



California State Library.



0 2007 1256361 4  
California State Library

125

Date received



No. 43,680.

fc630.5  
P1  
/3

EXTRACT

From an Act prescribing Rules for the Government of the State Library,  
passed March 8th, 1861.

SECTION 11. The Librarian shall cause to be kept a register of all books issued and returned; and all books taken by the members of the Legislature, or its officers, shall be returned at the close of the session. If any person injure or fail to return any book taken from the Library, he shall forfeit and pay to the Librarian, for the benefit of the Library, three times the value thereof; and before the Controller shall issue his warrant in favor of any member or officer of the Legislature, or of this State, for his per diem, allowance, or salary, he shall be satisfied that such member or officer has returned all books taken out of the Library by him, and has settled all accounts for injuring such books or otherwise.

SEC. 15. Books may be taken from the Library by the members of the Legislature and its officers during the session of the same, and at any time by the Governor and the officers of the Executive Department of this State, who are required to keep their offices at the seat of government, the Justices of the Supreme Court, the Attorney-General, and the Trustees of the Library.















# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, JANUARY 6, 1877.

[Number 1.

## Tahiti.

We have thought that a little information concerning Tahiti would be of interest about this time. The island commands the attention of our fruit importers, and large imports of Tahitian semi-tropical fruits are made every year. Thus the island becomes of interest both to our fruit-growers and fruit-consumers.

The rising of Tahiti into commercial importance is one mark of the general advance which the islands of the Pacific have made during the last score of years. In the case of Tahiti, as with several other islands, this advance has been fostered by the growth of the Pacific coast of the United States, for had it not been for the near markets which our city affords the stimulus to production and commerce would have been wanting.

The commerce of Tahiti sprang from very small beginnings. In order to contrast the past with the present we give a little engraving of the style of trade which the islanders carried on before the great trading ships carried away their produce. Whenever a ship came in sight the natives were wont to push out from the shore in their peculiar "balanced canoes" and transact their business upon the deck of the visiting vessel. We find a description of this early trade in a book of travels written by a French voyageur in 1845. We translate as follows: "Scarcely had our anchor fallen when we perceived a fleet of little balanced canoes flitting about us. The arrival of a ship is always an event for the Tahitians. Soon the deck was covered with a troop of men who came to take us by the hand. On all sides we were greeted with polite salutations, which might be translated: 'Good day, if you please, your excellence.' Our visitors showed by every action the pleasure they had in seeing us. They were eager but not importunate, and the sincerity of their reception, full of cordiality, appeared in their countenances. What a difference between these islanders and the natives of the Cape of Good Hope. There we saw human beings in the lowest scale of intelligence, without intellect, badly formed, savage and stupid. Here at Tahiti we were met, not by hideous scenes and repelling nudity, which the eye of the traveler sees with disgust. A graceful scarf enveloped the handsome men, large, well-made and cleanly. I returned from Tahiti with most favorable impressions of the people."

Thus early did the natives of Tahiti display superiority over the other races which were at that time comparatively new to the thought of the world. In their progress since that time they have manifested much enterprise in turning the capability of their soil to the productions demanded by commerce. From the day of the small "balanced canoes" there has come a growth until the newspaper, now printed at Papeete, the capital city, contains several columns of the names of arriving and departing vessels from all parts of the world, and in these lists of ships San Francisco is frequently given as the port of destination or departure.

To give a better idea of the formation of the island we give a little map showing Tahiti, the main island, and Eimeo, the next largest of the Tahiti group. The islands are mountainous in the interior. The highest peak in the main island, as shown in the engraving, has an elevation of 7,339 feet. The chief part of the productive land on the island lies in a belt or border from one to five miles in width, which lies between the base of the hills and tide water. This land is exceedingly rich, and is level and well adapted to cultivation. In the general appearance the mountains of Tahiti are alike. Their origin is volcanic and consequently they are largely composed of lava, basalts and ponce stone. Aside from the strip of good land along the sea-shore, there is considerable variety of soil in the interior. The sides of the mountains are in some places thinly covered with earth, and there are lagoons and small lakes to

which small streams are tributary. On lands near these streams and lakes a part of the population find their homes. The climate is healthy and very mild, the range of the thermometer through the year being inconsiderable. Besides the breadfruit, the island produces almost every tropical vegetable and fruit, and some fruits have been introduced from the temperate regions. The guava shrub is now common and bears a profusion of fruit upon which pigs and cattle feed with avidity. The introduction of oranges and limes has been very successful, as is shown by the large cargoes which come to our market.

As we have said, the chief trade of Tahiti is with San Francisco, and thus it is proper to



THE EARLY TRADE IN TAHITIAN FRUIT.

take the island into our circle of neighbors. The principal port of the islands is Papeete or Papeite, located on the northeast corner of the island of Tahiti, as shown in the map. Here several foreign merchants reside, and here the government buildings are located.

The geographical position of Tahiti is 17° 28' south latitude and 152° 1' west longitude.

HOW THE RURAL SPREADS THE FAME OF THE STATE.—We are informed by Bro. Broughton,

## Is Heat a Remedy for Potato Disease?

Our potato growers are severely troubled with the blight or rot of the tubers. There is great interest manifested in the cause and cure, but so far as we are informed, there is little being done in the way of experiment to overcome the evil. In order to awaken inquiry in this connection and to draw out our growers in writing what observation they may have made, we are going to tell what an English grower has done and the results which he claims. In a late issue of the *London Chemical News* we read that

might not lie in its imparting a dark color to the soil and so rendering it a better absorbent of solar heat. I therefore had the following experiment tried to decide this question: A piece of ground was chosen, little adapted for the growth of potatoes, consisting of a kind of blue till. The ground was divided into two parts, and both were planted with potatoes in the ordinary way, using stable manure. The one half was left as planted, while the other was covered with soot, which had been carefully washed till no soluble matter remained in it. Those with the soot sprouted first and were all through much healthier than the others. A series of temperatures were taken until the foliage was too thick for much sunlight to penetrate, and then resumed when the foliage was beginning to fail till the tubers were dug up. The temperature of the air was not kept, as we have no idea from it what is the real temperature of the leaf, as we do not know how much heat it absorbs from the sun's rays. All the temperatures were taken on sunny days, as on others there was no difference in temperature."

The tables of temperature which Mr. Hannay compiled from his thermometer tests show that at depths of two inches an average of 61.96° in the soot-covered earth against one of 59.83° in the other, and at a depth of eight inches 60.19° against 58.74°. The writer adds: "These numbers show distinctly that the potatoes grown in a dark soil have a warmer climate, so to speak, than those in a light one. The tubers with no soot were weak and a great deal of disease among them, whereas those which had the covering were larger and nearly all healthy. Still, as was shown by analysis, the principal inorganic constituents were present in nearly the same proportions, from which it may be concluded that the soot did not act upon the potatoes as a fertilizer."

Although the chemical analysis did not show any marked difference in composition, it was found by microscopic examination that the starch granules were much larger and the starch was more abundant than in the tubers grown without the soot. This indicates a more vigorous and healthy growth of the soot-heated ground.

These observations are of course far from conclusive, for closer examination might disclose other causes for the difference than the soot treatment. We should be pleased if our readers, after reading the above, would write us any facts in their experience which would agree or conflict with Mr. Hannay's conclusions. Please state in what soils the evil has been greatest. If black soil is all that is necessary we could perhaps give our potato fields a top dressing of adobe which would tangle the sun's rays pretty effectually.

AMERICAN GRAPES IN EUROPE.—At a recent meeting of the French Acclimatization Society, says the *Rural World*, there was an interesting discussion on the value and prospects of the American varieties of grapes which have been largely planted in some of the districts where the ravages of the phylloxera have been greatest. In the Herault alone some 15 American vines have been planted, and great hopes of success are entertained. The variety called the Clinton has been extensively planted, and, whilst some members stated their experience with it as a shy bearer, it was stated that as many as 180 bunches had been gathered from one cane. The wine produced by it is said to be highly colored, and without the unpleasant flavor commonly attributed to it, and almost as rich in alcohol as Rouissillon. The unanimous opinion was, that the American varieties suffer less from the phylloxera than the French ones, and if not so valuable for their fruit, they are at least of great use as stocks.

BONE MEAL FOR GRAPES.—The editor of the *London Horticulturalist* asserts that among all the fertilizers proposed for the grape, none embody more of the necessary ingredients than bone meal. It should be applied as early in the season as possible. About a ton to the acre makes a dressing that will prove valuable in two or three years.

SECRETARY ROBESON has assured the secretary of war that the navy department will cordially co-operate with the war department in the daily simultaneous meteorological observations now being made by many nations around the world.



ISLANDS OF TAHITI AND EIMEO.

of the *Lompoc Record*, as an evidence of how widely the *RURAL PRESS* is circulated and read, that he has just received a letter of inquiry about the Lompoc Temperance Colony, from a gentleman in Bath, England, who learned of its existence from reading the *RURAL PRESS*.

ABOUT two out of every three passengers on the train which fell through the bridge at Ash-tabula were killed by the fall, the fire or the cold.

escape infection, and I have found on careful inquiry that as a general rule those fields which escaped have been of a darker color than those attacked, and this has led me to the conjecture that the heat caused by the absorption of the solar rays must have strengthened the constitution of the plant. Soot is considered by practical men as a preventive of the disease, and it occurred to me to determine by experiment whether, besides the good which its contained ammoniacal salts effect a part of its virtue



## CORRESPONDENCE.

### Large Talk in Agriculture.

EDITORS PRESS:—Under the head of "Large Talk in Agriculture" in the PRESS of December 16th, 1876, you say some good things, but while reading it I could not help thinking of your page of "Agricultural Notes," taken mostly from country papers. They are principally records of successes, not one-fourth of them failures; and you are not to blame for not recording the failures, because you don't find them noticed in the local papers. No, no, not they! that wouldn't do. If it should be known that there was ever a failure of a crop it would injure the reputation of the place, and that wouldn't do. There wouldn't anybody settle there then. Then again, some of your traveling correspondents write some high or "large" talk. For instance, a few weeks ago one wrote from Scott's valley, Siskiyou county, that there was 100,000 tons of timothy hay cut there in the valley this season. At two tons per acre (and that is more than it will average), that would take 50,000 acres. Now, I lived in Scott's valley about nine years, in different parts, and have been all over the valley from side to side, and from end to end, and I don't think that there are 50,000 acres of tillable land in the whole valley. I can't imagine where the balance of the stuff he wrote about came from. And corn; I never saw 10 acres of corn all the time I was there. Perhaps they have taken to raising corn since I left, some six years ago. I was somewhat amused in his statement about the prominent business men. Some men have risen wonderfully if they are the most prominent men there, or else others have fallen. The facts are, those of us that have been here in California for 10 or 15 years, and have learned the ways, just read such pieces or letters as the above referred to, and laugh over them, and they don't do us any harm. But the poor immigrant that has just arrived, or those who think of coming here, usually get terribly deceived, and I think the country is injured thereby in the end. But the "locals" argue: Induce a big crowd to come, and some of them will be bound to stick, because it is so far they can't all get away again for want of means. After all, I like California better than I do the Eastern States. S. WHITMORE.

San Diego, Dec. 18th.

[We have no personal knowledge of the locality which our correspondent refers to. If our readers in the valley can show the writer that it has grown beyond his recollection, it will be proper to do so.]

We believe with our correspondent that harm has been done by the large talkers, still we are just as sure that truthful statements of what men really succeed in accomplishing, no matter how great may be the success, are of great value in urging others up to renewed endeavor, thoughtful investigation and more profitable action. "What man has done man can do" if he work aright, and all we desire in connection with the statement of a great deed in agriculture is that it *has* been done, *how* it has been done, and the amount of skill, industry and sacrifice involved in the undertaking.—Eps. PRESS.]

### Hop Culture in Sacramento County.

EDITORS PRESS:—I have seen it stated in your paper, and copied into others, that Santa Clara county was the largest producer of hops. Now, I disclaim any intention of finding fault with any one, or being envious, if such is the case, but merely of setting the matter right and giving credit where credit is due. I think that the mistake is traceable to the assessors of the respective counties. While that of Santa Clara has gathered in his statistics the products of all the hop yards in his county, the assessor of Sacramento county has not reported more than one-quarter or one-third of the yards and yield.

In the winter of 1875-8 Wilson Flint and myself planted one-half of an acre of hops on our land, one mile below Sacramento, as an experiment, neither of us having any practical knowledge of the culture of hops. We made no attempt to pole them the first year, learning that in the East they did not bear until the second season. Somewhat to our surprise, the vines made quite a growth and produced hops the first season, and, taking a hint from that, the next year (five acres) that I planted, I set one pole to each hill, and with rather of a poor stand at one end of the yard, it produced me 6,000 pounds of No. 1 hops.

When in search of poles for my first yard, I got into conversation with one of my neighbors, a 49er and a genius, in regard to hop culture. He told me that I had better plow up my hop roots and plant something more profitable, for he said hops would do nothing in this rich soil—would run all to vines and bear no hops. Not having farmed any since 14 years of age, I must confess that his advice discouraged

me a good deal. I told him as long as the roots were planted I would get a few poles and try them one year anyhow. To add still to my doubts, down came two bright luminaries of the legislature, either prospecting or for a walk, and they asked me why I raised hops; says they, why do you not grow staple articles, such as tobacco, rice, cotton, wheat and barley, etc.? I told them a person was apt to grow on his ranch that which was the most profitable. If I had sown this five acres with wheat, at the outside price I would not have received more than \$250, and the first offer that I had for the hops was \$3,600.

The first two years I had no kiln, press or conveniences for hop culture. I procured all the works and articles on hop culture and interviewed every person that ever saw a hop vine climb a pole, and by that means I gradually gained some knowledge of the business. To show that I had still something to learn, and had to depend on mother wit to help me out, I will relate a little incident that happened in my early experience. The State Board of Agriculture offered a prize for the best acre of hops, and appointed Dr. H. and others to visit the yard. The Doctor, by the way, was an enthusiast and expert in hop culture, and as he entered the yard he was very lavish in his praise of the size, height, quantity, quality and mode of culture. He asked me how far apart my hills were, how many males I had to the acre, and requested me to show him one.

If there had come a good shock of an earthquake about that time it would have relieved me a good deal, and I presume changed the subject.

As nothing happened to divert the Doctor's attention or relieve my embarrassment, I concluded to rely on mother wit. Not aware that gender was applied to the hop family, I was totally unprepared to point out the sex. However, I started rapidly towards the center of the yard, looking right and left for a male vine. Shortly I saw a pole that had a large vine on it, but no hops, and I concluded if there was such a thing as the male vine that this must be one, so I said to the Doctor, "Here is one," and he walked up to it and pronounced it a fine one and in the right place.

I will not relate the difficulty I had with my first kiln, heating apparatus, press, etc., or the shirings that I got from the cold shoulders of the brewers and dealers, while trying to introduce my first hops, for it would approach an essay, instead of a short article, which I intended to write when I began this. Suffice it to say that there was a strong prejudice against hops as well as there was against our barley and wheat, and I find that prejudice will soon disappear in the former as it has in the latter, and to-day our hops are quoted three to six cents higher in the Eastern market than all other brands.

I started out to say and show that I thought Sacramento was the banner county in the growth of hops, and I will here show what she did in the Centennial year, and would be very much pleased to hear from every hop-growing county in the State: Number of acres, 374; number of bales, 3,239; number of pounds, 637,500. That is an average of a little over 1,700 lbs to the acre, and nearly 200 lbs to the bale. The price started in at 17½ cents @ lb this year and ran up as high as 30 cents. I think the averaged price would not be quite 25 cents.

There are 23 hop growers in the county; the smallest is two acres and the largest 53 acres. Calling the hops at 25 cents the crop produced a revenue of a little over \$150,000, or an average of a little less than \$7,000 to each grower. Most of our hops found sale in the Eastern States, where they are received with more favor as they become more acquainted with them.

DANIEL FLINT.

Sacramento, Dec. 27th.

[We should be pleased to receive notes of the hop yields in the different counties and of other points in connection with the industry.—Eps. PRESS.]

### Solano County.

EDITORS PRESS:—Our farmers have been very busy this season in putting in their crops. More ground has been plowed and sowed than I have ever seen before. The farmers have nearly finished their seeding for this year; many have stopped sowing on account of the dry season. We are looking for rain, as we generally have some about Christmas, but it has not come yet. The north wind has been blowing for the last three days, and the cold frosty mornings begin to make the farmers in this part of the county have months drawn down to represent a rainbow. The crops need rain badly, as the early feed is nearly gone, and what is not gone the wild geese will soon have, as they are very numerous. If the editor will call and see me I will give him a wild goose dinner, or ducks, if he prefers, as I have not much to do but hunt them at present till it rains.

Most every farmer takes the RURAL PRESS, and if they did not get the paper Saturday afternoon they would be lost, and some would not get out to church on Sunday, for they would not know what wheat was worth.

The tules are on fire between Sacramento and Rio Vista, sending up black columns of smoke by day and fire by night. I suppose that they are clearing up the tule land for crops for the dry season.

Binghamton, Dec. 25th.

### Barbecue at Berryessa.

EDITORS PRESS:—On Friday, the 22d instant, the people of the Berryessa neighborhood gave a grand old-fashioned barbecue, commemorative of their recent victory in the big lawsuit with H. S. Carpentier, in which the titles to their homes were long involved. After fighting fraudulent claims for over 20 years, and spending vast sums of money, the dark cloud that so long hung over their well-improved places has been dispelled by the decisions of the highest courts of the land, and the clear sunshine of brighter prospects is upon them. And it is not strange that after contending, shoulder to shoulder, so long for their rights that many of them have grown gray in the strife, they should now feel like meeting together and having a good time rejoicing over their hard-earned victory.

The place selected for their festivities was the school-house and yard in the village of Berryessa. On our arrival at the place, about noon, we found all the lanes and fences lined with horses and carriages, and a large company of people already on the ground, while out on the roads in every direction were loads and loads of men, women and children coming in.

The day was as warm and as pleasant for outdoor enjoyment as could be desired, and I presume nearly every family living on the large grant was well represented. I heard the crowd variously estimated at from 1,500 to 2,000 people. I did not learn the number of families interested in this land dispute, but it must be quite large, as the grant covers an area of 15,000 acres, and most of it is thickly settled.

Everybody looked pleased and happy, and everybody was rejoicing with everybody else. Hearty congratulations and hand-shaking seemed to be the order of the day.

But the most interesting feature of the occasion was the dinner, which was provided for by the good people of Berryessa district on a magnificent scale, and to which everybody was invited. The arrangements for feeding the vast company were bountiful and complete. Two long tables in the school-house yard were loaded with everything a hungry man could wish for. The tables were well served by young men and maidens detailed for that purpose. There was hot coffee of the very best flavor in abundance for all, and warm meats—beef, pork and mutton, broiled over beds of hard wood coals, and done in the most approved barbecue style. There was enough for all, and enough left for as many more.

At the time of our leaving, at 3:30 o'clock, there seemed to be no perceptible lessening of the crowd, nor any abatement of the interest; but on the contrary, as the throng around the table thinned out and gave way, they became more loquacious and sociable; and all round in every circle, men, women and children were talking and laughing gaily. The school-house was now becoming the central point of attraction, especially to the younger people. The desks were removed out of the way, and the sound of music and dancing came from the open windows as we drove out for home. How long this was continued, or at what hour the gay party broke up, this deponent knoweth not.

G. W. M.

Santa Clara, Cal., Dec. 26th, 1876.

### New Jerusalem Artichoke.

EDITORS PRESS:—Although so called, it is in no way allied to the artichoke, but as that is the name most of us know it by, I suppose it makes little difference as to its botanical name. I am sorry that it is not better known and its merits better understood by our farmers in general. Perhaps a few remarks concerning its great value and easy method of cultivation may not be out of place.

The artichoke is a native of Brazil, and as our climate is similar, California soil offers great inducements for its growth. Although a native of a warmer climate it has already been proven to be one of our hardiest plants, and deriving as it does through its large leaves most of its substance from the air, it improves instead of impoverishing the land. It is eagerly eaten by horses, cattle, sheep and swine, furnishing an aliment as nutritious as it is healthy, cheap and easy of cultivation. It is, I think, the most profitable root crop that could be planted. It is rich in farinaceous substance and all animals do well and improve when fed on it. It has been tested and it has been found by an accurate chemical analysis that the artichoke contains one-third more nutriment than the beet. Besides, it will yield a fair profit on soil too poor for either potatoes, beets or carrots, and more relished by stock than either.

Few plants stand our summer drouths as well, and at the same time our wet winters. We often allow them to remain in the ground all winter, only turning them out with a plow as they are needed, and we always find the tubers in perfect order, unmolested by insects or rot. Another point of great importance is, that a field of artichokes once well set needs no further planting. And again, on good authority it is said that a field or plantation will thrive and remain in full perfection on the same spot first planted ten to fifteen years, often yielding from

twelve to fifteen hundred bushels to the acre.

Our method of cultivation is simply to have the ground thoroughly plowed and laid off in furrows two feet apart, the tubers dropped a foot apart in the rows and covered by a plow. When the plants are well up they should have a good working with plow or cultivator, and the work is finished.

CONTRIBUTOR.

Merced, Dec. 27th.

### An English Opinion.

One of the contributors to the London *Garden*, in speaking of the Jerusalem artichoke, reiterates what is above claimed for this plant. He says: One cannot help wondering that a plant so prolific, and that can always, under all conditions and circumstances, in any kind of soil and with but little attention, be relied on to produce a crop, should have received so little attention as this artichoke. However, such is the fact, and, except in the gardens of the wealthy, it is almost unknown. They might, however, have a trial, for although probably their peculiar flavor would not suit every taste, yet they might be made into soup or cooked in various ways, and in the winter they would furnish a desirable change of vegetables. Doubtless many have condemned them or refused to grow them without really knowing what they are.

Plant the sets like those of potatoes, in March, either with or without manure, according as the land is good or otherwise, or whether large or small tubers are required. Plant in rows three feet apart, twelve inches asunder and six inches deep. All that is necessary afterward is to keep down weeds till the tops get fairly into growth. About July the ends of the shoots may be shortened a little to keep them from flowering and within bounds, and to strengthen the crop. Some leave them in the ground altogether, and just dig a few when required. This, however, is a bad practice; they should always be lifted before growth begins. The best shaped tubers should be selected for use and stored like potatoes; the others should be reserved for seed.

### Poison in Blue Cloth.

EDITORS PRESS:—While the papers are discussing the properties of poisons in different articles of wearing apparel, I wish to give my experience with a very common garment, "blue overall cloth." Twice I had a milking jacket made from the same material, and twice I have suffered and am now suffering from its poisonous condition. The arms appear inflamed, especially at the wrists, where the cloth comes in contact with the skin, and the itching thereby is intolerable. For some days I could not account for the affliction, until I remembered having had the same symptoms when I first put on a former jacket. I immediately sent the blue vestment to the wash-tub, the washer being poisoned in one washing.

As blue color is generally made from green and yellow, it is very probable that "paris green" is used. If so, no wonder it produces the itch. [See note below.—Eps. PRESS.]

The cloth is so universally worn as overalls that much evil may be caused from the effects of the poison without knowing the why or wherefore. Let any person who wishes to test the above facts procure a small strip of the goods and tie it around the wrist, and if inflammation takes place, with a desire to allay the itching, they will find by experience the truth of my statement. JOHN TAYLOR.

Mt. Pleasant, Dec. 11th, 1876.

[Our correspondent is doubtless accurate in his experiences, but he is at fault in his surmises. A blue color is not and cannot be produced by a combination of green and yellow. Blue is a primary color and cannot be produced by any mixture whatever. Our correspondent is doubtless misled by the memory that blue and yellow produce green by mixture. There is no "paris green" in any blue dye, and our sufferer cannot attribute his discomfort to this cause. Blue dyes were formerly made almost wholly of "prussian blue" (prussiate of iron), but of late the introduction of aniline colors has been general. We have read of poisoning by aniline dyes, and here may be the trouble. So far as the practical effects of the cloth are made known by our correspondent, his contribution is of general value and should be heeded. Eps. PRESS.]

MURDER OF SCIENTISTS.—The *Chicago Times* says: Late news from New Guinea conveys the intelligence that two persons engaged in making scientific collections on that island were lately murdered by the natives. The one was a Dr. James of the United States, the other a Swede, his companion, who had been some time with him exploring Gule island. The two had gone in their large boat to the east side of Hail sound to shoot birds of paradise, when they were attacked by three canoes and both were killed. The native crew managed to get away in the boat and carried the news of the sad calamity to Cape York. Only a fortnight before the notice of his death reached England Dr. James's first collections arrived there, and the excellent way in which they were preserved, together with the careful notes accompanying them, betoken that science has lost a promising auxiliary through his untimely decease.



## THE APIARY.

## Experience of a Napa Bee-Keeper.

EDITORS PRESS:—In looking over files of the RURAL for an address of parties having Italian bees (pure) for sale, I saw an inquiry from Santa Rosa for information about saving swarms. I am only an amateur, but I lose no swarms if I see them flying. With a pail of water and a wisp broom I sprinkle them lively, either as they leave the hive or as they circle in the air, and follow them up until they begin to cluster, as they surely will when they get heavy with the water. When I perceive them begin to cluster I get a box or empty five-gallon syrup keg, well cleaned beforehand, and empty what have clustered right into it by shaking them, holding the box right under, or, if the cluster is low, by cutting the bushes near the ground, and lifting them carefully, and shaking them right into the box or keg. Then I turn the keg over, mouth down, on the board already provided, and placed as near the swarm as convenient to work. I lay some small sticks on the board, under the keg, to make room for the bees to go in freely. Those already in immediately commence to buzz, which those outside hearing, commence to march in like an army. If any continue to gather on the bush I shake them with those first taken off, and keep the bush in motion, or take it off entirely if not valuable. A large napkin or table cloth, folded once, laid from the bush (if low), to the hive or box, will assist, and you may detect the queen or queens if there are any. If the bees are slow a little sprinkling with a wisp broom, dipped lightly in water, will hurry them in, but you must not get them too wet.

The bees can be then moved to their stand. It need not take over twenty or thirty minutes if one has an empty hive, which should be ready. They can be emptied right into the hive where they are to stand. It would be a good idea to keep them shut up for a few days, until an hour or two before sunset, until they get used to their new place, and there will not be much risk of their leaving. Be

## Sure That the Queen

Is with the swarm. It is very easy to find out by spreading a sheet on the ground before the hive, one end resting on the bottom board, (a loose one is best) then empty all the bees on the sheet, and as they march in have a glass tumbler and imprison her when you see her. If not successful the first time try it again, until she is found. Sometimes several are found, when it will be necessary to kill all but one, or else divide and make two swarms in case the swarm is large.

Last summer I had a swarm leave three times and finally saved them by letting them out late for a few days, and closed the entrance until just big enough for one bee to go in or out at a time. I have

## Stopped Robbing

By the same process. Having a short time ago applied for a name for a honey producing plant and having got the name through the RURAL, I take this opportunity to return thanks. I am only a beginner in the bee business, but I take an interest in it. I have five swarms, all common bees, but they are in good condition and now in movable frame hives. My experience has cost me about \$75, which makes \$15 a hive (a rather steep price,) but I think that by another spring that I can reduce the average price considerable. I shall try to

## Italianize Them All

This coming season. I transferred a strong colony from a box hive to a movable hive, on the 11th of the present month, (Dec., 1876.) I had to put two combs together, and put what was the bottoms together in the middle, making the top do for the outside ends, making two frames 12x18 of brood, and two the same size filled with honey and capped. I use what is called the improved Quimby frame with closed ends. I have made some additions of my own but the principle is the Quimby. So far I like them very well. The bees sealed the centers together, making one single comb, and have new sealed brood in them already, and are prospering. In fact I think they like the change, they are bringing both honey and pollen in quantity. I fastened the comb in for a few days, with strips of light wood, until the bees fastened them to the frames. I have since added frames with comb and a supply of honey. All my swarms have lots of stores, and have worked every day since the first rains.

## Honey Plants.

The manzanita has been in bloom here in the foothills since November 15th. Laurel came in November 25th. The California poppy has been in bloom since the golden rod went out, now the crocus has come and wild flowers are coming daily. There is a weed that some call "dove weed," which is full of little black seeds, and of which doves and turkeys are fond, from whence the bees get pollen when everything else is gone. I can tell it by its gray color.

I sent in September to the East for two pure Italian queens, but lost them in introducing. The honey season was over and the bees were very jealous of a strange queen, but I shall try

it again in the spring. The moths have not troubled me this season, as I have kept my bees from swarming as much as I could under the circumstances.

I find that I can stand the stings better than when I commenced. I think that I must be inoculated and that my system is getting used to them. In securing swarms I use no protection, but in handling hives I protect my face with a veil and use smoke, with a Quimby smoker, using decayed hard wood.

Napa, Dec. 25th.

J. D. ENOS.

## Measurements of Angles by Bees.

The editor of the "Scientific Record" in the *Phrenological Journal* makes some observations as to the structure of the compound eyes of the higher insects, that may possibly furnish a basis for the scientific explanation of the accuracy with which bees measure angles. As most readers are aware, the cornea of the insect eye consists of a single membranous layer of transparent lenses or cells, sometimes hexagonal, as represented in standard works, but almost as frequently round or square, depending on their situation. These cells, or double convex lenses, are about one-three-thousandth of an inch in diameter, and, by a method of experiment calculated to ascertain their thickness, I find it to be in bees about one-fifteen-thousandth of an inch. The cornea is not movable as respects its position, but, by means of a circular muscular band, it can, as a whole, be rendered more or less convex, according to circumstances of vision. If a calculation be entered into, as concerns the accuracy of direction of which convex lenses so minute are susceptible, compared with the lenses of the human eye, it will appear that, whereas the average deficiency as respects the estimation of angles in a trained geometer, is about one degree in ninety, the deficiency as concerns the eye of a bee cannot exceed three-one-millionths of that amount—that is to say, if a human eye may be stated as able to distinguish dimly between an angle of 89 degrees and one of 90, the eye of an insect is, by calculation, capable of distinguishing between an angle of 89.999997-1000000 and an angle of 90. The extraordinary nicety with which building insects construct their works is thus readily accounted for by the extraordinary nicety of perception consequent upon such congeries of lenses, and by the immovability of the eye as concerns its position in the head, without the necessity of calling in a special instinct. The lobster, the eye of which terminates a hulk styled the eyestalk, and has a cornea consisting of square lenses, shows, under extraordinary circumstances, a nicety of perception as concerns direction which approximates to that of insects.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

## Mysteries in Poultry Breeding.

There are many intricate or mysteriously wrought operations in the formation of the egg in producing that curious and wonderful combination holding the vital principle of animated being. But little is known, says the *Poultry World*, by actual, thorough experiment, of the details of the workings of this natural construction, so wonderful in its origin and through all its changes, from the infinitesimal vesicle forming at first in the ovary, down to the ejection of the perfect shelled egg laid by the hen. The ovary (or egg-sac) in the fowl lies just in front of the left kidney. The passage from it outward is called the oviduct. The ovary contains the little globular germs of the eggs that are naturally formed with the early growth of the hen, and are very numerous, some 700 (of various diminutive sizes) having been counted in pullets less than a year old. And this ascertained fact gave rise to the hypothesis that all the eggs a domestic fowl would ever lay, are formed at one time in the first instance in this embryonic life. These globules slowly increase in proportions, those lying nearest to the mouth of the oviduct enlarging first and passing out, one by one, into the passage as they approach maturity. When the first or outer vessel has become about the natural size of the common yolk, it is caught in the funnel-shaped end of the egg-passage; and each yolk, as it goes slowly down through the flexible tube, has formed about it the albumen or "white" of the egg. This substance contains fine strong threads in its composition, which holds the yolk in its place in the future shell. The membrane that lines the shell is then formed, and finally the outer hard shell. The "white" of the egg is first formed at the mouth of the oviduct; the membranes, half way down; the hard shell last, at the lower end of this egg-passage.

Hens are often ill, or in a weak condition, when they drop what is called "soft-shelled eggs." If the oviduct be inflamed from any cause—either through eating too much stimulating food, or by colds, fevers or being worried by the cocks—the membrane does not form around the yolk properly; or, if it have, the hard shell will not secrete naturally, and the thick-skinned yolk is extruded prematurely. Kill a vigorous laying fowl any day when a year old, and carefully examine the ovary and oviduct. You will find one perfectly formed hard-shelled egg ready to be laid, frequently; then a full-sized "soft-shelled" egg above it; then a smaller membra-

neous-covered yolk above that; then a yolk two-thirds size, then half size, then quarter size, and so on (from the upper end of the egg-tube into and through the oviduct), still smaller embryonic eggs or yolks, from those of the dimensions of a pea to those of finest mustard seeds, or less, in bulk. Count all you can see, if you are curious, then apply the microscope, and you may find as high as 700 of these tiny vesicles, of various sizes, each of which would have formed a perfect hard-shelled egg in time.

These eggs are impregnated in the yolk after they enter the egg-passage, undoubtedly, and before the outer membranous secretion (or white) is formed. How many are impregnated or rendered fertile at one time is a question not decided. But the best authorities give us the most reasonable answer to this inquiry, that but very few are impregnated at the same moment; and that by the continuous association of the cocks with the hens only can the eggs laid be rendered truly available for successful hatching.

## THE STOCK YARD.

## A Card from Mr. Carr.

EDITORS PRESS:—Having been absent in the northern part of the State (Modoc county) I did not learn that I had been classed as a short horn *speculator* instead of a breeder, until I read Mr. Robert Ashburner's article in your valuable journal of the 23d inst. Thanks to both yourself (in your paper of the Nov. 11th) and Mr. Ashburner of the 23d inst., in defending me "as a breeder." I would like C. N. W., of Watsonville, to inform me "what constitutes a breeder." If I am not a breeder in the true sense and meaning of the word, I confess I don't know what constitutes one. I have made two direct importations of Short Horns, the first from Kentucky and the second from Canada, what did I do with those? On their arrival on this coast did I take them over the State offering them for sale, or did I advertise them for sale? No, I took them immediately to the Gabilan rancho and have kept them there since breeding. W. S. Chapman and myself purchased a car load of Short Horns from Minnesota. These were not shipped out on order, but were selected on letters of inquiry that we had written to the party that shipped them (Col. W. S. King). On the arrival of them here, satisfying ourselves that the pedigrees of them were all of the best, we purchased the entire cargo. Did we turn around and offer them for sale? No, we sent them to the Gabilan and have been breeding them also. I have also purchased high bred grade cows and have been breeding them to my thoroughbred bulls, the bull calves of which I have been selling and also shipping some of them to my ranch in Modoc county. I have also sent two thoroughbred bulls up there, all to breed to my common cows.

Ford, Robson and Abbott are all my neighbors here. They are all gentlemen of enterprise and have taken some pains to improve their stock, but if a man purchasing one or two animals at home at moderate prices is more commendable than one who goes abroad and takes the risk of importation, besides paying high prices, in order to get the purest and best pedigrees as well as the best animals he can find, I confess I don't see it in the same light as does C. N. W.

I am not fond of newspaper articles and would not notice this article of C. N. W., if he had not charged me as being a *speculator* instead of a breeder of Short Horns. I could have purchased Short Horns in this county probably for one-half of what mine cost me to import them. I went abroad for the most of mine because I wanted the best Short Horns both as to looks and pedigree. I confess I had some pride about this. My importations were costly, possibly in a financial point of view too much so for this market, and it may prove to be an unwise investment of mine, but this county has and will have the benefit of my importations whether I profit by them or not. Had I been purchasing Short Horns to bring here on speculation I could have purchased for one-quarter or one-fifth of the prices I paid and brought animals here that I could have sold to persons not versed in Short Horns and their pedigree for about as much as I could sell those I imported. I contend that if we expect to improve our stock as it can be improved we cannot do so with the majority of the stock imported to this county by *speculators for sale*. Good stock with the best pedigrees cannot be had in the Atlantic States or Canada without paying good prices such as *speculators will not pay*. If I am a *speculator* in Short Horns I think it would be well for the State if every cattle breeder in the State was a *speculator*.

I started out to ask C. N. W. only one question, "What constitutes a breeder?" but I feel a good deal of interest in this Short Horn business, as I view it as one of the most laudable enterprises in the State, and have therefore said a good deal more than I started to say. Salinas City, Dec. 27th, 1876.

J. D. CARR.

[Mr. Carr's statement is very pointed, clear and conclusive, and with it will close the discussion of the subject. We have admitted the matter to our columns, from the first position of C. N. W. to the close of the discussion by Mr. Carr, because we believed it would be a good thing to have the line drawn between im-

porting for breeding value and *speculating* for "speculation," as the term is understood among breeders. Purchasers of cattle should always consider whether stock offered for sale has been imported and bred for the purity and practical value of it or otherwise, and we are glad that attention has been drawn to the subject.—Eds. PRESS.)

## THE DAIRY.

## Jerseys as Butter Cows.

The annual meeting of the New York State Dairymen's Association was held during the first week of December. Among the topics presented was a showing of the Jerseys as butter cows, by W. L. Rutherford, of St. Lawrence county, whom we know as a successful butter maker. From the report of Mr. Rutherford's statements as given by the *Utica Herald*, we quote as follows:

## History.

After alluding to the importance of the study of breeds, both historically and as regards their practical qualities, the speaker proceeded to trace the origin of the Jersey cow. Many writers claim that she originated in Brittany or Normandy, but he maintained that she was first bred upon the island of Jersey. She was there bred for the special purpose of producing cream and butter. He sketched her development upon the island, claiming that the farmers even then saw that she would yield more and better butter than any other breed. They were, therefore, content to possess the ugly, ill-favored animal with flat sides, flat between the ribs and hips, "cat-hamned," with high hips and hollow back. Yet her fawn-like head, large soft eyes, elegant crumpled horn, small ear, yellow with-in, and her capacious udder attracted them. Shortly after her introduction into England, a demand for solid colors sprang up, which caused some breeders on the island to sacrifice their bulls from their best cows if they were parti-colored, and to use bulls from inferior cows if they were solid or self-colored. The mania spread to this country, and for a time seemed to threaten the usefulness of the breed. The danger, so far as relates to this country, however, has passed, but another danger still threatens, that of breeding for quantity of milk. It lies in the fact that the quality of milk from cows or breeds yielding a large quantity is inferior in quality; and as a rule they do not hold out as well in their milk.

## Quality and Quantity.

It appears that when a cow devotes her energies to the production of a large quantity of milk, the deterioration in quality is out of proportion to the increase in quantity. We have a notable instance in the case of the English-bred Jersey cow "Milkmaid." She is a typical, solid-colored, English and Jersey, and her record has been made public by her present owner, Mr. Sharpless, of Philadelphia. Her best yield was 22½ quarts, or about 45 pounds of milk per day, and yet she only produced on trial 11 pounds and 3 ounces of butter per week, requiring over 27 pounds of milk to produce a pound of butter. By means of other tests he had found that the milk of the English-bred Jersey is inferior to that of the home or American-bred cow. The milk of a good breed of Jerseys should produce a pound of butter from 16 pounds of milk. A good Jersey cow gives from 25 to 28 pounds of milk per day; and instances are not rare of cows yielding 12 or even 14 pounds of butter per week, and that is quite above the average. He had not the detailed record of Mr. Sutcliffe's famous cow "Pansy," which produced 574 pounds of butter in a year; nor of Mr. Motley's cow "Flora," which produced 511 pounds—both causing much discussion at the time—but according to the weekly record of butter, "Flora" never produced over 14 pounds per week, even in the month of June.

The speaker then presented the record of a single cow from his own dairy, during the past season, a notoriously unfavorable one. She calved January 26th, and her milk was saved from February 5th. The total number pounds of milk was 5,672, producing 282½ pounds of butter, the record extending to the end of November. The highest aggregate was in June, when 817 pounds of milk yielding 51 pounds of butter were produced. This, for the fifth month, was a remarkable yield. During the period of drought the falling off was marked. The average quantity of milk per cow in his dairy last year was about 4,640 pounds, and of butter, 289 pounds.

There was no error more common, he continued, than that of breeding for quantity of milk. To illustrate this point he cited the case of George Rule, a St. Lawrence county dairyman, who had made a test of the butter qualities of his cows. He set the milk of each cow separately for a week, and churned the cream. The result was that five out of his herd of 17 cows went below five pounds of butter per week, and were consigned to the butcher. They were all good milkers, and one in particular, which was estimated to yield at least 210 pounds of milk during the week of trial, only produced two pounds of a very inferior quality of butter. In order to maintain and promote the characteristics of any breed, we must adhere to the conditions which produced those characteristics. A course of treatment which will produce a cer-

Continued on page 10.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Letter from Brother Wright.

EDITORS PRESS:—No facts stated in your late issues have afforded me more pleasure than those which prove that the brother chosen by our State Grange to succeed me as Lecturer agrees with me so exactly in his views on the principles and needs of our Order.

Though I have never had the pleasure of meeting Brother Pilkington, I shall hope to see him soon, and chat about the interests of the brotherhood to which every Patron has pledged fealty.

In one of your numbers, soon after his election, I was glad to see your statement that he does not believe in mere eloquence and rhetoric, but in plain statements of practical facts on the Grange, or words to that effect. Now if you had attempted to express my own sentiments in that article, you could not have given them more accurately. I am delighted to have a successor of such congenial views.

Of course it is well known and admitted by all sensible people, that mere eloquence in itself, or mere rhetoric in itself is of very small account, but that true eloquence and true rhetoric have been and will be, in all ages and by all right-thinking people, esteemed as a valuable means of making truth clear to others, and of forcing conviction on all real seekers of truth.

Like other things in the Grange and in life generally, these qualities should not be made the ends of our efforts, but the means of doing good work. Take economy, for instance: when we make it the whole end for which we strive, we become penurious, miserly, "penny wise and pound foolish," but when we make it a means of carrying out worthy objects and great objects, we become prudent, saving and frugal.

I wish our present Worthy State Lecturer every success in his labors. It is to be hoped he will be well sustained, as a brother called to such work always should be, by the Executive Committee, the State Grange, and the brotherhood generally, and I hope he will be properly paid for his labor. In this way only can his ability and devotion to the Order do the good service which they are naturally capable of doing. It is a mistaken view for our Order, or any body, to take of such services, that the honor of the position should pay a good part of the salary. Unfortunately the mere honor of the thing won't buy meat and bread, shoes and clothing.

I am glad to see from the last RURAL that Brother Webster has got home safely from

### The National Grange.

He will, no doubt, give you all the desired information about this earnest working session. Even if the conservative, prudent course of the RURAL PRESS always in the past were not a sufficient guarantee that in your columns there will not be found any of the false and absurd statements about this body, and its last session, such as have of late been going the rounds in a few papers, the information Bro. Webster can give should prevent such wrong impressions on our coast. I have such confidence in his prudence, and his knowing that, because of our many outside enemies, all Grange members should work together in harmony, and sustain by word and act our chosen and constituted authorities—even though personally we do not fully approve of everything done—that I believe he will use his influence to prevent inaccurate and injurious statements from finding their way into our Pacific papers, especially our Grange press.

Being constantly for several months where I could watch the spirit of the press as regards the Grange on this side of the Rocky mountains, I have been interested to see how, as the time approached for the National Grange to meet, many papers, some political and some claiming to be agricultural, began to prepare for a regular onslaught on that body when it should meet, no matter how its work might be done. All sorts of advice was given for the guidance of these representative farmers. Some even went so far as to say they demanded so and so, which, you know, is entirely out of keeping with the spirit of our Order, or indeed of any true fraternity. Fraternities are not given to demanding or commanding, unless some serious wrong has been done.

Well, the session of 13 working days is ended, and really, the officers and members exerted themselves to do the best they could for the general interests and progress of the Order. Of course, they could not succeed in pleasing every-

body. And now, though most papers speak in moderation and approvingly of the work done, a few are pouring out the phials of wrath which they had already prepared. One or two papers, notably the Chicago Times, have been making not only false statements, but some of the most absurd imaginable in regard to the session. Strange as it may seem, such utterly false and absurd statements have been copied by a few papers claiming to be in our Grange interests, as reliable information for Grange members. Yet Worthy Master Allen, of Missouri, whose devoted services to our Order are so well known and appreciated, shows in a recent letter that one of the abusive articles in question contains no less than 60 erroneous assertions. Think of such "bosh" being given out to influence our members. Surely, they will not allow themselves to be influenced by such stuff. When each Subordinate Grange gets the complete

### Journal of Proceedings.

Which has been prepared most carefully and truthfully, they will see how many incorrect statements have been made. These will soon be distributed to Secretaries of State Granges.

It is to be hoped that when Masters or Secretaries of Subordinate Granges receive these reports they will not put them in their pockets, or anywhere else, and forget all about them; but that they will have them read and understood by their members at successive meetings. They are intended for the correct information of all our members. They are furnished with an index this time, which will make them easier to study and understand.

One or two points more. One of the most ridiculous errors one paper has made, and several others have copied, is a little raving about "Priests of Merida," as a set of "closeted aristocrats of the Grange," and all that sort of thing. Now it is impossible to imagine a more supremely ridiculous mistake than all such expressions are. "Merida!" Why, there is no such word anywhere in the whole work of the Grange. It is altogether a new invention. Where in the world such a crazy thought came from it is hard to tell, unless it be that the first person who used the absurd expression meant to say Priests of Demeter. You know Brother Grosh uses this expression several times in his attractive "Mentor," published for general use, (pp. 331 and 337,) where he gives some explanation of the seventh degree. Demeter, you know, is the Greek for Ceres, by whose name the seventh degree is called. For one I cannot see why any of our members should worry themselves much about these high degrees. They really amount to very little, one way or another, except as a means of teaching very beautifully some of the best lessons in which life is constantly schooling us. In proof of such facts we need only remember that out of the 13 days' session only about two hours were spent in the sixth degree, and about as long a time another evening in the seventh. Nearly all the session was in the fourth or business degree of the Order, and all members of the fourth degree in good standing were present when they wished to attend.

The view that it is a good plan to "let well enough alone," and to retain those features of the Order under which it has so grown and prospered, seems to be prevailing in the National Grange and in subordinate bodies. Surely there are much more important matters for the Patrons of Husbandry to occupy their attention with than this constant "tinkering" with the Constitution, which has made us what we are. Regarding

### The Important Question of Co-operation.

Not in the mere sense of acting together, but as a safe and well matured business system the great mass of our members are beginning to look upon it with decided favor—especially in its use for local, State and inter-State trade. Others do not yet see their way so clearly in that higher and future development of co-operation, which seeks to apply the same principles to part of that immense trade between us and other nations, which has long existed, and will always exist, whether our Order ever looks after its interests in it or not. Very many of our members and papers favor such an enterprise, when they think we are ready for it. This is all right; we must first prepare for it. Most of those who oppose it do so either because they do not yet understand it or are opposed to the Grange engaging in any trade in any form, or are really in the interests of trade and capital, rather than of our farmers. A few oppose it from blind and bitter personal prejudices which they cannot rise above in considering the interests of our brotherhood. Though some of these opposers have never examined enough into the matter to really know what is proposed and how it can be done, just say "international co-operation" to them, and it makes them as rabid as it does a mad dog to show him water. They rave and fume and give no good reason for it. Now, fellow Patrons, when you get full copies of the Proceedings of the National Grange, examine well what it recommends and see if you cannot find much sound sense and many practical suggestions in its acts. In weighing the work done, let us be guided by reason and common sense, not by passion and prejudice.

Fraternally, J. W. A. W.  
Louisville, Ky., Dec. 14th, 1876.

SACRAMENTO GRANGE.—EDITORS PRESS:—There will be a public installation of officers of this Grange with a harvest feast on January 13th, 1877, at 11 o'clock A. M.—Pioneer hall.

GEORGE RICE, Sec'y.  
Sacramento, Dec. 30th, 1876.

### Worthy Lecturer's Visits.

EDITORS PRESS:—Since last writing you I have visited Woodland, Sacramento, Yuba City and Chico Granges. At Woodland there was a greater attendance from adjoining Granges than from Yolo Grange, but while the numbers showed a lukewarmness and lack of interest in the Yolo Grange, generally those that were there, from their very active and earnest W. M., Brother Blowers, to all present, are alive in the Grange work, and gave good evidence of coming fruitfulness in the Grange future. I received here marked attention from all, evincing the true spirit of Grangers, and passing a night with Brother Blowers in his most comfortable and well appointed home, I was greatly gratified and instructed as well as most comfortably entertained by his wife and family. I wish every farmer's home could exemplify as well what a Granger's home ought to be as Brother Blowers's.

From Woodland I went to Sacramento, and on Dec. 19th addressed Sacramento Grange in the afternoon, and held a meeting for improvement in the secret work in the evening. Here I met our Worthy Deputy, Brother Overhiser, from Stockton, with visiting brothers from Elk Grove, Florin, Enterprise and Cosumnes Granges. We had a very interesting meeting, as after an address of an hour and a half from the State Lecturer we had five to 15-minute speeches from a large number of the brothers. W. N. Hancock presided, and was in his best mood, and made all feel at home in the Sacramento meeting. The evening meeting was productive of great good, as Brother Overhiser, the Deputy from Stockton district, was perfectly posted in all that pertained to the secret work, and it was very profitable to compare notes when so many masters of different Granges were together. Here was living evidence from both brothers and sisters that this portion of the State is alive to the Grange interest.

From Sacramento I went to Yuba City, there meeting Patrons from Marysville, Wheatland and North Butte Granges, and where we had a most interesting time. Brother Ohleyer, of Yuba City, presided, and opening with appropriate instrumental and vocal music, my address was listened to with rapt attention for nearly two hours, when short addresses were made by many of the Patrons present from both Yuba and the visiting Granges. On my arrival I was taken care of by Brother Ohleyer, and after the meeting by Brother Smith, the W. Lecturer-elect, who the next day gave me a ride of 30 miles through the best portions of Sutter county, visiting Granges and doing Grange work. Yuba City Grange is alive and already doing a warehouse business that commands not only the confidence, respect and business of Grangers, but of this whole community.

From Yuba City I came here to meet with Chico and Nord Granges; found Nord out in force, but Chico too much engaged in getting ready for Christmas. To make up for lack of interest in Chico Grange we had a representation of Evening Star Grange, from Nelson station, in Brother Nelson, and with those from Nord showing a true Grange spirit, with Brother Thorpe, of Chico Grange, presiding, we had a pleasant meeting.

Here ends my labors as State Lecturer for the year 1876, but only to till the appointments already made for half the month of January, 1877, with private calls from Vallejo, Santa Rosa, St. Helena, Healdsburg, Ukiah, Nord, Colusa, and many others, which our Brother Secretary must try and get into some of his future appointments.

So the Grange work goes nobly on—not dead nor sleeping as its enemies reported it, but alive to its great and good results; and at this rate of growth, by the meeting of the State Grange in October next, will call for alliance and co-operation with all industrial associations of our State, so as to become that good and great benefactor to the labor interest, and the great equalizer of capital and labor.

Yours fraternally,

B. PILKINGTON,  
Chico, Dec. 23d. State Lecturer.

### From the Granges.

#### Plymouth Grange.

EDITORS PRESS:—Our people up here do not seem to appreciate the real objects to be attained by belonging to and working in the Order. Many of the members seem to lack in energy and perseverance to accomplish the desired results. This has a tendency to make our meetings dull and uninteresting. We are in need of a good, healthy lecture to awaken an interest and point out the evil results of non-attendance. Yours truly, S. C. WHEELER, Sec'y.  
Plymouth, Amador Co., Jan. 1st, 1877.

#### Santa Clara and Saratoga Granges

EDITORS PRESS:—The officers elect of Santa Clara Grange will be installed on second Saturday, 13th of January, at 1 p. m. The installation will be public. Saratoga Grange will join forces with us by consolidation, and deliver up their charter to State Grange. I have discouraged this resolution during the last year; but as Santa Clara is a more central point, to which place many of the Saratoga folks go every week, and for other reasons, that Grange will join us on the occasion of our installation.

I. A. WILCOX.  
Santa Clara, Dec. 30th, 1876.

### Election of Officers.

ANTIUCH GRANGE, No. 145, CONTRA COSTA Co.—M. A. Walton, M.; W. J. Smith, O.; Josiah Wills, L.; W. W. Smith, C.; Wm. Darby, S.; Seth Davison, A. S.; Wm. Sellers, G. K.; S. Broacher, T.; Mrs. J. C. Smith, Secretary; Mrs. J. H. Dean, Ceres; Mrs. Olive Veal, Pomona; Mrs. Olive Laverly, Flora; Miss T. Walton, L. A. S.

COTTONWOOD GRANGE, No. 116, MERCED Co.—Election, Dec. 16th: J. L. Crittenden, M.; E. L. Sturgeon, O.; A. Ewing, L.; S. Ewing, S.; R. M. C. Hale, C.; C. S. Johnson, T.; J. J. True, Sec'y; E. F. Hale, A. S.; W. T. Bradley, G. K.; Mrs. M. Gardner, Ceres; Mrs. F. W. Ralley, Pomona; Miss Letitia Tinnin, Flora; Miss L. True, L. A. S.

DENVERTON GRANGE, No. 123, SOLANO Co.—Election, Dec. 8th: R. H. Barkway, M.; W. D. Merrill, O.; John B. Carrington, L.; Wm. Spencer, S.; C. Garfield, A. S.; J. H. Bullard, C.; Mrs. Merrill, T.; John Bird, Secretary; G. T. Stewart, G. K.; Miss Mary E. Cook, Ceres; Mrs. O. D. Arnold, Pomona; Mrs. Wm. Spencer, Flora; Mrs. Jane E. Stewart, L. A. S. Trustees—John B. Carrington, Oscar D. Arnold, John Bird.

FERNDALE GRANGE, No. 102, HUMBOLDT COUNTY.—Election, Dec. 16th: F. Y. Boynton, M.; James Smith, O.; J. D. Ferrell, L.; D. H. Langston, C.; J. Criss, S.; Wm. Flowers, A. S.; J. Baldwin, T.; E. C. Damon, Sec'y; W. V. Woodridge, G. K.; Julia Branstetter, Ceres; Martha Woodridge, Pomona; Mary Dungan, Flora; Ethel Minar, L. A. S.; Trustee, R. J. Bugbee.

FRANKLIN GRANGE, No. 147, SACRAMENTO Co.—Election, Dec. 16th: Wm. Johnston, M.; W. S. Runyon, O.; H. T. Huggins, L.; J. B. Bradford, S.; P. B. Bradford, A. S.; J. W. Moore, C.; P. R. Beckley, T.; Mrs. S. G. Bradford, Sec'y; Thomas Anderson, G. K.; Mrs. Amanda Moore, Ceres; Mrs. Mary H. Runyon, Pomona; Miss Belle Johnston, Flora; Mrs. Hannah P. Flexman, L. A. S.

LOMPOC GRANGE, No. 248, SANTA BARBARA Co.—Rev. J. W. Webb, M.; Rev. E. H. Elkins, O.; Sebern Steele, Sec'y; Henry Summers, T.; Wm. Jackson, L.; Joshua Barker, S.; J. Shriner, A. S.; Miss Susan Barker, L. A. S.; John Olinger, C.; A. Albey, G. K.; Mrs. J. B. Pierce, Ceres; Mrs. H. Heacock, Flora; Mrs. Shriner, Pomona. Trustees were elected as follows: Wm. Jackson, three years, E. H. Heacock, two years, and J. B. Pierce, one year.

LOWER LAKE GRANGE, No. 77, LAKE COUNTY.—James A. Harris, M.; Mrs. Lena Voight, O.; Mrs. Lena Harris, L.; J. D. Hendricks, S.; C. L. Wilson, A. S.; Mrs. J. D. Hendricks, C.; James Chrisman, T.; H. Winchester, Sec'y; David Voight, G. K.; Mrs. L. Winchester, Ceres; Mrs. Emma Kouns, Flora; Mrs. E. Morrell, Pomona. Thomas Morlan, Trustee, vice James Chrisman.

PLYMOUTH GRANGE, No. 232, AMADOR Co.—Election, Dec. 9th: Chester Perry, M.; Hugh H. Bell, O.; Susie Choate, L.; Isaac W. Whitacre, S.; Simpson B. Newman, A. S.; Sophia Horton, C.; Eleazer S. Potter, T.; S. C. Wheeler, Sec'y; James F. Gregg, G. K.; Amy Perry, Ceres; Charity Rickey, Pomona; Mary A. Mathews, Flora; Sarah J. Sallee, L. A. S.; James Rickey, Trustee.

POMO GRANGE, No. 216, MENDOCINO Co.—Election, Dec. 9th: B. Pemberton, M.; Wm. V. Kilbourn, O.; L. T. Yount, S.; John McWhinney, A. S.; M. P. Goforth, L.; D. Woolver, C.; T. W. Dashiell, T.; E. V. Jones, Secretary; Alfred Woolver, G. K.; Mrs. Mary Brown, Ceres; E. Woolver, Pomona; R. C. Yount, Flora; Miss Jennie Deselin, L. A. S.

POPE VALLEY GRANGE, No. 197, NAPA Co.—Election, Dec. 16th: C. A. Boothe, M.; P. H. Wallace, O.; R. S. Hardin, L.; W. A. Wallace, S.; J. B. Duvall, A. S.; J. Boothe, C.; Jesse Barnett, T.; Sallie Bayne, Sec'y; H. K. Grotzgueth, G. K.; Mrs. R. S. Hardin, Ceres; Mrs. J. A. Vau Arsdale, Pomona; Mrs. J. A. Horrell, Flora; Mrs. Annie Dollerhide, L. A. S.; E. Kean, Trustee.

POTTER VALLEY GRANGE, No. 115, MENDOCINO Co.—Wm. Eddie, M.; S. H. McCreary, O.; E. L. Maze, L.; B. P. Whitney, S.; Lyman Engleman, A. S.; H. W. Baker, C.; S. L. Foster, T.; Taylor Vann, G. K.; Mrs. A. H. Slingerland, Sec'y; Mrs. Laura Lierly, Ceres; Mrs. H. W. Baker, Pomona; Miss Ella Burkhardt, Flora; Mrs. Jane E. Carnes, L. A. S.

RAISINA GRANGE, CENTRAL CALIFORNIA COLONY, FRESNO Co.—Election, Dec. 23: Bernhard Marks, M.; T. W. Bartholf, O.; George Rowell, L.; James W. Hingley, S.; Thomas O. Butler, A. S.; John Ritchie, C.; Wm. Muller, T.; Albert Rowell, Sec'y; James Hansen, G. K.; Mrs. S. C. Booth, Ceres; Nancy Booth, Flora; Mrs. Bernhard Marks, Pomona; Mrs. Richard White, L. A. S.; Trustees, Richard White, Gustaf Eisen, Mrs. Hannah Sewell.

RINCON GRANGE, No. 227, SAN BERNARDINO Co.—Election, Dec. 2d, 1876: H. C. Brook, M.; T. B. Walkenshaw, O.; John Gregory, L.; R. W. Rives, S.; W. R. Lovick, A. S.; J. M. Hathaway, C.; S. B. Mathews, T.; John Taylor, Sec'y; John Arbon, G. K.; Beatrice Gregory, Ceres; Caroline Mathews, Pomona; Mrs. Josephine Stanfield, Flora; Eliza Gregory, L. A. S.; W. T. Stanfield, Trustee.

RINCON GRANGE.—EDITORS PRESS:—We would like to have the Worthy State Lecturer visit our Grange.

JOHN TAYLOR, Sec'y Rincon Grange.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**DITCH.**—*Independent*, Dec. 30: The irrigating ditch that runs from Niles to Centerville and beyond will be capable of conferring immense benefits upon many farmers this winter, and its capacity and extent may be so enlarged as to aid a great many more, who do not now think of trying to avail themselves of its advantages. The reservoir can be enlarged and the ditch extended so as to accommodate a great many who are now beyond the reach of its friendly waters. We hope to see it utilized to the greatest extent possible by all in need.

**SQUIRREL KILLING WITH GAS.**—E. H. Dyer, of this county, after experimenting for years, has discovered that by a combination of charcoal, sulphur and coal tar a gas is produced that causes instant death to squirrels and gophers. The process is simple, effective and cheap. A small furnace is required, with a blower attached. A pipe is attached to the blower by a flexible joint that can be adjusted to enter the squirrel-hole. The machine is mounted on a common wheelbarrow, which, together with material sufficient for a day's use, will only weigh a few pounds. A charcoal fire is kept constantly burning in the furnace. The sulphur is mixed with the coal tar, and, after the machine is set at a hole, about a tablespoonful of the mixture is put into the furnace and the blower started, which will force the smoke through all the holes connected therewith. As soon as smoke is seen issuing from a hole stop it up tight. Set the machine at every hole that you cannot force smoke from. Stop all holes tight as soon as they are filled with smoke, and you will have every squirrel. Machines can be obtained at W. T. Garratt's brass foundry, Fremont street, San Francisco, for \$25; coal tar of any dealer in paints and oil, or at the gas works, for 25 cents per gallon; sulphur of wholesale druggists for six cents a pound; charcoal at any coal-yard, at \$1 a sack. Material for 100 acres will not cost over \$4. It requires two men to work to advantage; one with the machine, and one with a long-handled spade with a heavy iron ring on the end of the handle to tamp the holes with. Any person desirous of seeing the machine in operation and witnessing the effect can do so by visiting Mr. Dyer's farm near Decoto station.

## COLUSA.

**CROPS.**—*Sun*, Dec. 30: Grain is looking better everywhere than people expected it would, with no rain for over two months and so much frost as we have had. The summer-fallow that was sown before the October rains is up and doing very well. The frost has given the volunteer a yellow cast, but there is no danger of its drying with rain any time in the near future. On summer-fallow land the ground is wet clear down, and spring rains will make crops. There have been any number of seasons when we have had rain in November and December that the ground was not nearly so wet as it is now, and when crops were not looking so well at this date. We have seen good crops raised when the ground was not wet over an inch or two on the 1st of January. It may be that some seed sown just at the wrong time has rotted in the ground—especially when it was soaked a good while in bluestone water before it was sown, but from all we can learn the damage from this source is comparatively small.

**GEESSE AND DUCKS.**—Geo. Hoag bought, the other day, 10 kegs of powder, for the purpose of having the geese on his place killed. He has 10 men constantly at work shooting them. Mr. Clark, who owns a place near Dunigan's, says that the ducks are worse than the geese down there, and they spread over the fields at night and destroy the grain. Farmers there have to keep men out with lanterns at night to scare the ducks away.

## KERN.

**STOCK LOSSES.**—*Californian*: We regret to learn of the serious loss of our popular citizen, Mr. John G. Dawes, who left here two weeks ago with his flock of 2,000 sheep for the north. While crossing the alkali lands near Tulare lake he camped for the night, and in the morning when he awoke he saw his sheep all lying down but one, and on examination found that there was but that one alive. They had all quietly died in the night; a loss of more than \$5,000. The Frenchmen who moved southward with their 7,000 sheep last week, are losing about 50 head per day, and should a cold storm come on while the flock is in its poor condition, it is most likely all would die in a single night.

## LOS ANGELES.

**BEE-KEEPERS' MEETING.**—*Herald and Express*: The Bee-Keepers' Association met on Saturday, December 16th, at Mr. Binford's office, on Court street, Los Angeles. On motion, Mr. N. Levering was chosen Chairman. Mr. Levering stated that lumber for bee-hives could be had at Santa Monica at \$26 and \$37.50 for rough and dressed respectively, and that he expected the lumbermen there would soon be able to furnish material for frames. He also said that he hoped within a short time to complete arrangements for furnishing extractors and honey-tanks at reduced rates. The following officers were then elected for the ensuing year: President, A. J. Davidson; Vice-Presidents, Pleasants and Muth-Rasmussen; Secretary, N. Levering. The thanks of the Association were tendered Mr. Wm. Muth-Rasmussen for the able manner in which he had dis-

charged the duties of his office as secretary. **MERCED.**

**THE CHANCES.**—*Valley Argus*, Dec. 30: While it is true that but little rain has fallen in the valley this fall, experience teaches us that with a reasonable amount of rain during the months of February, March, and April, fair crops may be harvested. It is true that there will probably be a loss of seed on summer-fallow and volunteer fields, but prudent farmers know that such misfortune need not be fatal to crop prospects, as the lands can be re-sown either before or after the rains commence. Wait yet awhile before you give up; for with the varied and boundless resources of our State none need fear a famine. A dry season would cause the people to utilize the waters flowing from the mountains for agricultural purposes, and also the now waste tule lands of the San Joaquin, Sacramento, and other great valleys of the State. Let us ever make the most of the resources we have and all will be well with us, even though no rain should fall until the 1st of February. There is a plentiful supply of grain and meat in the State for the subsistence of the people of the State for another year, even if there should be no harvest, or a very light harvest in 1877, and the alarm need not be sounded until the winter months are spent.

## MENDOCINO.

**CROPS IN POTTER.**—*Democrat*, Dec. 23: We are told the ground in Potter valley is in excellent condition. Taking a surface view of some of it, it would seem to be hard, but turning over an inch or two it shows up all right. Prospect for grain good.

## MONTREY.

**BOUGHT A FARM.**—*Index*, Dec. 30: Mayor H. S. Ball, of Salinas City, has just purchased of Messrs. Sherwood & Hellman 166 7-10 acres of land, paying therefor at the rate of \$60 per acre, or a total of \$10,020, cash down. It is situated about a mile and a half from Salinas, opposite Perry Jack's farm, and between those owned by the McKinnon Bros. and Mr. Lynn. In this purchase Mr. Ball has secured one of the finest pieces of land in the valley, and at a very reasonable figure, too. We would be glad to see a general cutting up of the large tracts of land in this valley into small farms and offered for sale on terms that would bring them within the reach of men of moderate means.

## NAPA.

**SCALPS.**—*Register*, Dec. 30: Those very useful men, the squirrel hunters, have been reaping a bountiful harvest this month at the expense of the squirrels. During the week beginning December 20th and ending December 27th, about \$400 worth (in bounty money) of scalps have been brought in to Napa. Squirrel scalps alone do not form the whole stock of any hunter. He always manages to bag a few 'coons, polecats, and those industrious but destructive animals, gophers. A drive through any country district during harvest season, or later, would make one think that an epidemic had fallen upon the squirrel tribe, so many are seen lying dead. But a glance at the animal's head shows where the hunter has left his mark. In spite of the large number killed every month the little animals are by no means exterminated, though their number has been greatly lessened.

## SACRAMENTO.

**FLORIN.**—*Record-Union*, Dec. 29: The soil at and about Florin is peculiar. What is called bedrock or hard-pan is reached at the depth of from three to five feet. In the dry season of 1863 Florin produced first-rate hay, grain and fruit crops, which is accounted for on the theory that the hard-pan does not allow the passage of what moisture the soil may possess. Abundant supplies of excellent water can be obtained at depths varying from 14 to 45 feet. After reaching the stratum of quicksand, the water will rise in the well to within six or 12 feet of the surface, and will retain its high with but little variation throughout the year. After boring these wells, no piping or curbing is required. Two men can easily bore a six-inch well in from a foot to a day and a half, according to the depth. It is estimated that there were raised at Florin last season at least 3,000 tons of grapes. Table grapes were not sold at less than \$40, while wine grapes brought from \$8 to \$9. Twenty-seven tons of raisins were made from the White Muscat, and 60 tons, while in process of curing, were ruined by the October rain. With the advent of rain there will be from 30 to 40 more acres set out in strawberries.

## SAN JOAQUIN.

**TULARE LAKE TO ANTIOCH.**—*Ledger*, Dec. 23: The surveying party under Chief Engineer Hall, of the West Side survey, arrived at Antioch on Wednesday evening, having completed the line of survey from Tulare lake to tide water at this place. The party commenced operations about the first of September, and have been continuously in the field since that time. The weather has been most favorable for the work, and the party, consisting of 23 men, has enjoyed remarkably good health. They report the residents along the line, with few exceptions, as being unanimous in their expressions favoring some plan of irrigation, as upon this they base their hopes of permanent prosperity as regards agricultural operations. The only remaining work in the field is to take the soundings of Tulare lake, which will be done by Engineer Hall in company with the commissioners. A full report will be made to the Governor by the first of March next, as required by law.

## SAN BENITO.

**MARKS OF DROUTH.**—*Enterprise*, Dec. 23: We hear it remarked that it is too soon to croak,

that if we get copious rains before January 1st, all will be well. We admit all this, yet we cannot close our eyes to the truth that seeding is at hand, and feed is getting distressingly short. Perhaps one-tenth of the acreage intended to be cultivated the present season has been dry sown, but the seed remains in the ground unsprouted and will so remain until enough moisture falls to bring it up. In this regard this county is probably much better off than some of the northern localities of the State where rain fell bountifully in the fore part of the season, but subsequently dry weather has prevailed and is killing the growth.

## SONOMA.

**CROP PROSPECTS.**—*Democrat*, Dec. 30: We learn from farmers generally in the county that the prospect for the coming harvest was never more favorable at this season of the year than it is at present. The first rains in October thoroughly softened the ground and placed it in most excellent condition for plowing and sowing. The fair, delightful weather since that time has enabled farmers to push their work without interruption, and perhaps there has been more grain sown than ever up to this season, and as a general rule it has been put in in better condition. That sown early is now several inches high, and, notwithstanding the frequent frosts, is stout and growing finely.

**FARM NOTES.**—Alex Stiles informs us that most of the wheat land in the vicinity of Geyserville has been plowed and sowed. A little rain would be acceptable about this time. A man named Wyckoff took a number of hogs to fatten on the shares and turned them into his vineyard; he says that hogs fatten on grapes more quickly than upon stubble. Quite a number of persons fed their grapes to hogs on account of the low prices that ruled last fall. It is a great pity, for we believe that the grapes of that section will make the best wine in the State. John Gallagher, of Anala township, was in Santa Rosa Thursday. He informs us that there is no pressing need for rain in that section yet. The wheat sown looks well and some farmers are still planting. The fruit raisers generally are setting out fruit trees to enlarge their orchards.

G. N. SANBORN has been clearing up a tract of willow land on the Laguna. It makes, when ready for the plow, the best hop land in the State. Mr. Sanborn will set out a hop field on his place, and will doubtless make as great a success as others in the same neighborhood have done. The hop crop on the Laguna was not quite as good as usual, but was sold at remunerative prices.

J. H. OVERTON, of Vallejo township, informs us that the grass in that section is exceptionally good. He never saw it better for the season. There has been more grain sown in Vallejo township than ever before known. All the grain that is up looks well, and a light shower would bring up all that has been sown.

## SANTA BARBARA.

**NOTES IN REPLY.**—*Santa Barbara Press*, Dec. 23: "Santa Barbara county" is the subject of a readable letter signed "Wabois," in the last issue of the *PACIFIC RURAL PRESS*. The correspondent makes an argument endeavoring to prove that fruit-growing in this county has been unduly stimulated, and that the pursuit has not made the county as prosperous as fine stock-growing would have done. We differ from the correspondent, and think it might be "difficult to realize" how the business of growing fine cattle and horses, if widely adopted by our husbandmen, would prove invariably or even generally profitable. We are not convinced that the margin of profit on dairy products is so large in this region as to make the pursuit desirable above other branches of farming. And as for fancy stock-breeding, it must be apparent upon a little reflection, that that is a luxury which small farmers in this section could not generally indulge themselves in with financial safety, because, in the first place, it requires much means to set up an establishment of that kind; and, in the second place, the demand for fine animals of any kind for breeding or other purposes is not sufficiently great in the adjacent thinly-populated pastoral region, upon which our breeders would have to draw for a market, to justify and stimulate a large production. We cannot think that our people have made any mistake in the matter of planting fruit-trees of any good kinds. It is well that the foundation for an extensive business in this department of husbandry has been laid so broad here. The results will tell in good time. Patience and work are necessary before the full harvest is reaped. The fact that exaggerated estimates of the profits to be realized from the culture of almonds, olives and walnuts in Santa Barbara were made by enthusiastic and theoretical cultivators "in 1868-69-70 and years following," is no sufficient argument against the fair and reasonable success which has been achieved in actual experience. Nobody has a right to expect a profit of \$900 or \$400, or even of \$240 per acre from the culture of any of these fruits, year after year, through thick and thin. But a profit of considerably over \$100 per acre has been and can be realized. This is demonstrated by the careful statement of Mr. Olmstead, published in the *Press* on the 9th inst., showing the actual results of his operations in almond culture. This is good enough.

## VENTURA.

**BEE RANCH.**—*Signal*, Dec. 30: Mr. Nathan Shaw, a brother of Henry Shaw, of this place, late of Omaha, has made arrangements to establish an apiary in the Canada Larga, having purchased all the hives of Mr. D. Roubush. Mr.

Shaw has had experience in bee-keeping, and will doubtless succeed.

**DRY WEATHER.**—Some alarm is expressed by those not long in the country that we will have a dry season and a failure of crops. It should be remembered that our soil a few inches down is very moist, and a small amount of rain will do the coming season. Old feed is still abundant and hay is cheap, and many farmers have taken the precaution—which all should—of saving their straw piles, in which there is much good feed. No danger need be apprehended in this part of the country if rain does not come till the 15th of January. Preparations should be made, however, for a dry season, irrigating ditches should be put in order, so the land under them may be flooded this winter.

## STANISLAUS.

**CONDITIONS.**—*News*, Dec. 29: The young grain that is already up is holding on to life with a tenacity most remarkable, when the great length of time without rain we have had is considered. This is produced no doubt from the fact that we have had little or none of the usual dry northwest winds, which usually sweep over our plains during periods of winter drouths. Many of the farmers have been compelled to suspend plowing and are feeding large teams of horses and mules that are lying idle at a heavy expense. Live stock, where the pasturage is not abundant, has already begun to suffer. Each day they are, in such cases, becoming weaker, and should they have to pass through cold, heavy rains, thousands would die before the growth of young grass would be sufficient to save life. Certainly the outlook is not flattering. True, there is yet time for sufficient rain to produce an abundant grain crop. The difficulty, however, will be in plowing and seeding the large fields that are cultivated in this locality. There will certainly be a diminution of the acreage sown to grain. Still what fields will be cultivated with late spring rains may produce heavy crops.

## YOLO.

**THE OUTLOOK.**—*Mail*, Dec. 29: Christmas has passed and still the earth is dry. The summer-fallow wheat fields look green and thrifty, but the volunteer, the dry-sown, and that planted in the fall-plowed ground needs rain badly. The sky has been overcast with light clouds for several days. A bright ring around the moon was visible on Monday night, but all these signs have not given us any assurance of rain. We believe there are some of our farmers who still have hopes of plenty of rain, and there may be a regular flood before many days, and we really believe there will be.

## Oregon.

**FARMING ITEMS.**—*Oregonian*, Dec. 23: The *Dispatch* says: Seattle is no bad place for farmers to bring their produce. A Lewis county farmer stayed there three days this week and sold 1,160 pounds of home-cured bacon, 1,040 pounds of domestic cheese, 400 pounds of butter and 120 of lard, besides a big lot of eggs. The *Douglas County Independent* says: A majority of our farmers are about through plowing for the season, and are now nearly prepared to lay aside care and labor until spring arrives. There is no doubt that there has been a larger acreage of grain sowed in this county this fall than ever before. In many places wheat and oats are up and growing finely. The *Polk County Tribune* says: There has been more wheat sown the past fall than has been for several years past, we are informed. The weather has been unusually good for fall and winter sowing, and a very large acreage has been seeded. The grain sown early in the fall is up and looks well, while the grain put in the ground in the early part of December is also up. The farmers are very busy plowing their lands now, and have been for some time. From present appearances the yield of grain in Polk county next harvest will be very large. W. Waterhouse, writing to the *Willamette Farmer* from Polk county, intimates that Oregon potatoes are small now compared with the productions of pioneer days. He says: I noticed the article of J. B. Dimick, on potatoes, in which he says he raised one weighing six and three-quarter pounds, and five pounds is the largest that Bliss has any record of. Now, that is behind time, for in the fall of 1852 there was a potato raised on Tualatin plains, in this State, Washington county, on the place owned by H. Lindsay, now of this place, which weighed eight pounds, variety, Blue Neshanock. Again, in Marion county, there was some years ago, same kind, weight, eight pounds. Later, there was one raised one mile from here, same variety, weighing seven and one-half pounds. I saw it weighed. This year there was one raised about six or seven miles from here weighing seven pounds.

THE British fleet has withdrawn from Turkish waters. One correspondent says this has no political significance. Another says it is because the Sultan, in an interview with the Marquis of Salisbury, definitely refused to accept the proposals formulated by the Powers.

THE managers of the trunk lines have decided to advance the rates on grain and fourth-class freight between Chicago and New York five cents, making the rate 35 cents on grain and 40 cents on fourth-class.

THE late heavy gales on the English coast have caused very great damage. A number of marine disasters are reported.

THE Sierras have never been so bare of snow, in the beginning of January, since 1849.





### The Herons of Elmwood.

[By HENRY W. LONGFELLOW.]

Warm and still is the summer night,  
As here by the river's brink I wander;  
White overhead are the stars, and white  
The glimmering lights on the hillside yonder.  
Silent are all the sounds of day—  
Nothing I hear but the chirp of crickets,  
And the cry of the herons winging their way  
O'er the poet's house in the Elmwood thickets.  
Call to him, herons, as slowly you pass  
To your roosts in the haunts of the exiled  
thrushes;  
Sing him the song of the green morass,  
And the tides that water the reeds and rushes.  
Sing him the mystical song of the heron,  
And the secret that baffles our utmost seeking;  
For only a sound of lament we discern,  
And cannot interpret the words you are speaking.  
Sing of the air, and the wild delight  
Of wings that uplift and winds that uphold you  
To joy of freedom, the rapture of flight  
Through the drift of the floating mists that en-  
fold you;  
Of the landscape lying so far below,  
With its towns and river, and desert places;  
And the splendor of light above, and the glow  
Of the limitless, blue ethereal spaces.  
Ask him if songs of the troubadours,  
Or of minstrelsy in old black-letter,  
Sound in his ears more sweet than yours,  
And if yours are not sweeter and wilder and  
better.  
Sing to him, say to him, here at his gate,  
Where the boughs of the stately elms are meeting,  
Some one had lingered to meditate;  
And send him mused this friendly greeting:  
That many another hath done the same  
Though not by a sound was the silence broken;  
The surest pledge of a deathless name  
Is the silent homage of thoughts unspoken.  
January Atlantic.

### Woodside Papers—No. 8.

[Written for the RURAL PRESS by J. E. JAMESON.]

"There wife, you are going to have company," said Mr. Payson one morning a short time after Mrs. Payson's conversation with Mrs. Towne. "There's neighbor Wendall's son, and, as most of the callers come to see you lately, I suppose I might as well depart in peace; though, as poor Mr. Peters would say, 'Tisn't human nater fur a poor hen-pecked husband like myself to go on my way rejoicing.'" So saying, Mr. Payson proceeded very meekly to take down his hat, when suddenly he found himself sitting in an easy chair, while his wife shook her finger at him and exclaimed, "The idea! You pretending to be a hen-pecked husband! Now, you may just sit there and entertain Mr. Wendall, while I go and make my pies." But before Mrs. Payson could leave the room, Clarence Wendall entered, and throwing himself upon a chair, exclaimed, "Would you believe me if I told you that my good mother had turned me out of house and home?"

"Well, young man, that might have happened long ago, if you had had what you deserved," said Mr. Payson, putting on a very long face, though his eyes twinkled mischievously.

"There, there, Kendrick, he will think you are in earnest. What is the trouble, Clarence?"

"Oh, my mother is going to have a lot of company, and she told me this morning that there was a good house standing empty, and if I were married and living in it she should have more room for them. She repented, of course, but it hurt my feelings fearfully. What shall I do, Mrs. Payson?"

"Now, Clarence Wendall, you know what I think about it. They say that,

"The gude or ill-hap of a gude or ill life  
Is the gude or ill choice of a gude or ill wife."

And you know that I think Emma Moulton would make a gude wife, and if I were you I would occupy that house before many months."

"Well, Mrs. Payson, you are a wise woman, and I think—I will tell you what I think some other time. There is Mrs. Towne, and I guess I will take my departure."

"Oh, why didn't she wait until I got my pies made! Never mind, I will take her right into the kitchen. How do you do, Mrs. Towne, and how is your husband?"

"Ah, Mrs. Payson, I've great reason to be thankful, fur Eben has been at home every evening since I was here. I have tried hard to make it pleasant for him. I've worked over the stove and cooked just as good as I could, but its been hard work. There's pies, now! Eben's makin' fond of pies, but my crusts don't taste jest right. How do you make yours?"

"I make cream crusts when I have the cream, but I cannot spare it to-day, so I shall make hard crusts," said Mrs. Payson, vigorously sifting flour into a new tin dish. I want to make four pies, with two crusts each. I take as much flour as I can hold lightly in both hands, for a double crust. It is handy to make some such calculation, so that you may have enough, and

not much left over. Take a heaping spoonful of lard for each pie. Put in a teaspoonful of salt, one-half teaspoonful of cream of tartar, and a quarter of a teaspoonful of soda. Work in the lard with your hands, and add cold water until it is right to take upon the board and knead, as you want it. There! here is mine all made. Now I put on the under crust, letting it come to the edge of the plate; then put in the apple and sugar, a large spoonful of water, and a little nutmeg. Now, before laying on the upper crust, the edge of the lower crust must be wet, and when the upper crust is pressed down upon it, it will prevent the juice from coming out while it is baking. I have known old cooks who were greatly troubled because their pies would persist in losing the juice out in the oven, but I am never troubled, if I moisten the under edge. The under crust must be kneaded harder than the other, that it may not be soggy. For myself, I much prefer pies made without an under crust."

"I believe I must try to make some real nice pies. But there, I do feel so miserable in the morning that I can hardly drag around," said Mrs. Towne, mournfully.

"There must be something the trouble," returned Mrs. Payson. "I do not see why you should feel so miserable in the morning. How do you ventilate your sleeping-room?"

"What do you mean. Let out the air?" queried Mrs. Towne.

"Why, yes, and let the fresh air in."

"Oh! I leave the door open into the sitting-room," said Mrs. Towne.

"Do you have any windows open there?" said Mrs. Payson, cutting the edge of a pie-crust from the plate.

"No, it would let in the cold," said Mrs. Towne.

"Let in the cold!" groaned Mrs. Payson, "Isn't the air in the sitting-room the same that you have been breathing all the evening, and didn't you know that air that has been breathed already is poisonous?"

"Why, yes, I suppose the air has been breathed in the evening, but I didn't know it was poison," returned Mrs. Towne slowly.

"It is though," said Mrs. Payson with a great deal of energy, "and I do not wonder you feel miserable. Through lack of knowledge the people perish, but it is high time they were shaken up out of their old habits, and it is time, if they intend to have even a small portion of health left for old age, that they began to breathe pure air. Some wise body has said that the people's ignorance in regard to the human body is amazing to those whose stock of amazement has not long ago been exhausted in the contemplation of the stupidities of mankind. I cannot stop to explain all about the air, which is of one part oxygen and four parts nitrogen. But oxygen supports life. At every breath a half pint of blood receives its needed oxygen in the lungs, and at the same time gives out an equal amount of carbonic acid and water. This carbonic acid, if it goes into the lungs undiluted by sufficient air, is a poison, and causes certain death. When it has only a little air mixed with it it is slow poison, but sure. When a room is deprived of fresh air, and the breathing of those who are in it has deprived the air of oxygen and loaded it with carbonic acid, it is slow poison. In proof of this, we see mention made of the horrors of the 'Black hole of Calcutta.' One hundred and forty-six men were crowded into a room only 18 feet square, with but two small windows. After a night of terrible torture, there were 123 dead men, and 23 half dead. Also, in 1848, a captain shut up his passengers in a tight room without windows. Terrible groans, shrieks and curses followed, until at last the door yielded to their blows, when it was found that there were 72 of the 200 already dead, and the others were in convulsions, and were only brought back to lives of suffering. When I think of such horrors as these, all for want of fresh, pure air, which God has provided so generously, I think we are absolutely wicked when we close our doors and windows, and breathe, and rebreath, and breathe again the same old, miserable air, until one coming in from out-of-doors feels as though they must put a handkerchief over their breathing apparatus. You know it is a great help to put cotton over the mouth. Every person inspires air about 20 times each moment, and vitates about half a pint at each inspiration, and one hoghead every hour. Take a sleeping-room 12 feet square and seven feet in height, and two persons will vitiate the air in 50 minutes, four persons in 25 minutes. Just think of the sin they would commit in breathing the air over and over again, after the first few minutes. Convulsions or fits usually occur among children in the night, and are often caused by the impure air which they breathe. Parents, who would no more think of giving their children strychnine in regular doses than they would commit suicide themselves, are slowly poisoning those they love better than life, by excluding pure air from the rooms they occupy. It is the strangest thing in the world that people have so little sense upon this subject. I have lived for years in the same house with persons who had graduated from colleges and seminaries, and have sometimes had occasion to pass through their sleeping apartments after they had left them in the morning. Shades of our forefathers! What air those rooms contained! I would manage to get through by holding my mouth and nose; but it just made me ache to think, that for all their Latin, and Greek, and French, they did not know enough to last them over night—at least they did not seem to know enough to let in pure air. Carbonic acid is not the only poison there is in air. There are the pores

of the skin, or the perspiration tubes, which are constantly throwing off the dead particles from the system. These tubes, or openings, are so numerous that 3,500 of them have been counted in one square inch, on the palm of the hand. Each tube descends from the surface into the true skin and forms a coil, the whole length being about a quarter of an inch. Their united length would be about 75 feet to a square inch, or 28 miles over the surface of the body. Only think what a wonderful provision this is for carrying away the waste particles from our ever-decaying bodies. Carbonic acid has no odor, but the bad odor we perceive in a close room, where several have slept, is owing to these particles thrown from the lungs and skin. More than half we eat and drink, its nutritive part being used, is thrown out in this way, at least so those say who have studied the subject. A large portion of this waste matter remains on the skin, and the pores will take it back into the system, unless it is removed, as it should be, by bathing. There is another lack! How often do you bathe?"

"I don't know as I ever did more than a few times in my life," said Mrs. Towne, meekly.

Mrs. Payson groaned. "There, Mrs. Towne, I do wonder sometimes that we live at all. We take so little care of what health we have left when we come to the age when we have to take care of ourselves. We are not brought up to take good care of ourselves. But there's your little Eben coming for you, and I don't know what I have said or haven't said. Do come again, and I'll straighten it out."

### Our Grandfathers.

[Written for the RURAL PRESS by M. E. TUTTLE.]

In this Centennial year it is highly proper and right that we pay due respect to the memory and achievements of our forefathers. In an article in the PRESS entitled "Social Life," the author enlarges on the days of yore in comparison with the present degenerate times. We remember accurately the amount of work our grandmothers performed in the olden time; how economical in dress; how simple in habits; doing all the work for a large family, and tending a baby besides; and then doing the weaving in the old moments. While the woman of to-day in like circumstances—spend their time in idleness and foolish dress, riding in fine carriages and making fashionable calls. But while the virtues of our grandmothers stand out in such bold relief, he has strangely enough ignored even a reference to the part our paternal parents bore in this battle for an inheritance, and far be it from me to pass in silence this unjust omission. Might not some in their simplicity imagine that men had held the "even tenor of their ways," and that fifty years ago men might have been seen sitting in comfortable arm chairs in well furnished offices, clothed in genteel business suits, with polished white shirt fronts, with gold watch and chain, also a gold-headed cane and beaver hat within reach. Oh, no! I could not bear to think that some young person of to-day should picture to themselves their grandfathers riding about their farms in fine buggies with fast trotters attached while they superintended the Chinamen; or possibly rode around the field on gang plows, or sulky rakes, or reapers and mowers, and then declared it enough to kill a man to follow such employment. And again, it would be just like our boys to think that their grandfathers stood with their hands in their pockets watching a steam thresher put their cleaned grain into sacks; or that after all this arduous employment they went home and sat down to a table shining with silver and china, and ate roast beef and a variety of vegetables, with hot rolls and pie and pudding for dessert, and having their tempers sally soured if the children appeared with soiled faces or clothes or the house chanced to be in disorder.

No indeed, they must not harbor such a thought, and now I will tell a legend of the "olden time." While the care-worn mothers kept the house of one room in order and tended the children when they were not along with their fathers in the fields, or washed their scanty garments and cooked their meager meals, keeping the wheel and loom going at intervals; the fathers swung the grain cradle or the scythe all day long in the burning sun or raked the hay or bound the grain, wearing their homespun suits, wet, yea dripping, with the sweat of honest toil; and when winter came wielded the axe with steady blows all through the biting winter days, or grubbed at the matted roots and rolled the logs and piled the brush in the "clearing," not forgetting to thresh the golden grain on the threshing floor in the barn, where the steady blows of their well aimed flails were heard from morn till night for weeks together. And when night came they taught the children to read and write or do their simple sums, with many a lesson of truth and righteousness besides, or hushed the little ones to rest in their arms. They were up betimes, these men of iron frames, on the frosty mornings. The snowy back log was rolled into the wide fireplace, and like a dream there arises in my mind to-day a vision of blazing fagots and cheering warmth that tempted the sleepy eyes and tumbled curly heads from off the pillows of the trundle bed to father's

knee beside the hearth. And who tied the shoes and buttoned the flannel dresses snug and warm? 'twas father's hand; 'twas father's voice in quiet reproof when settling disputes about the warmest corner or the easy chair. Children were acquainted with their father in those days, not a person to dread and fear, but one to love and honor, who taught by example as well as precept, to whom it seemed natural and right to delegate the honor of being "head of the household."

Grandfathers as well as grandmothers had many faults, no doubt, but their patience and endurance and devotion to duty are bright examples for our instruction to-day. They had little time in those days for anything but the bare realities of life. To get a living honestly and decently for themselves and children was for many the highest aspiration. If to-day people have more time for self-culture and ease, let us be thankful for those great advantages. Few men would have their wives go back to the days when for a woman to read a newspaper was grievous idleness. There are "Mamah James" enough to-day who receive nothing but contempt for their ignorance, when that ignorance is but the result of years of faithful toil.

### A Lady Farmer of 1739

[Written for the RURAL PRESS by G. D. W.]

In Hewitt's Historical Accounts of South Carolina and Georgia, there are some very interesting articles on the early interest taken in developing the new country. From the journal of a Mrs. Pinckney, daughter of George Lucas, Governor of Antigua, and mother of Generals Charles and Thomas Pinckney of South Carolina, we find many items of note. Miss Lucas was only 18 years old when she was entrusted with the management of her father's plantation, and especially the planting interest. He sent her from time to time great varieties of seed to experiment with, and the first indigo that was grown in South Carolina came from this young lady's plantation.

The dates from her journal are as follows: "July, 1739. Wrote to my father to-day a very long letter of the plantation affairs; what pains I had taken to bring the indigo and ginger, cotton and lucerne, to perfection; and that I had more hopes of the indigo than the others."

Again: "August, 1741. Wrote according to custom to my father to-day, but this time particularly on the subject of cotton and the silk worm." We find also mention made of the silk she had spun from those very silkworms, that is still in existence. "A very rich satin damask is now in the possession of Mrs. Rutledge, of Charleston, to which the following memorandum is affixed: In 1750, Mrs. Pinckney took with her to England a quantity of silk spun from worms of her own raising at Belmont plantation, near Charleston, S. C. It was considered by the manufacturers equal to any importation from Italy. The quantity was sufficient to be woven into three dress patterns, one of which Mrs. Pinckney presented to the Princess Dowager of Wales, mother of George III., another to Lord Chesterfield, the third she brought to America."

One can scarcely refrain from exclaiming, why do we not possess more of the spirit of enterprise and self-independence that animated the noble woman character a century ago, in seeking to develop the best interests of our new country.

MORAL INFLUENCE. The influence of a good example is far-reaching; for our experience and conflicts with the world lead us at times to indulge misanthropic sentiments, and charge all men with selfish and impure motives. The play of pride, prejudice and passion, and the eagerness manifested by the great majority of men to advance their own interests, often at the expense of others, and in violation of the golden rule, cause us to look with suspicion on the best intents of others. Arrogance, hypocrisy, treachery and violence, every day outrage justice, till we are almost disposed to distrust human nature, and become discouraged. But amid all that is sad and disheartening in this busy, noisy world, now and then there is presented to us a life of such uniform virtue that we recognize in it a character that brings hope for the perfect development and ultimate regeneration of our race. Such characters are precious, and such examples should be held up to the world for its admiration and imitation; they should be snatched from oblivion and treasured in the hearts and thoughts of all who are in process of forming habits and maturing character.

CLIMATIC CHANGES IN RUSSIA.—The winters in Russia are becoming colder every year, and the summers hotter, more dry and less fruitful, owing, as is clearly stated by Livingston, to the destruction of the woodlands which formerly abounded in the southern districts. The clearing of these lands has caused such an enormous evaporation, that many once capacious water-courses have become mere swamps or are completely dry. The Dnieper becomes every day more shallow, and its tributaries are no longer worthy of the name of streams. The question of replanting has frequently been agitated, but the dried condition of the earth in many places in Southern Russia makes it a great difficulty. Energetic measures, however, are about being adopted to overcome this difficulty by scientific means.



## Caterpillars in Coal.

At the last ordinary meeting of the Derby Naturalists' Society, the *Colliery Guardian* says that Mr. A. H. Stokes produced a caterpillar which had been presented to him as a "find" in the coal, 61 yards deep, at High Moor, Eeking-ton. The man from whom he obtained it stated that, on splitting a piece of coal in the ordinary course of his labor, he discovered the insect curled up inside, and it being of a "blood-red color" it so alarmed him and others that, at first, they did not dare touch it. Eventually it was secured and taken to the daylight, where it proved its mortality by devouring voraciously some leaves. Although the spirit in which the insect had been preserved had tampered very much with the delicate epidermis, and had thus destroyed the coloring, yet it was soon recognized as the larvæ of the goat moth (*Cossus ligniparda*), the larvæ of which is supposed to be the "cossus" of the ancient Romans, by whom it was esteemed a great table delicacy. The insect appeared to be "full fed," and quite ready to form its cocoon, and this would account for the position in which it was found. How it came down the mine it is, of course, impossible to say. The ordinary home of the insect is in the wood of willow trees, where the pupæ are sometimes found, and it may have descended in the timber used in the mine, or it may have descended unobserved on some of the men's clothing. Some persons might doubt the ability of an insect to eat its way into coal. On this point, fortunately, we have ample evidence. A gentleman once placed some of these larvæ in a box, which he deposited upon the piano. He was rather surprised the next morning on finding that these industrious biters had gnawed their way through the box into the piano, and had evidently gone on a voyage of discovery into the interior. Prof. Henslow, writing to the *Zoologist* (vol. viii., p. 2,897,) says: "I placed half a dozen caterpillars of the goat moth in a glass jar, with sawdust and a piece of willow, and covered the mouth with sheet lead, which was perforated with an awl to admit the air. Three of the caterpillars were to-day crawling on the floor, and, on examining the jar, I found that they had effected their escape by gnawing the lead, having enlarged two of the perforations sufficiently to enable them to pass out of their prison." Now, an insect which can eat its way through lead and through walnut wood would not make a difficulty over a piece of coal. The larvæ of different species of *Dicranura* are similarly powerful in the jaw, and Mr. Stokes's insect was at first taken for one of this order.

## A Mother's Words.

A mother on the green hills of Vermont was holding by the right hand a son sixteen years old, mad with love for the sea, and as he stood by the garden gate one morning, she said:

"Edward, they tell me—for I never saw the ocean—the great temptation of a seaman's life is drink. Promise me, my son, before you quit your mother's hand, that you will never drink."

And said he—for he told me the story—"I gave her the promise, and I went the globe over, Calcutta and the Mediterranean, San Francisco, the Cape of Good Hope, the North Pole and the South. I saw them all in forty years, and I never saw a glass filled with sparkling liquor that mother's form by the gate did not rise up before me, and to-day I am innocent of the taste of liquor."

Was not that sweet evidence of the power of a single word? Yet that is not half.

"For," said he, "yesterday there came into my counting room a man of forty years."

"Do you know me?"

"No."

"Well," said he, "I was once brought drunk into your presence on shipboard; you were a passenger; they kicked me aside; you took me to your berth and kept me there until I had slept off the intoxication; you then asked me if I had a mother. I said I had never known a word from her lips. You told me of yours at the garden gate, and to-day I am master of one of the packets in New York, and I came to ask you to come and see me."

How far that little candle throws its beams! That mother's words on the green hills of Vermont! O, God be thanked for the mighty power of a single word.

MARKS OF A GENTLEMAN.—No man is a gentleman who, without provocation, would treat with incivility the humblest of his species. It is vulgarity for which no accomplishment of dress or address can ever atone. Show us the man who desires to make every one around him happy, and whose greatest solicitude is never to give cause of offense to any one, and we will show you a gentleman by nature and species, though he may never have worn a suit of broad-cloth, nor ever heard of a lexicon. We are proud to say, for the honor of our species, there are many men in every throb of whose heart there is solicitude for the welfare of mankind, and whose every breath is perfumed with kindness.

HAPPINESS is inborn. It is not an outward trait. It is generated in the soul. It is never bought or sold as an article of commerce. You may fill your house with all manner of beautiful and curious things, but you cannot lay in a stock of happiness in the same way. If you are happy, your happiness is that which you are able to make by the use of the mind itself.

## Young Folks' Column.

## Old Jenkins and Ben.

[Written for the RURAL PRESS by PHILMORE.]

Our schoolhouse stood out all alone,  
With a door in one corner so queer,  
With four little windows in front  
And four just the same in the rear.

A stone wall, topped out with a rail  
Was the boundary one side and no more—  
And that was to stop up a trail  
Where the children came 'cross lots before.

Old Jenkins, too mean to live well,  
He begrudged what others possessed;  
But he has gone, some say to—well,  
Say Kansas or somewhere out West.

He always contrived to annoy  
Every scholar that passed by his way;  
But chiefly he hated one boy,  
And that boy hates him to this day.

The schoolmaster, good of his kind,  
Felt bound to earn well his fee;  
To the faults of the wealthy was blind,  
But the poor boys' shortcomings he'd see.

Through a pond in the meadow a fence,  
All covered with ice and with snow;  
Some rails were missing from thence—  
Where were they, no one seemed to know.

At last the young culprit was caught,  
Or at least so old Jenkins maintained,  
And that was the boy who had nought,  
Of course he the best could be blamed.

The rascal was tried and condemned.  
Though forty more boys were along,  
He only was called to amend,  
For none of the rest could do wrong.

He was punished as boys ought to be;  
Whose parents are helpless and poor;  
The schoolhouse was built to be free,  
But this was too much to endure.

So a meeting was called to decide  
What was best to be done in the case.  
The result the poor boy must abide,  
And perhaps leave the school in disgrace.

Squire Blunt was the first to address  
The Trustees that were to conclude—  
Says he: "Mister Cheerman, I guess  
You won't mind if I sorter intrude;

"You see, I have knowed this 'ere boy,  
And I have some boys of my own,  
Some on 'em are g'in to destroy  
And some on 'em can let things alone.

"Now, the boys all played on the ice,  
Some thirty or forty, they say;  
So now, just take my advice—  
Let's see what amount is to pay.

"I have three, and Ben there is four;  
Ten dollars for damage they claim;  
I'll give one dollar or more,  
But all t'other boys are to blame."

Now Ben was the culprit to try.  
Looking up to Squire Blunt with a stare,  
The poor boy, commencing to cry,  
Said: "I told him the others were there.

"He told me I lied—called me names,  
Said he knew who broke down the fence,  
He had caught me, he said, at my games,  
And would teach me a lesson from thence.

"I ain't got no money to pay,  
But I'll work out my portion for you,"  
Said he to the Squire with joy,  
"If you've got any work I can do."

A purse was made up there and then,  
And received by "Old Jenkins" with joy;  
Given freely by sensible men,  
In justice, to help the poor boy.

Many years have since come and fled,  
Many changes have been, good and bad,  
Squire Blunt has long since been dead,  
But he lives in the heart of that lad.

Old Jenkins has not been forgot,  
Since he went—we do not know where;  
But whether he is happy or not,  
Ben knows not, nor yet does he care.

## The Horse Hospital.

There are several large horse residences in New York. They each have beds for hundreds of horses. Horses, like men, sometimes have their ill turns and fits of sickness; and the curious part of this is, that they take cold, and have sore throats and the rheumatism, and everything else that men are liable to have if they do not take care of themselves. So there is a doctor constantly on hand to look after the company, and to give them their pills and powders. The first sign that a car-horse exhibits of sickness is a slight lameness when at work. Do you think they whip him up and make him go faster? No; they take him right to the hotel, and call the doctor. The medical man looks wise, feels of the poor fellow's feet, and says he is feverish and must have a warm bath. So the doctor's assistant takes off the patient's shoes, and leads him to the hospital for lame horses. This is a cool and shady room in the basement, and filled with comfortable stalls, and each having a big tub of warm water. Here the lame horse with fever in his feet has a foot-bath of warm water and hay-seed. He has tramped many a weary mile over the stones of Third avenue, and the bath is grateful and comforting, and he holds his feet in it with resignation and patience, as if he felt sure that the wise doctor knew what was best. Then, after the fever has gone, the doctor's man dresses the patient's feet and wipes them dry, and the horse feels a hundred times better, and thinks he could try that long tramp down town again without misgivings. The shoemaker puts on new shoes, and the convalescent goes to his own room for a good supper and a night's rest, and to-morrow he will be all right again.—"The Horse Hotel," in *St. Nicholas*.

## GOOD HEALTH.

## Air for Infants.

We cannot lay down any rule with regard to exposing infants to the outer air, but we know they must have it in some way. Mothers must be discreet and not expose their infants to so low a temperature that even their warm clothing cannot retain sufficient animal heat to resist the depressing influence of cold. The extremes of temperature must be lessened by good management. The heat of summer can be lessened in its effects upon infants by keeping them in cool rooms during the heat of the day, and in warm rooms (no hot) during the cold; exposing them to the outer air in the former case morning and evening, and in the latter case, in the warmest hours of the day.

In the damp, chilly temperature of spring and autumn, when the special diseases of infancy are apt to prevail, too much care and watchfulness cannot be bestowed.

Adults, barely able to move their bodies, have been strengthened and raised to a good degree of health by being placed in some convenient carriage and taken out to ride daily. In the same way sick infants may be wonderfully improved by being taken into the outer air and given gentle exercise. By it the strong are made stronger and the weak are rendered less feeble. We have known infants so feeble that the fresh air was their only medicine, and on this they recovered. Compare rural with city children. The pale faces and soft muscles of the latter do not compare well with the ruddy faces, hard muscles, active limbs and sprightly eyes of those who spend most of their time, every proper day, in the open air.

While we regard the purity we are not to disregard the temperature of the inhaled air. The mother's plan should be to preserve as uniform a temperature as possible. For it is not the absolute temperature that harms infants, so much as the vicissitudes of it. A house in mid-winter should not have a temperature higher than 70° Fah. It is this difference that does the harm, the sudden change from heat to cold. Let me repeat, mothers should not suppose that because harm does not follow exposure at once no harm has been done. Ordinarily the bad influences of indiscreet exposures appear gradually. Some infants are more predisposed to "take cold" than others. Some are very susceptible to vicissitudes of temperature. They may be but slightly exposed on some damp, chilly afternoon. They are put to bed in apparently a good state of health. They do not sleep well. The next day they are hoarse, and by night are feverish, and in a few hours may have indications of sore throat, or inflammation of the lungs, or croup. What shall a mother do? If she expose her infant to a lower temperature than that to which it has been accustomed, it may take cold. If she keeps it snugly warm within the nursery or the house, it becomes very tender and susceptible, so that, on the whole, she may find, as others have, that her infant is safer, less likely to take a severe cold, if discreetly exposed, than if confined to the hot air of her dwelling.

The most and best a mother can do on this subject, is to collect from the wise and experienced in the business of raising children all the knowledge they have, and then use her discretion in its application. The greatest wisdom and the keenest discretion cannot always protect infants in such a way that they never "take cold." A young mother, then, needs the advice of those who have obtained their wisdom by experience and observation.

Feeble children, in whom the powers of resistance are small, should be guarded against exposures in damp and chilly weather. Fresh air contributes to the health and comfort of infants, but severe cold is an excess of freshness and may injure on the general principle that moderation benefits and excess harms. A vigorous child, who can easily resist the depressing influences of cold, and who is so warmly clothed that it can retain the animal heat generated by the various functions of his nature, is ordinarily very much benefited by inhaling cool air. It renders him still more robust and hardy. It improves his digestion and his assimilation. It enriches his blood and gives strength and rapid development. The weakly and poorly developed do need great watchfulness from the mother. We repeat, the comfort and health of infants requires discretion in exposing them to unaccustomed degrees of cold.—*Prairie Farmer*.

AVOID CHILLS.—It is one of the facts best known to science that when a part of the outer surface of the body has been exposed long to cold the greatest risk is run in trying suddenly to re-induce warmth. To become thoroughly chilled and then to pass into a very warm atmosphere, such as is found near a fire, results in a dangerous reaction which, a few hours later, may cause pneumonia, or bronchitis, or both diseases. The capillaries of the lungs become engorged, and the circulation becomes static, so that there must be a reaction of heat inflammation before recovery can occur. Common colds, says a contemporary, are taken in the same way: the exposed mucous surfaces of the nose and throat are subjected to a chill, then they are subjected to heat; then there follows congestion, reaction of heat, pouring out of fluid matter, and the other local phenomena of catarrh.

## DOMESTIC ECONOMY.

## Farmers' Kitchens.

There are several reasons, says the *Country Gentleman*, why the farmer's kitchen should be regarded as one of the most important rooms in the house. It will, perhaps, be correct to say that it is decidedly the most important. Not that we would advise the family to make a sitting room of it, and to spend all their time in this apartment; for unless his house is very small, the farmer should provide a separate room for the leisure hours of evenings, and for reading, writing and study; or for conversation with his family, and for the sewing and other occupations of its female members during the day.

Nevertheless, the kitchen should receive special attention and we now offer a few suggestions on the subject to the many who are about to build, and who look over and digest their plans during winter preparatory to commencing operations in the early spring.

First, then, in the list of requirements, the kitchen should be made pleasant and respectable. A dark room or badly ventilated apartment will not favor good cooking, either by the hired girl or by the mistress herself. To the former a small dark room will convey the impression that what is done in it is not of much consequence, and that the work may be slighted and that cleanliness is not of vital importance. The mistress will find it difficult to do anything so well in the dark, or in the foul air, as under the more favorable circumstances. During the years of a long life the writer has tested both modes. Better servants can be secured and retained when a comfortable apartment is provided, and when all conveniences and appliances have been procured, than when there is nothing pleasant and attractive, and where kitchen work is performed at a continued disadvantage. We therefore provide a well-oiled floor of hard wood, which is easily kept clean, cover the walls with well-varnished wall-paper, place green Venetian blinds on the windows, provide ample lights on both sides which permit free ventilation, bring water to the sink by means of two pumps, place the valve which opens to the coal-bin within a step of the cooking stove, have the store-room adjoining, and last, and not least, add a comfortable bed-room for servants, opening from the kitchen.

All these conveniences are not expensive. They save money in the long run. The waste and breakage of poor servants will more than pay the additional cost of better ones, to say nothing about the satisfaction of cleanliness and well-cooked food which the family and the mistress will enjoy.

The mode for obtaining these conveniences will readily suggest themselves to most house owners. But there is one point to which we wish to invite more particular attention, and this is the importance of securing ample light from two opposite sides, besides giving the apartment good size. We often see plans of dwellings where neither of these requisites are secured.

ALMOND CAKE.—Blanch and pound in a mortar six ounces of sweet almonds and three ounces of bitter almonds; must pound but two or three at most at a time, adding a little rose water to them, to make them white and lighter; put them out on a plate when done and take two or three more; beat 13 fresh eggs as light as can be; stir slowly into them alternately the beaten almonds; one pound powdered sugar; one half pound sifted prepared flour, and one small grated nutmeg. Have a square pan lined with buttered white paper, and bake in quick oven. Do not move it until done, which will be or ought to be in half an hour. When cold, ice with the following icing: Whites of two eggs, beaten as usual, and half pound of powdered sugar, two ounces of sweet and one of bitter almonds, prepared the same as for the cake, and mixed smoothly with the egg and sugar. It should be spread over the cake nearly half an inch thick; put in a cool oven to dry. Do not let it brown one particle; then cover it with a plain icing of sugar and white of egg. Lady cake is very nice with almonds in it. The same quantity of almonds and prepared and finished as above.

HOW TO ROAST WILD GOOSE.—This is an excellent recipe for geese, turkeys or chickens. Take apples, pared, about the same amount as you would take of bread, cut them as fine as possible, or, what is better, chop them with a sausage knife; also chop with the apples half a pound or less of sweet bacon and two onions; when these are quite fine, add a small piece of bread, crumbed fine, a few handfuls of raisins, a very little salt, pepper and ground allspice and cloves according to taste; fill your goose with this; pin a few slices of bacon on the breast of the goose with pine pins; add some water, and let it roast slowly for from three to four hours; from time to time, as it roasts, pour the gravy over the goose, so that it does not become dry.—*Rural World*.

SAGO PUDDING.—One dozen tart apples; one and a half cups of sago; soak the sago till soft; peel and core the apples, and place in a dish; fill the apples with sugar; pour the sago over, and bake till the apples are cooked.





PUBLISHED BY

DEWEY &amp; CO.

A. T. DEWEY. W. R. EWER. O. H. ASTRON. J. L. DOONE.

PRINCIPAL EDITOR.....W. R. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos. Per line.....25.....80.....\$2.00.....\$5.00 Half inch (1 square).....\$1.00.....\$3.00.....7.50.....24.00 One inch.....2.00.....5.00.....14.00.....40.00 Four weeks are rated a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary loaded matter.

ADDRESS all letters to the firm, and not to individual members, or others, who may at any time be absent from our office.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, January 6, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—Tabiti; Is Heat a Remedy for Potato Disease, 1; The Week; Dairy Notes and Comments; A Pamphlet on Phylloxera; Fungus on Nut Trees, 8; The State Agricultural Society; Moonlight on the Susquehanna; The Ishmus Canal; Construction of the Hoof, 9.

ILLUSTRATIONS.—Moonlight on the Susquehanna, 1; Islands of Taiti and Eimeo; The Early Trade in Tahitian Fruit, 9.

CORRESPONDENCE.—Large Talk in Agriculture; Hop Culture in Sacramento County; Solano County; Barbecue at Berryessa; New Jerusalem Artichoke; Poison in Blue Cloth, 2.

THE APIARY.—Experience of a Napa Bee-keeper; Measurements of Angles by Bees, 3.

POULTRY YARD.—Mysteries in Poultry Breeding, 3.

THE STOCK YARD.—A Card from Mr. Carr, 3.

THE DAIRY.—Jersey's as Butter Cows, 3-10.

PATRONS OF HUSBANDRY.—Letter from Bro. Wright; Worthy Lecturer's Visits; From the Granges; Election of Officers, 4.

AGRICULTURAL NOTES from various counties in California and Oregon, 5.

HOME CIRCLE.—The Herons of Elmwood, (Poetry); Woodside Papers—No. 8; Our Grandfathers; A Lady Farmer of 1739; Moral Influence, 6. A Mother's Words; Marks of a Gentleman, 7.

YOUNG FOLKS' COLUMN.—Old Jenkins and Ben, (Poetry); The Horse Hospital, 7.

GOOD HEALTH.—Air for Infants; Avoid Chills, 7.

DOMESTIC ECONOMY.—Farmer's Kitchens; Almond Cake; How to Roast Wild Goose; Sago Pudding, 7.

QUERIES AND REPLIES.—Canary Seed and Onions; Cuts on Apple Trees; Bleaching Wax, 8.

THE SWINE YARD.—English Cross Breeding, 10.

SHEEP AND WOOL.—Practical Points in Wool Growing, 10.

THE STABLE.—About "Balking," 10.

HORTICULTURE.—Using Young Gions; Orange Marmalade, 11.

GENERAL NEWS ITEMS on page 12 and other pages.

MISCELLANEOUS.—Murder of Scientists, 2. Climate Changes in Russia, 6. Caterpillars in Coal, 7. Tea-Preparing Machine; Bleaching Cotton; The Indian Cyclopedia; Bleaching Wool; The Moon's Motion; Cause of Error in a Thermometer; The Permanent Exhibition, 11; The Wool Clip of 1876; The Drouth; The Ashtabula Disaster; A Chance for the Low Lands, 12.

## NEW ADVERTISEMENTS.

Live and Let Live Bull's Head Stock Yards; Auction Sale of Live Stock; Two Thoroughbred Short Horn Bulls; Wanted and for Sale, R. P. Saxe, S. F.; Seed Annual, D. M. Ferry, Detroit, Mich.; Flower and Vegetable Garden, James Vick, N. Y.; Floral Guide, Detroit Seed Co., Mich.; Seeds for Sale, Himmelfallen Greenhouses, Springfield, Ohio; Heavy Fleeced Merino Sheep, John S. Coe, Brownsville, Pa.

## The Week.

The PRESS is rather proud of its new clothes and does not hesitate to ask its friends to contrast the new, bright surfaces with the garments which have been laid aside. The doing of new type is an event in the history of any newspaper. It is an indication of prosperity. It is a plain demonstration that readers of the paper rank it so high that their patronage warrants expenditure for improvements. And when the publishers return to the patronous benefit of their substantial support, it should be the occasion for all friends of the paper to give it another push forward. We trust that the RURAL will thus be received and promoted by every reader.

We think the reader will find the new type much clearer and more legible than the old. It has an open countenance and a frank expression which we much admire. The impression, too, is sharp and well defined, and thus may be the thoughts which are presented. Although it is with regret that we lay aside the old type, which has gained for us so many times the eyes of our readers and the expressions of their approval, we trust that the new may secure renewed and increased favor. With this expression of our hope and purpose, we present the first issue of Volume XIII to the reader.

## Dairy Notes and Comments.

EDITORS PRESS:—Our prospect here at present is rather "blue." Only one inch of rain has fallen since last April. The old feed is pretty well consumed or trodden to dust, and the new is almost dried or frozen out.

A conundrum for dairymen might be, "If butter is hard of sale at 30 and 35 cents, under present aspect of weather and feed, what would it have sold for if the season had been propitious?"

It is the custom in California to overdo everything that promises to pay decently, and it looks as though it were possible to produce more butter than will sell at a paying figure, unless we can turn the tables and market our winter butter East. With our present rates for labor, there will be very little profit to the producer if butter fetches less than 25 cents per pound net.

There is no money in feeding cattle with beef at present rates, and sheep men must have a hard scratch to keep even, with wool and mutton at almost less than cost of production.

In my opinion these things in great measure arise from speculators competing with regular farmers, and from over-greedy monopolists. Another reason is that farmers themselves are too apt to change from one kind of stock to another, as the price is temporarily high or low, thus making markets unstable.

Of course pitiless political economy ultimately vindicates her rights and hips monopolist and speculator, solid men though they be; but the struggling farmer does not escape scatheless when the pinch comes. Unfortunately, what to the solid man is but the loss of some thousands of dollars, is almost total ruin to the farmer.

I know of one "solid man" who made cheese at a cost of \$1 per pound, and another who is at present engaged in growing pork at a cost of say 25 cents per pound, live weight. The operation does not benefit them much, but it helps to depress the market for the legitimate farmer. Of course it also circulates the solidity of the solid men.

EDWD. BERWICK.

Carmel Valley, Cal., Dec. 29th, 1876.

These points are forcibly made and worthy of consideration. The remedy does not appear, unless, as our correspondent notes, a new and more capacious market can be found for our butter when we have a great surplus. The present condition of the butter market is easy to understand. Aside from the increased number of butter producers, there was the immense yield of last winter and spring, because the wet season gave such rich, wide spread and enduring pasturage. The price at the time fell low and the surplus was pickled. The early rains of last October started the feed and hastened the flow of milk, so that a great weight of fresh roll came upon the market before the pickled roll could be worked off out of the way, and thus arose the glut and present low prices. The influence of the present drouth has not yet had time to exert itself, because the supplies on hand were so large, but there can be no doubt that it will act sharply and speedily if the rains are longer deferred.

In the features noted above the season is somewhat exceptional and may not occur again for years. It looks now as though we should have a bitter experience in 1877 like that of 1875; when the surplus in pickle was exhausted and before the large production of fresh roll began, there was a need to import large quantities of Eastern butter to supply our markets. The lesson for such a season is to make every effort to grow extra green fodder, which shall maintain the flow of milk during August and September, and thus be prepared to reap the reward which the early marketing of fresh roll always secures the producer. The present outlook is that there will be money in such a plan if the dairyman have land upon which he can grow his green crops next spring.

As for marketing some of our winter butter in the East, we think it can be done profitably if the effort is made wisely. The time to strike the New York market is in February and March. At this time the supply of Eastern butter is small and the quality very poor, because the make of the fall months is generally exhausted and nothing comes forward but the early hay butter. If the effort to ship butter to the East is made it should be done with a view to the style of package, etc., which will sell best in their markets, and for this purpose correspondence should be had with the Eastern merchants to whom consignments are to be made. This the dairymen could accomplish by acting together, and perhaps they could use the California Dairymen's organization for this purpose. There is nothing in the way of safe and cheap shipment if the butter is properly made and packed, because after the Sacramento valley is passed there is no danger of warm weather at that season of the year at any point on the way to seaboard. It would be well to ship by the full car-load, and if fresh, clean cars are used we should have no fear of the perfect carriage of the product even by slow freight.

As our correspondent truly says, the rewards of legitimate production are always lessened by the efforts of amateurs and adventurers and with no advantage to them. Every productive enterprise which attains any success must expect this and be prepared to "hold the fort" against it. When such forces are operating in the dairy production the regular producer must hold his ground and be content to live and little more until the reaction comes. Then his reward will return and atone for the sacrifice. The success is to him who perseveres and holds himself in readiness for the coming. The experience and observation of years has shown the wisdom of this policy in agricultural production, when the line of production is one which is permanent in the demands of men. We believe in the dairy, in beef producing and in wool growing, the prices of the coming year will atone for the lack of the past year, to all those whose advantages and courage will enable them to continue the production.

ON FILE.—"Tree and Vine Planting," W. A. S.; "Industry," G. W. W.; "Orange Scale Bug," S. R.; "Bee Hives," S. P. S.; "Curing Hops," J. M.; "In Memoriam," Mattole Grange; "Items," Ferndale Grange, Rancon Grange.

## A Pamphlet on Phylloxera.

We are disposed to look with favor upon every effort to cope with that enemy of our vineyards, the phylloxera. We are disposed to treat kindly every publication on the subject which evinces earnest thought or careful investigation on the subject. We hold the critical spirit in abeyance, and rejoice when anything good is brought forward even if it is attended with much that is crude. We even do not require that a statement shall be altogether new, because a good thing, in a time of need, will bear repetition.

This disposition of ours is put to the test by a pamphlet on the phylloxera, which is written by A. Drioton, and published by A. Roman & Co., of San Francisco. The writer calls his pamphlet "All About Phylloxera," and this we consider rather a presumptuous title when we read for a description of the insect: "The phylloxera, seen through the magnifying glass, is an insect somewhat of the shape and color of a bug." If this is the way the author takes to say that the insect is of the Hemiptera, all right; but his method is peculiar. The author persists in spelling the name of the insect with one "l," which is without authority in the Greek, whence the name is derived. Also, when he calls the odium "odium" he comes very near being odious. We hardly find much more satisfaction in the way in which the author says the insect is produced, but will not argue the point. We pass to the points in the pamphlet which in spite of its crudity may be useful to repeat.

The writer finds the reasons why vineyards are destroyed by the insect in the exhaustion of the soil by continuous drain of its productive power without return of fertilizing material, and in the weakening of the vine by overbearing. The secret of the treatment, then, is to restore the fertility of the soil and to prevent the vines from excessive fruiting. Now, so far as these things go they are very wise and good, and perhaps they do not possess less value from the fact that every writer upon the subject of the phylloxera has mentioned them as points to be observed in the combat with the insect. What there is new in M. Drioton's pamphlet consists in his regarding these items as the sum total of warfare and defense against the insect. He says it is not possible to cure a vine which has been attacked; the only remedy is to uproot such vines and treat the remainder of the vineyard so that the insect shall not be developed. We are not sure of this statement, although from the failure of the insecticides which the French have brought to their service there is some show of truth about it.

We shall give the method which the author proposes for the conquest of the scourge, because if it does not accomplish the result desired it is doubtless possessed of some qualities for strengthening the vines and rendering them less liable to all their foes. We quote as follows:

"Now, let us suppose our vineyard attacked by the phylloxera; let us see what will take place and how we shall proceed. In the month of June, but oftener in August, at the season when the sap is in action, will be noticeable one or several places where the stocks, losing their beautiful dark green color, will change into a yellow shade, more or less pale according to the intensity of the disease. At that time we shall be satisfied with pointing out with a special mark all diseased stalks, but we shall not touch them in any other way, for, by eradicating them at that time we would risk wounding some of the healthy vines, and it is well known that the wounds inflicted on the vine at the time of its bearing are not easily healed. But during the winter months, whilst the action of the sap is suspended, we must pull out all the stalks that we have taken care to mark, as well as those lying by the side of them, upon a space of ten feet long, proceeding thus:

"First dig a hole around the shrub six feet in diameter by one and a half in depth; then bring on the spot a portable boiler, of the style of those generally seen near all the wine cellars, and keep it constantly filled with boiling water; after that, take three or four buckets full of that boiling water and throw it in the hole as well as over the mold that has been dug out, and this operation once performed over all the stalks that are to be destroyed, uproot them and burn them on the spot, stems, roots and all, taking great care not to leave a particle alive. Level the soil again, and then leave it untouched until the month of February. At that time, manure it, as well as the rest of the vineyard, with a great quantity of farm-yard manure, and the refuse of the wine-press and still. Then replant the vacant spots, and every year be careful to put in dung suitably so as to keep the soil sufficiently fertile."

IMPORTED STALLIONS.—A lot of fine imported stallions, owned by Mr. Baker, of Minnesota, have just arrived at Saxe's Bull's Head stock yard. They are "Boylston," "Baker's Fear-nought," "Mambrino Box" and "Blackstone, Jr.," all well bred and from famous sires.

THE railway operators' strike in Canada still continues.

## QUERIES AND REPLIES.

## Canary Seed and Onions.

EDITORS PRESS:—This week I ordered the RURAL PRESS through our news agents, Messrs. Bartlett Bros., for one year. Having changed my position from a druggist to that of a rancher on a small scale, I naturally thirst for information relative to my new occupation, and I trust you will lend me your assistance on special articles. 1st. Can canary seed be grown successfully in this part of the State? If so, what kind of soil suitable, amount of seed per acre, manner of planting, cultivation and harvesting for market? Is the ordinary seed we purchase in the market suitable for planting?

2d. Which is the best onion to grow for the market, Silverskin or Red Wethersfield? or would you advise both? What is the probable cost of a drill for putting in the seed?—C. F. BURKS, San Buenaventura, Cal.

We see no reason why canary seed should not do well in Ventura county. It has been grown with success, we believe, farther down the coast, and Ventura should, we think, favor the crop. Any land which will grow good grain will yield canary seed. It must be remarked, though, that the cleanest land is essential, either for hemp, rape or canary. If our querist has land which has been cultivated two or three years or has passed through a fallow, it may be clean and well fitted for the crop. If it has been given to volunteer crops the chances are in favor of a weight of foul seed. The amount of seed to the acre depends considerably upon the quality of the land. If it be rich, less seed is desirable. Probably from 30 to 40 pounds to the acre would be the range under all conditions. The sowing and harvesting of canary seed is like any of the other small grains. The threshing and cleaning are the same. The seed, as ordinarily sold, will do for sowing, but there must be care to get good clean seed. This is sometimes difficult to find in the home-grown article.

Of onions it would be well probably to plant one-third red and two-thirds Silverskins. The latter have been the favorites in the market this season. Many growers use, for sowing the seed, a small hand drill, which costs \$1.25. This tool will put away a good deal of seed. Doubtless there are larger drills which could be had by addressing our agricultural implement dealers.

## Cuts on Apple Trees.

EDITORS PRESS:—I notice in the PRESS of December 23d information wanted regarding curious cuts on apple trees. By Mr. Greenfield's description I should unhesitatingly say it was the work of a kind of woodpecker called the sap-sucker. There are very few orchards in the Eastern States free from their marks. He will find the rogue a little smaller in appearance than the robin; a gray bird, with white and black spots on the wings and tail, and a little red spot on top of the head, and he makes a "pip" of a noise as he moves around and works on the body and larger limbs of the tree. The shotgun is his remedy.—C. CARWELL, San Jose.

## Bleaching Wax.

EDITORS PRESS:—I have but recently become a resident of your State and a subscriber to your valuable paper. Will you be so kind as to publish a recipe for bleaching beeswax, and oblige a beginner in the business?—B. R. ROCKWOOD, San Diego, Cal.

Will some reader favor us with the best method?

## Fungus on Nut Trees.

At the time of our visit to the Gilroy region we noticed that the nut trees at San Felipe were rendered very unsightly by the presence of a black fungus on the leaves and husks of the green nuts. If we remember correctly, both the almond and the English walnut trees were attacked. We brought back to the city with us some of the leaves for examination. We submitted them to Mr. C. Mason Kinne, Secretary of the Microscopical Society, and he finds the fungus to be a *Capnodium*. The *Capnodia* are a branch of the *Coniomycetes* family, a group of fungi which have for structure little more than a mass of dusty spores, and lacking the roots and branches (so to speak) which are characteristic of the molds and other fungus plants. Mr. Kinne has no doubt that the fungus on the leaves we gave him is identical with the black fungus which attacks the orange, or at least is similar to it in its structure and effect upon the tree and fruit. This fungus was fully described in the RURAL PRESS of June 3d, 1876, from the researches of Prof. Farlow, of Harvard.

It will only be necessary to note in this connection that the fungus, because of its lack of roots (*Mycelium*), does not make a direct onslaught upon the juice and substance of the leaf to which it attaches itself, and therefore does not blight the foliage. The plant sustains itself chiefly from the air and propagates itself by means of its myriads of spores which float on the breeze. The only way in which it can do harm is by spreading its integuments over the stomata of the leaves and thus suffocating it. This is only accomplished in extreme cases, because generally it does not seem to interfere with the fruiting of the trees afflicted with it. The fungus will not be found so serious a trouble on the nut trees as on the orange, because the result in the one case is spotted oranges in the market, while in the other the fungus is removed with the outer husk of the nut. The chief evils which the parasite will accomplish will be the disfiguring of the trees and possibly a reduction of their strength by the smothering process. We shall be pleased to receive from our readers any note of observation which they may have made upon the fungus.



## The State Agricultural Society.

It is announced that on the 25th of the present month the annual meeting of the State Agricultural Society will be held in Sacramento. The President, Mr. Carey, we are told will insist upon resigning his office, in accordance with the intention expressed some time ago. We hear also that, by reason of resignation and regular vacancy, there will be need to elect a quorum of new members to the State Board of Agriculture. Thus there will be an opportunity to put the State Society into the hands of a new set of managers, and, being in the majority, they will have the direction of its policy. This being the case, the *Record-Union* urges upon any who have not approved the way in which the society has been managed, to step forward and put their beliefs into tangible shape at the election.

This is fair. It certainly is not right to find fault with a popular institution and then make no effort to improve it when the opportunity offers. We have had a good deal to say considering the policy of the society because the interests of practical and progressive agriculture were made second to the race and its belongings. We have said that the exhibitions held at the fairs did not fitly represent the agriculturists of the State in whose name the institution was maintained by public aid. Now there is a chance for those who do not believe in having their name used to cover the performances which have been most prominent at the fairs, to come forward and place themselves in a position to lead in the councils of the society. So far as we know the expression of dislike to the management of the Society has been of an individual character, except in the case of the Cattle Breeders' Society. This organization, at its last meeting, adopted resolutions asking for certain changes in the manner of conducting the exhibition of stock and protested against giving so great a share of the premium money to the racers. This society has a membership embracing some of our best farmers, and possibly by its efforts in the present emergency the coming election of the State Society could be made to show a larger proportion of members in the board who do not believe that agriculture should be overshadowed. It seems to us that the present is the time to remodel the society and it will soon appear whether the farmers of the State care enough about it to make the effort.

**A NEW AUSTRALIAN WILD FRUIT.**—Mr. W. Howard lately brought under the notice of the *Queensland Chronicle* specimens of a wild fruit which, according to his account, has been only recently discovered by settlers on the Burrum, and of the edibility of which even the blacks until lately had no knowledge, they having been first induced to taste it by observing that their dogs greedily devoured those that had fallen from over-ripeness. In size and appearance it is very like a small apple; the color, externally, bright red; inside, greenish white; the pulp closely resembling that of an apple, but drier and more fibrous. The flavor is tart but not unpleasant, and approximating to that of a common crab or wood apple. It contains five hard pits of a bright mahogany color, each enclosed in a separate core, and about an inch in length. The tree is described as very tall and ornamental, and the locality where it abounds is near the mouth of the Burrum. The fruit, although not very palatable in its wild condition, would no doubt be easily improved by cultivation. The tree in question abounds on the headwaters of Tinana creek and Boppel range, and the apple, by keeping, becomes mellow and delicious. It seems to belong to the sapotaceous order, and to be referable to one of two genera, *Achras* and *Mimusops*.

Our readers will welcome the advertisement of the popular seedsmen, Messrs. D. M. Ferry & Co., of Detroit, Mich. Their Seed Annual for 1877 far surpasses their previous numbers. This firm, one of the largest in the seed business, needs no indorsement from us.

A TERRIFIC gale has occurred on the English and French coasts, causing great damage.

## Moonlight on the Susquehanna.

What a legacy of beautiful names the Indians have left us! Strike from our geographical nomenclature all of Indian origin, and you eliminate from it almost all it has of grace and beauty. Compare the Wachusett, Jnniata, Suwanee, Mississippi, Shasta, Tacoma, of the Red Men, with the "Bald" mountains, "Black" rivers and "Goose" creeks of the white settlers. And think of "Susquehanna!" Does not the very name breathe beauty and poetry, almost tempting us, without further knowledge, to believe with Buchanan Read,

"None half so fair as that broad stream whose breast  
Is gemmed with many isles, and whose proud name  
Shall yet become among the names of rivers  
A synonym of beauty—Susquehanna."

"It is difficult to imagine," says another, "a more continuous line of beauty than the course of the Susquehanna, a river whose mild grace and gentleness, combined with power, render it a message of nature to the affections and to the tranquil consciousness. This trait of mildness, even in its proudest flow, seems to hover upon its banks and waters as the genius of the scene. No thunder of cataracts anywhere announces its fame. It is mostly the contemplative river, dear to fancy, dear to the soul's calm feeling of unruffled peace."

This is the poetic aspect, and from this aspect should the "moonlight scene" upon this page

## The Isthmus Canal.

Those California farmers who are looking to the cutting of the isthmus for quick shipment of produce to the European markets, may find encouragement for the realization of the project in this week's news. During the week a dispatch was received from Washington stating that the commission appointed by President Grant to examine the three proposed routes for connecting the Atlantic and Pacific by means of a canal, have reported in favor of the Nicaragua route. The *Call*, in commenting on this announcement, makes the following statement: "The commission consists of Gen. A. A. Humphreys, C. B. Peterson, of the Coast Survey, and Daniel Ammen, of the Navy Department; all gentlemen well qualified for the task assigned them. The report they have made was anticipated by the general opinion of professional engineers and non-professional experts who have examined the different routes. We have not the reports of the former commissions before us at this moment so as to give actual estimates in detail, but these reports left little doubt that the Nicaragua route would be finally selected as the most feasible. Still, the work is one of gigantic proportions, and will rank, with the construction of the Suez canal and the building of the Pacific railroad, among the great engineer-

mation concerning the most feasible route has then gathered, has been at the service of the present commission. Thus, if they have changed the route materially they have done so in consequence of the discovery of a better one. The objection which the British government interposed at that time are now overcome by making the work international in its character, by the equal participation of the great commercial powers in its construction and subsequent management. The United States Government is now in communication with the several European nations in regard to the enterprise, and it is expected that the President will soon be in possession of documents which will justify him in submitting the question to the consideration of Congress.

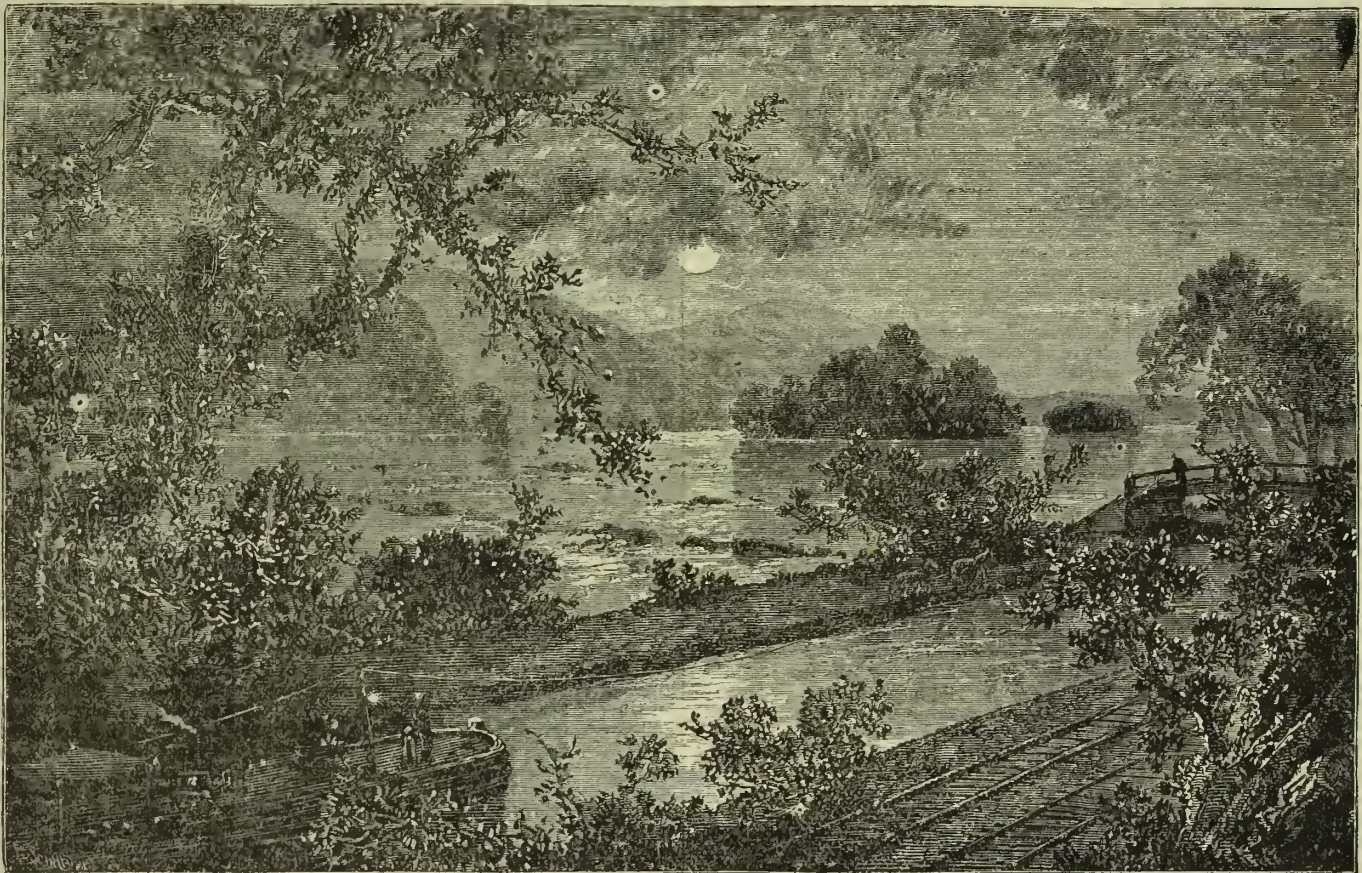
**CONTRACTION OF THE HOOF.**—A very interesting veterinary operation was performed by Dr. Dunbar, at the stables, 842 and 844 Howard street, in this city, on Tuesday afternoon. A valuable stallion, owned by Judge Green, was severely afflicted by contraction of the hoof. As is usual in such cases, the contraction of the horny hoof had forced the frog up from its normal position, and the pressure upon the joint above had given rise to much inflammation and a bad sore was formed. Dr. Dunbar's operation consisted in cutting away a portion of the hoof and in fitting thereto one of his shoes, contrived

for the special purpose of expanding the foot. This shoe has the sink for the nail holes within the circle of the shoe, which bears the weight, instead of outside it, as in the common shoe. The nail holes slant toward the exterior and thus the "draw" of the nails is outward. The improved shoe has nail holes in the toe and at the inner and outer toe. It has also nail holes at the "heels," but the "quarters" (between the toes and heels) are left without nailing. In the present case the Doctor set the nails in toe and heels of the shoe, and then applying a screw between the heels, he expanded the shoe, and with it the hoof, nearly three-quarters of an inch. This expansion was done in the cold iron, after the shoe was nailed to the foot. The operation will relieve the pressure upon the joint of the foot, and will allow the frog to settle down to its proper place. Now the feet of the stallion will be submitted to a poulticing with flaxseed meal, and it is expected that all inflammation and soreness will disappear and the horse be sound of foot again. Judge Green's horse is a valuable one, lately imported from Maine, and he promises to inform us of the further results of the operation.

**IMPORTANT TO SHIPPERS OF WHEAT.**—Messrs. Schroder & Co., of this city, brought suit in the Fourth District Court to recover \$10,245, for the value of a shipment of wheat to Hongkong some time in 1874, which was submerged in a warehouse. The complaint was demurred to on the ground that there was not a total loss, and that the wheat was not destroyed by the peril of the sea. In passing upon the demurrer Judge Morrison said that to determine the first of the questions it must be determined what is meant by "connections." The counsel for the defense took the ground that it meant a direct connection with the *Colorado* at Yokohama. On the other hand, it was claimed that there might be many connections by dividing the shipment to go forward from Yokohama, and the loss of any one of these shipments was a total loss within the meaning of the insurance policy. The meaning of the term "connection" could be ascertained by the terms of the policy. The question whether it was understood that one vessel only should be used in carrying the shipment, or that it was contemplated to send forward by several vessels, could only be ascertained on the trial. It was the impression of the Judge that the loss occurred by peril of the sea. The demurrer was overruled.

THE Detroit Seed Company, Detroit, Mich., have issued their New Floral Guide for 1877, which they are offering free, by mail, to all applicants. If you want a handsome floral work and reliable seeds, write to them.

QUEEN VICTORIA was on New Year's day proclaimed Empress throughout India with great ceremony.



MOONLIGHT ON THE SUSQUEHANNA.

be viewed to be fully appreciated. But the Susquehanna has other associations than those of beauty. It has been made an historic stream by deeds of blood and massacre exceeding all others in the darkest pages of colonial history. Wyoming and Cherry Valley are upon its banks. It marked, too, the limit of rebel invasion into the North. Never did a Greycoat succeed in crossing its waters, though they several times reached its western bank.

A peculiarity of Pennsylvania geography is that the rivers have not the same direction as the mountains, but generally run at angles to them. Instead of gliding quietly between or along them, they seem to decide which is their shortest route to the sea, and then push boldly forward for it, let what obstacle come that may. Of this eccentricity, as it may almost be called, the Susquehanna is chief representative. Numberless seem the mountain ridges and hills through which it has cleft in its course to the Chesapeake. In some places it passes through as many as five of the so-called "gaps" or "narrows" in the distance of 20 miles. Almost its entire course is through the mountains, and it has all the characteristics of a genuine mountain stream, being usually broad, shallow and rapid, with here and there long stretches of calm, deep water. Its bed is very rocky and in many places is studded with beautiful little islets. In the lower portion of the river's course its general width is about a mile, narrowing occasionally to half a mile or even less.

For purposes of commerce the river has little value, owing to its shallowness. In the summer it can be forded almost anywhere. But in the winter and springtime, when its banks are full, it opens a road to market for the vast quantities of lumber in the densely wooded regions about its headwaters, and many are the thrilling adventures of the strong-armed, steady-nerved men who pilot the great rafts down its turbulent current and successfully "shoot" all its rapids and "dodge" all its islets and sunken rocks on their way to the lower country.

ing triumphs of the age. The Isthmus of Suez connects Asia with Africa, and separates the waters of the Mediterranean from those of the Red sea. Commerce required that this barrier of earth should be removed that ships might pass from sea to sea, and the work has been done. Commerce now requires water communication between the Atlantic and Pacific oceans, and it is only a question of time as to when this work shall be done. The State of Nicaragua does not offer so narrow an obstacle between the two oceans as other points on the southern coast. The width of the State varies between 120 and 240 miles. Lying in the interior of the State, a few miles from the Pacific ocean, is the Lake of Nicaragua, a sheet of water from 30 to 40 miles broad, and only 128 feet above the waters of the Pacific. This lake will be utilized in the construction of a canal. Its depth varies from 30 to 90 feet. The great obstacle to be overcome in constructing the canal is a volcanic range running near the western coast, and rising between the Pacific and the inland lake to a height of 10,000 feet. This State is supposed to show a separation of the great chain of the Cordilleras into two divergent ranges, having a less average height than the main ridge, and being subject to partial interruption. The commission doubtless find favorable passes in these broken ranges which render feasible the project they have in view. The report estimates the cost of the work at \$100,000,000, which our dispatches state to be less than former estimates. There seems to be an error in this. In the year 1849 a contract was entered into between the Republic of Nicaragua and the Atlantic and Pacific Ship Canal Company of New York, by which the latter party undertook to construct the canal for \$20,000,000. The contract was never carried out, owing to the interference of the British government; but the terms were then considered fair by competent judges. We do not know if the present commission follow the exact route the New York Canal Company had selected, but presume that whatever infor-



Continued from page 3.

tain result will, if persistent in, become intensified and hereditary.

#### Methods and Improvements.

The treatment of cows upon the island of Jersey was described. They are not allowed to roam at large in the rich pastures, but are tethered, and are moved to a fresh spot three or four times a day, and are not even driven up to be milked. The milkmaid takes her pail and milks her cow while she is feeding. In winter the cattle are fed half a bushel or more of roots with a little hay in the morning. They are turned out in the middle of the day, and about four o'clock they are put into the stables and milked. They are then fed as in the morning. Two or three hours later they are fed a few pounds of straw. They are fed a bran mash for about two weeks after calving, but at no other time. Grain or meal is not fed to cattle; in fact, no grain except wheat is grown upon the island. The heifers are allowed to come into use at two years of age, the first calf being dropped in early spring, when the grass is luxuriant, thus early developing her milking qualities to the present extent. In regard to the Jersey cow at her home on the island, we find four important conditions, viz: 1—early maturity; 2—gentle treatment; 3—a succulent, vegetable diet; 4—a perfect diet. While early maturity and succulent food have a tendency to develop the milking qualities as far as quantity is concerned, the conditions of quiet and gentle treatment tend to improve the quality. Experiment has shown that 14 pounds of morning's milk will produce as much butter as 17 pounds of evening milk, showing that the cow when resting quietly produces richer milk than when roaming about the pasture seeking food. The paper closed with this recommendation: "Keep your eye on the essential point of utility. Raise your calves from only your best cows; and above all use a bull from the best strain attainable."

## THE SWINE YARD.

### English Cross Breeding

Prof. Low makes the following notes on the results of cross breeding, as practiced by English swine growers:

In the cases where the older races exist without intermixture, the animal presents remarkable characters. Its form is uncouth; the bones are large and the limbs long; the back is arched and narrow, the shoulder low, the face long, the ears large and flapping. It presents, in truth, a combination of the characters which breeders now wish to avoid. Yet, with all their defects, these animals possess one important quality—the females produce large litters, and are the best of all nurses for their young. If crossed with superior races, as with the Chinese or the Berkshire, the immediate progeny is good, retaining the size of the dam, and acquiring the aptitude to fatten of the superior male. Thriftless, then, as these are in themselves, with relation to their power of fattening on a given supply of food, yet any one who possesses a sow of this kind will find her more valuable than any other for the purpose of rearing pigs.

In Yorkshire, Lincolnshire, Norfolk, and generally in the eastern counties, there are breeds of large size, of a white color, and with pendent ears. These breeds have been cultivated with more or less care, and have all been affected in their form and characters by crossing. The county of Suffolk has long been noted for producing large quantities of pork, chiefly for the supply of the London market; and the white breed of Suffolk became early known for its goodness. The breed, however, has been crossed and re-crossed by the Chinese or descendants of the Chinese variety, so as to suit its size to the demand of the consumers. The Essex breed has, in like manner, been crossed with the smaller and finer breeds, so as to lessen the size and increase the delicacy of the pork; and Essex hogs are peculiarly distinguished by the fineness of the skin and softness of the hair.

The same system of crossing has been applied to all the former breeds of the country, the Shropshire, the Hampshire, the Rutland. The latter, so-called from a village of that name on the borders of Surrey and Sussex, were the largest swine in England, and perhaps in the world. The Hampshire hogs were also a very noted breed, from their being of large size, and well suited for bacon. But the distinctive characters of these various races have been more or less effaced, so that varieties described by former observers cannot now be traced. In general, it may be said that all the breeds of this country have been tending to a smaller size and greater uniformity of character. Of the breeds of England, one greatly valued is the Berkshire. It is so termed from the county of that name, though the principal improvement of the breed was made in the counties farther north, chiefly in Leicestershire and Staffordshire. It still retains, however, its original designation, and the Berkshire has been long known as one of the most generally spread of the improved breeds of England.

The true Berkshires are of the larger races of swine, though they fall short in size of some of the older breeds, as the Hampshire, the Rutland, and others. They are usually of a reddish-brown color, with brown or black spots, a character which makes it appear that one of the means employed to improve them was a cross

with the wild hog. The Berkshire is still regarded as one of the superior breeds of England, combining size with a sufficient aptitude to fatten, and being fitted for pork and bacon; and it is held to be the hardiest of the more improved races.

But the Berkshire breed has, like every other, been crossed and re-crossed with Chinese, or Chinese crosses, so as to lessen the size of the animals, and render them more suited to the demand which has arisen for small and delicate pork. Many of the modern breed are nearly black, indicating their approach to the Siamese character, and sometimes they are black broken with white, showing the effects of the cross with the white Chinese. From this intermixture, it becomes in many cases difficult to recognize, in the present race, the characters of the true Berkshire. The great improver of the breed was Richard Astley, Esq., of Oldstonehall.

Although no doubt can exist with respect to the great benefit that has arisen from diminishing the size and coarseness of the former swine of England, yet, assuredly, there should be limits to this diminution of size in the hog, as of every other animal cultivated for food. In many cases the diminution in size has been merely to suit the caprice of taste. The larger kinds of pigs do not find a ready sale in the markets of great cities, and hence the more essential property of an abundant production of butchers' meat is sacrificed. But we should remember that the supply of pork is of great importance to the support of the inhabitants of this country. In the state of bacon it is largely consumed by the mass of people, and in the salted state it is used for supplies of our numerous shipping. It is not, therefore, for the general good, that the old breeds of England should be merged in the smaller races of China and other countries.

While we should improve by every means the larger breeds that are left us, we should take care that we do not sacrifice them altogether. The country might one day regret that this over-refinement had been practiced, and future improvers exert themselves in vain to recover those fine old breeds which had been abandoned. In place of increasing crossing with the smaller races, it would be more praiseworthy and beneficial to apply to our larger races those principles of breeding which, in the case of our other animals, have so well succeeded. By mere selection of the parents, we could remove the defective characters of the larger breeds, and give to them all the degree of fineness, which consists with their bulk of body; for there is no animal so easily changed in form and molded to our purposes as the hog.

Amongst the kinds of crossing, that with the wild hog has been lately revived to some extent. The only good effect of this cross is a certain improvement of the flesh, by mixing the fat more equally with the lean; for, in the wild hog, as in all the less cultivated races of the domestic animals, the fat is more mixed with the muscular parts. But otherwise the crossing with the wild race does not seem to be advisable. The form of the wild hog is not the perfect one at which the breeder should aim, and we have much better models presented to us in the best of the breeds already improved by cultivation.

Hogs are from time to time brought by our innumerable shipping from the countries of the Mediterranean, as Italy, Turkey, Spain, and mingled with the swine of this country. Of the Mediterranean breeds, the Maltese was at one time in favor. It was of small size, of black color, nearly destitute of bristles, and capable of fattening quickly. At the present time a breed from the country near Naples has been introduced, and has been employed very extensively to cross the other breeds. This breed, like the Maltese, is of small size, and of a black color. It is nearly destitute of hair or bristles, but, on being bred several times in this country, the bristles come. The flesh is exceedingly good, but the animals themselves are destitute of hardness, and unsuited for general use. But they have been made to cross the other swine of the country, and the progeny exhibit much fineness of form and aptitude to fatten. Their flesh, too, is delicate, on which account the Neapolitan crosses are at the present time in considerable favor in several parts of England. But there are other races of Italy which might, with greater benefit than that of Naples, have been introduced into this country. The best hogs of Italy are supposed to be produced in the duchy of Parma. They are of larger size than those of Naples, while they possess even greater aptitude to fatten, and yield pork equally white and delicate. Hogs are sometimes introduced from Africa. Their descendants are of tolerable size and square form, and, like the other hogs of warmer countries, fatten with facility.

AN IRON TORCH.—The *Iron Age* says: "The combustion of iron in air is a chemical phenomenon now made comparatively easy to the experimenter. The most practicable method is to take a straight bar magnet of some power, and sprinkle iron filings on one of its poles. These filings arrange themselves in accordance with the lines of magnetic force, and, however closely they may appear to be placed, of course no two of the metallic filaments are parallel, and consequently a certain portion of air is enclosed as in a metallic sponge. The flame of any ordinary spirit lamp or gas burner readily ignites the finely divided iron, and continues to burn most brilliantly for a considerable length of time, the combustion being apparently as natural and easy as that of any ordinary substance, and the light normal, though vivid."

## SHEEP AND WOOL.

### Practical Points in Wool Growing.

We find in the *Adelaide Observer* an article on the care and breeding of sheep, which it seems to us possesses many practical points of universal application. It is true that the seasons do not agree with our own, for the lambing season is not yet here, but anything valuable may be remembered for practice at the right moment:

The unvarying tenor of the London wool brokers' report is that the great decline is on the inferior and badly got up wool, while really first-class clips, although they suffer to a considerable extent, do not participate so fully in the general decline. This is just what might be expected, and as a first-class sheep eats no more than a bad one, while the return of the one is perhaps double that of the other, it requires no great amount of wisdom to perceive which is the most profitable one for the farmer to keep. Without wishing to be considered as taking a gloomy prospect of the future, I will state plainly that I do not expect the wool trade to rally or improve to any appreciable extent for the next year at all events. The outbreak of the Franco-Prussian war was the first cause of the recent demand for wool and consequent high prices. During the war time the increase of sheep in both these countries received a check, consequently continental buyers had to purchase more largely in the London market. Our colonies did not possess within 10,000,000 sheep of what they do at the present time, the State of California has increased her sheep enormously, as where 20 years since there were scarcely any sheep in the country, last year she produced 43,530,000 lbs. of wool. South America is also largely increasing her flocks. It may be argued that the population of the world is also progressing, and the demand for articles of clothing formed of wool increasing, while the supply of cotton, if not decreasing, is not more abundant than formerly; but taking all these into consideration the supply of wool is increasing in a very perceptible way. Having said this much I will revert more particularly to the subject of farmers' flocks, and endeavor to show the most practical way of working them with profit, and at the same time credit to the owners. From now until after shearing is the busy time, and as lambing is now generally on, I will offer a few remarks respecting it. One of the first things to be seen to is

#### Sufficient Shelter

For the ewes and young lambs, especially where the paddocks are treeless and exposed, as in many places is the case. Good shelter can be made to accommodate a large number of sheep by weaving tea tree or wattle saplings in post and rail fencing, and forming a roof of rough saplings or forks thatched with fern or rough grass, or if a log fence simply the roof is required, taking care to place it on the lee side of this fence. By this shelter many a lamb and ewe is saved that might otherwise perish on cold stormy nights. In the case of a ewe having twins, or as sometimes the case, three lambs, if the farmer have a dairy the largest and strongest lamb only should be left with the ewe; the other should be marked and brought up on cow's milk. The trouble is little, and fully compensated by the justice the ewe is able to do her lamb that remains with her, and by the increased growth and condition of the one taken from her. The

#### Lambs Reared on Cow's Milk

In a few days learn to drink out of a trough, but until pretty strong, require housing at night with some bedding until the weather gets warmer. I have seen this plan adopted on a large station, where fully 1,000 twin lambs were fed on cow's milk every year, and the owners informed me that these dry-nursed ones invariably turned out splendid sheep, and fully repaid them for all their trouble. A ewe has seldom more milk than one strong healthy lamb can take, and if she has to rear two, the chance is neither of them is ever fully satisfied, and cannot grow into such fine sheep as a single one. As weaning time approaches the ewe lambs should be carefully looked over, and any that show defects, such as spots, bad shape, or have indications of being lightly wooled, should be marked for fattening for sale to the butcher, as the farmer will often obtain more for them as butcher's lambs than if he kept them a twelve-month longer. As shearing approaches the ewe flocks require culling carefully; all ewes showing defects either in shape or wool should be marked for fattening off for the market.

#### Never Breed from a Bad Ewe,

And particularly avoid those with light and what is termed watery wool—wool not growing evenly over the body, but in little tufts or knots; also those showing much kemp or short white hairs in the fleece, or black spots. The watery wool is mostly found among Merinos, and is not prevalent among long-wooled or cross-bred sheep. Uniformity in size and quality of wool should be the great aim of the sheep farmer, and he should look to establishing the one breed of sheep only, and maintaining that as far as possible in its purity. Uniformity in breed produces an even quality and description of wool, which at once commends itself to the manufacturer. It is very hard to find a bale of wool, unless from some of the large improved

stations, that possesses uniformity throughout. In order to secure this object the ewes should be systematically

#### Classed for Wool

Just before shearing, and a distinguishing ear mark or brand that will not disappear when the sheep is shorn placed upon them. The rams also should be selected for each class of ewes. For instance, a ewe may be a large size, a good shape, well wooled and free from ordinary defects, but the wool may be inclined to run coarse and light. For such a ram should be selected possessing density and fineness of wool—in short, should possess those qualities that the ewe is deficient in. This point does not seem to have been sufficiently studied by farmers and small sheep owners, but it is one that if not adopted a man can never expect to produce uniformity in either sheep or wool; and as quality and not quantity is now required by manufacturers, these points must receive more attention from sheep owners.

## THE STABLE.

### About "Balking."

A writer in the *Golden Rule* makes some sensible remarks on this subject. If the education of the colt has been conducted in accordance with correct principles he will not balk. Balking on the part of colts is, for the most part, the result of the trainer's ignorance or passion. Yelling and whipping on the part of the trainer or driver, overloading, sore shoulders, or ill-fitting collars—these are the causes that make horses balk. But if you have a horse or colt that balks, while one cannot, without a personal knowledge of the subject, tell you what to do, we can tell you what not to do—never whip. If he won't go let him stand still and think it over. He will very often think better of it, and after a few moments' reflection and a few tosses of the head go on of his own accord. Or, if this does not answer, get out of the wagon and pat him and talk to him kindly. A horse is very susceptible to kindness; and the writer says he has known more than one quite vicious horse gentled into good behavior by a few gentle pats from a lady's gloved hand on the moist neck and veined muzzle. Sometimes it is well to loosen a strap or start a buckle. The mere act of unchecking and rechecking the animal has sometimes answered the purpose. It took his attention off in another direction, changed the current of his thought, and broke up his purpose and determination to resist. For this same reason an apple, or a bunch of grass from the roadside, or a handful of oats, or a few kernels of corn, will often accomplish what an hour of beating could never effect.

The truth is, a man must govern himself before he can hope to govern lower animals. A man flushed with passion, his brain charged with heated blood, and eyes blazing with rage, is not in a condition to think clearly; and it is just this thinking clearly that is, above all else, needed in directing and controlling horses. Hence it is that contact with horses, and an actual experience in teaching them, is one of the finest disciplines a man can have. He grows to love the colt he is teaching; and no nature is utterly depraved in which is going on the exercise of affection, no matter how humble the object may be. His employment makes it necessary for him to think; and this keeps intellect, which might otherwise have no development, alive. The language of the stable is not, as many pious and ignorant people imagine, all slang. Care and anxiety are felt in the groom's room, and consultations held upon the issue of which the health and safety of valuable property depend. Plans are formed and methods of procedure adopted, upon which fame and vast sums of money come and go. Faults of nature and errors of education and practice are corrected, and the trainer discovers that in schooling God's creatures he is being schooled himself. Thus, as in all other branches of honorable industry, the horseman discovers that he is the point from which one current goes forth and another enters in. He bestows and he receives; he educates and is educated; and the life which so many thoughtless people despise closes, as in the case of Hiram Woodruff—the upright in heart and act—with honor, and a fame which can fail only when kindness towards animals and integrity among men are regarded as of no account.

A NATURAL CURIOSITY.—The *American Manufacturer* says: In the great valley between the North and South mountains, in Pennsylvania, commonly called the Eastern ridges, a well was dug some years since in Franklin, and another in Cumberland county, 30 or 40 miles from the former, which led to a discovery affording a subject for interesting speculation. After proceeding in each instance to the depth of about thirty-six feet, the bottom of these wells gave way (but fortunately when the workmen had retired) and a torrent of water rushed up. A lead was sunk with fifty fathoms of line without finding the least obstruction. They remain at this time untouched and of unknown depth. The presumption is, that there is a subterranean lake in that quarter, and how far it extends under the base of the vast primitive mountains situated between the Susquehanna and Pittsburgh, will never be ascertained, unless by some terrible convulsion of nature they should be precipitated in the tremendous abyss.



## HORTICULTURE.

## Using Young Cions.

There has been some question raised among tree buyers in this State whether the cions cut from trees in the nursery rows were as good as those cut from bearing trees. Some failures in good fruiting have been attributed to this cause. The question was asked of Mr. Bateman through the *Country Gentleman*, and he replied as follows:

The propounder of this inquiry deprecates the practice of nurserymen referred to, as he has adopted the common belief that the habits of the parent tree, as well as the variety of fruit, are continued or reproduced by the cion. This, however, is not the opinion of the majority of those who have given much attention to such matters. In my own experience as a nurseryman, years ago, I used annually many thousands of cions of both the classes mentioned, and on noticing the result the only difference perceived was that, as a rule, the cions from bearing trees did not make as good a growth the first season, owing to the shoots on bearing trees being generally less thrifty than those on the nursery trees; and hence the latter were preferred when they could as well be had of the desired kinds, and the wood well ripened.

I saw afterwards thousands of these trees set in orchards and come to bearing age, but could discover no difference or fault in regard to fruiting. Indeed some of the kinds were disposed to begin to bear quite too early—even while standing in the nursery; while others, like the Northern Spy, require 10 years or more to arrive at bearing age. This habit, like that of the usual form of the tree, is, of course, a peculiarity of the variety, and is continued through successive generations by grafting; but not so the condition of an individual tree as to thrive or fruit-bearing, which is consequent upon age or accidental circumstances. If this were so, the using of cions from old trees, as is sometimes done, would tend to produce premature age and decay in the young trees on which the cions were grafted. But no such result is seen. Again, we may reverse the case, as is done in taking cions from seedling pears, only one or two years old, and grafting those upon bearing trees, for the sake of speedily testing the variety. Here we see that the stock, and not the cion, has the most to do in the matter of inducing fruit-bearing. The same is true where a cion from an old tree is grafted on a young stock. It seems at once to assimilate with the stock in its youthfulness and disposition to grow instead of to bear fruit. Why this is so, is like the why and wherefore of a good many other things pertaining to the influence of stocks and grafts upon each other: we can only say that as yet we do not know. It is right for us to leave many of these problems for posterity to solve. They will have better advantages at the start than we had, and ought to make greater progress in discoveries.

## Orange Marmalade.

The *Boston Journal of Commerce* gives an account of the way the sour oranges can be turned to account in a large manufacturing way. It says: Thomas Ritchie & Co., Jacksonville, Fla., are the first, and so far the only manufacturers of marmalade in the United States. The manufacture has been extensively carried on in Europe for nearly half a century, the oranges being obtained from Spain and the Mediterranean. The principal seat of the manufacture is in Dundee, Scotland, where from a small beginning it has attained immense proportions, and the preserve is the most esteemed of any in the European markets. So great is the demand that the supply is inadequate to reach it, though one house turns out 20 tons per day and others almost as much. The Scotch article is imported in this country, but the high price has interfered with its extensive sale. Thomas Ritchie & Co. have selected the proper locality for the manufacture in this country, the sour and bitter oranges of which alone it can be made growing wild in the forests of Florida. Their factory is modeled on that of one of the principal Scotch manufactories, though on a smaller scale. Their capacity is five tons per day, but can be easily increased to any desired amount. The preserve being slightly bitter, the taste for it is to some extent an acquired one, but there can be little doubt that the cheapness of Messrs. Ritchie & Co.'s manufacture will lead to its general introduction among all classes, and once known and appreciated its sale must be almost unlimited. Besides being a most delicious preserve, it possesses medicinal qualities of a very valuable kind. It is an excellent tonic, and a tablespoonful in a tumbler of water makes a most delicious and healthful drink. The Indians of Florida have long used decoctions of the bitter orange as an antidote to and cure for malarial fever, and in any shape the sour orange is useful in that respect. Messrs. Ritchie & Co., though so successful in their manufacture as to carry off the honors at the exhibition, are determined to excel still more, and we understand that during the coming season the manager will be a gentleman from Scotland, who has been connected in a similar capacity for eight or ten years with one of the principal Scotch manufacturers. They will also this year add the manufacture of orange, lemon and citron oil to their business. We may look on this as an established and successful enterprise.

## Tea-Preparing Machine.

We have recently had the advantage of seeing the plan and specification of a tea-drying apparatus patented by Mr. Ansell, of the Dooteriah estate. If this machine does in practice what its inventor claims for it on theoretical grounds, it certainly will be an inestimable boon to planters, and we hope a source of considerable profit to its inventor. Until one of these machines has been actually set up and has stood the test of at least one season's practical trial, it would of course be rash in the extreme to hazard even an opinion as to its merits or defects—so many inventions are simply perfection on paper, and yet, somehow, do not answer in practice. Apparently the main novelty in Mr. Ansell's machine is that he proposes to use steam for drying the tea, and that the apparatus is self-acting. In other words, the steam not required for rolling the leaf by machinery is available for drying it, and the leaf goes in at the top of the machine and comes out at the bottom manufactured tea. Mr. Ansell claims for his machine that it will turn out 150 lbs. of dry tea per hour, or in the working day of 10 hours, 18 m. 60 lbs., with an expenditure of 112 lbs. of wood per hour, or 14 maunds per day; being at the rate of about three-quarters of a maund per maund of tea. According to Mr. Ansell's plan, too, the heat to which the leaf is subjected can be regulated to a nicety according to the wish of the manufacturer, and the possibility of burning is altogether obviated. In addition to the saving of fuel, it also would appear that Mr. Ansell's machine will economize labor very considerably. On the whole, we must say we are pleased with Mr. Ansell's invention, and if he can do in practice what he claims to be able to achieve on paper—dry a maund of tea with three-quarters of a maund of wood—he has solved one of the problems which all planters have so long been desirous to achieve—economy of fuel in the manufacture of tea. —*Darjeeling News.*

## Bleaching Cotton.

Some of our readers may find it a great convenience to be able to bleach a few hanks or short pattern warps, in order to get samples round quickly; therefore we give the following safe method, from the *Textile Manufacturer*:

Boil well your twist, having first put in the water two ounces of soda ash to the gallon of water; wash off in cold water. Mix one pound of fresh chloride of lime in two pints of water, crushing all the lumps, and then add 43 pints more water. After allowing time for the lime to settle, pour off the clear chloride liquor, and immerse the yarn for about seven hours, in a cool place. Care must be taken to keep the chloride solution and the yarn from contact with iron. Wring out and wash in cold water, and do not allow the yarn to remain in the air very long. Then immerse in a well mixed solution composed of 26 drachms of double oil of vitriol to 45 pints of water. Allow the yarn to remain in this acid solution 10 hours, then wring out and wash off in cold water. In order to thoroughly remove the acid, work it well through a good white soap bath, and to this add a little marine blue to give the yarn any desired tint. Finally wash through warm water to clear away the soap. These proportions will do the least possible injury to the strength of the yarn. The solutions may be used stronger if it is desired to shorten the length of time of the processes. \*If soft mule yarn has to be bleached, the solutions may be used about one-third weaker; but if doubled yarn, the strength of the solutions must be increased according to the perfection desired in bleaching.

THE INDIAN CYCLONE.—Indian correspondents are forming theories concerning the late cyclone in East India, by which 215,000 lives were lost. *Nature* says: The storm wave swept over the islands to a depth in places of 20 feet, surprising the people in their beds. The country is perfectly flat, and therefore trees were the only secure range. Almost every one perished who failed in reaching trees. A strange fact about the disaster is that in Dakhin Shahabazpore and Hattiah most of the damage was done by the storm wave from the north sweeping down to Meghna. Several theories, the *Times* Calcutta correspondent states, have been started to account for this. One is that the cyclone, forming in the bay, struck the shore first near Chittagong, and went north for some distance, and then turned southward again. Another is that the wind blew back the waters of the Meghna, which rebounded with terrific force when the pressure relaxed. A third supposition is that there were two parallel storms with a center of calm between them. The first or third theory seems most probable, as in Sundep and Chittagong the destruction came from the south.

BLEACHING WOOL.—MM. Daudier & Son thus describe a new process for bleaching wool. It consists in plunging the wool or vegetable matters into a concentrated bath of chloride of calcium, and submitting them to prolonged boiling; to the bath may be added some hydrochloric acid, or compounds of that acid with metallic bases, such as aluminum, iron, zinc, copper, or tin, which will then act energetically on vegetable matters, while it will produce no alteration on wool.

## The Moon's Motion.

The reduction of the star occultations observed at the transit of Venus stations, for the purpose of determining their longitude, renders necessary an investigation of the errors of the moon's place, as given in the Nautical Almanac for the period during which the work was in progress. Such an investigation, says the *Independent*, has just been published by Professor Newcomb, as Part III of the papers issued by the Transit of Venus Commission. It appears, in the first place, that, on the whole, the moon has for the last 14 or 15 years been falling continually behind the place indicated by the tables. In 1864 the tabular and observed positions were sensibly accordant; but in 1874 the moon was on the average .94" (about 11 miles) behind computation. In respect to this Professor Newcomb remarks: "The sudden alteration of nearly one second per annum in the mean motion of the moon seems to me one of the most extraordinary of astronomical phenomena; but as I have scussed it in several papers during the last five years, I shall do no more here than call attention to its continuance, and to the impossibility of representing it by any small number of periodic terms, without introducing discordances into the longitude during previous years." The explanation suggested in the papers referred to is that there may have been an actual change in the rapidity of the earth's rotation, the length of the day having recently shortened something like 1-400 of a second, in consequence, probably, of some geological movement of the crust of the earth. Another result, hardly less startling to mathematical astronomers, is the discovery of a new inequality in the moon's motion, amounting to about 1.5" each way. It may be either an inequality of the eccentricity and perigee with a period of 16½ years, or merely of the moon's longitude with a period of 27.4 days. No theoretical explanation of this irregularity has been reached. According to Prof. N., the only apparent cause to which it can be attributed is the attraction of some of the planets.

## Cause of Error in a Thermometer.

Mr. H. C. Russel publishes notes on some remarkable errors in thermometers recorded at Sydney observatory, 1876. For upwards of five years the same hygrometer has been in use at the observatory. The dry bulb is small, only 0.3 inches in diameter, and the instrument, up to February 26th, had always given very satisfactory readings, tested by those of a standard which hangs only 3 inches from it. The difference in the readings was usually 0.2° to 0.3°. On that day the maximum shade temperature rose to 96.4° about noon; at 3 P. M. the dry bulb and standard read 83.7°, and at 9 P. M. 68.9° and 69°. Next morning they read 69.6° and 69.8°. As this was Sunday, they were not read again until 9 A. M. on the 28th, when the dry bulb read 87.3°, and the standard, 64.9°, showing a difference of 22.4°. It was at once thought that the glass was cracked, and let in the air, but as no crack could be seen, after careful examination, it was determined to continue the reading. The author had always found before that if a thermometer cracks in the bulb the mercury rises till the tube is full, and he expected it would be so in this case though he could see no crack. The result, however, was that the difference steadily decreased, at first at the rate of 1° each day, and in 35 days the difference had fallen to less than 0.5°, or almost to its normal condition. Between April 7th and 17th it rose again, then fell. On the 3d of May, and again on the 7th, sudden rises took place; since then the difference has been diminishing, except a slight rise on May 21st and 22d. When very closely examined with the microscope, a very small piece of colored glass is to be seen in the bulb, as if lead had been reduced by the blowpipe, and on one side of the bulb a mark is visible, as if there was a minute quantity of water between the mercury and the glass at one spot.

## The Permanent Exhibition.

The Philadelphia *North American* says: The permanent exhibition promises to be a grand success, the applications for room being already so numerous as to more than fill the main building, and that fact will give our readers an idea of what the exhibition will be. Many foreigners have applied for space, and it is believed that nearly all the countries represented at the Centennial exposition will secure room in the permanent exhibition for the display of their goods. Those articles exhibited during the summer and fall will generally be removed, to be replaced by other and still better ones, fresh from the manufacturers and artists of this and the old world. The manager has received such an immense number of applications that he will be compelled to make selections from the mass of articles submitted, and by so doing those accepted will be of the best quality, and in numerous instances superior to those of the same character displayed at the recent exposition. The directors design to improve the conveniences of the main building in every possible manner, especially in widening the passages and avenues, and introducing such other changes as may be deemed necessary to facilitate the movements of large crowds and give visitors better opportunities to view the exhibits. The success of the permanent exhibition is assured beyond a doubt, and we have no fears but it will be conducted in such an enterprising and liberal spirit as to merit the support and well wishes not only of Philadelphia, but of the country.

## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out; Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.



## The Wool Clip of 1876.

We herewith present the wool report of E. Grisar & Co. for the year 1876:

WOOL PRODUCTION.	
Bags.	Bags.
January..... 770	August..... 7,142
February..... 4,055	September..... 21,451
March..... 31,213	October..... 31,830
April..... 39,078	November..... 11,256
May..... 12,779	December..... 1,369
June..... 6,343	Total..... 168,054
July.....	Pounds.
Of which there was spring wool, 94,102 bags, weighing.....	23,230,600
Spring wool shipped direct from the interior.....	1,834,919
Total spring production.....	39,065,519
There was fall wool received, 73,952 bags, weighing.....	24,031,378
Fall wool shipped direct from the interior.....	204,073
Total fleece wool.....	54,300,970
Pulled wool shipped direct from San Francisco.....	2,250,000
Total production of California.....	56,550,970
On hand December 31st, 1875, about.....	420,000
Received from Oregon, 13,939 bags.....	3,823,600
Foreign wool received, 1,454 bales.....	545,250
Grand total.....	61,339,820

EXPORTS.	
Pounds.	Pounds.
Domestic, Foreign, Pulled and Scoured.....	48,309,694
Per rail, inclusive of shipments from the interior.....	1,844,222
Per steamer, inclusive of shipments from the coast.....	2,344,395
Per sail.....	52,588,311

Value of exports.....	\$8,200,000.
On hand December 31st, 1876, 12,265 bags.....	3,500,000

Difference between receipts and exports has been taken by local mills. The weight of bags received is about three pounds each; on pressed bales shipped, 14 to 16 pounds each. Fully two-thirds of the wool graded during the past year is A1. The balance is A2 and B. This proportion has been unchanged for the past seven years. The severe and long depression in business which has prevailed in the Eastern States has naturally been felt in California, although in a lesser degree. Those who had to find an outlet for their wools in the Eastern markets have suffered most. The wool-growing interests here, second only to wheat in the value of exports, being deprived of any market, except domestic consumption, has been severely tried by the general shrinkage in values. The woolen manufacturers having generally been unsuccessful for several years, their financial standing had created a general mistrust, and caused Eastern wool merchants to be very conservative in granting credits, and by this action reduced the facilities of buyers, and limited the demands for consumption, which caused a momentary stagnation in business, and consequently during the entire spring season wools were sold at rates below the cost of production, and if we take into consideration the improved nature of the wools produced in California, prices were in reality lower than they have ever ruled before.

California wools have become popular among manufacturers, and have gone into consumption with unexampled rapidity. Manufacturers who have never tried them before have found it to their interest to use them. Although the production during the year has reached an amount which a few years ago would have seemed impossible, stocks here to-day are unusually small, although somewhat in excess of the supply a year ago. The impression is general among those best qualified to judge on this point, that the limit of production in the State is nearly reached, and that a decrease is probable, especially if any failure of rain should occur. Large portions of land, in former years devoted to grazing, have been put under cultivation, and in the south the division of the large ranches tends to diminish the area of land hitherto monopolized by sheep. In Oregon there is still room for a large increase, especially in the eastern division. Experiments made in Arizona have not proved successful, as the wool usually received from there is inferior to similar wool grown in California, being of heavier shrinkage and barsher nature.

Spring wools began to arrive at the end of March, and met with ready sale until the heavy receipts caused an accumulation which exceeded the capacity of the warehouses. After comparative quiet for a short time, business again started at a lower range of values, and continued active until the larger portion of the clip had been marketed. Early in July the improved feeling in Eastern markets manifested itself here, and when fall wools began to arrive the spring clip was nearly closed out. Prices ranged from 10 cents for burry and defective to 20 cents for strictly fine.

Fall wools commenced to arrive during August, and at first realized about the same prices the spring wools brought. Under active competition, however, rates advanced rapidly, and many growers have obtained more for their fall than for their spring shearing. In fact, prices reached a higher range than those ruling during 1875. Fall wools met with ready sale until business was interrupted by political questions, and since the early part of November comparatively small sales have been made. The high prices obtained caused extensive shearing; but, judging from the large proportion of lambs, there will be a greater production of spring wool in 1877 than even 1876, always provided that the rainfall is sufficient to make pasturage abundant.

The condition of both clips has not fulfilled the expectations arising from the abundance of feed. Most of the clips of a year's growth were

heavily loaded with tags, arising from the rank growth of the grasses. As prices were low, growers were also less careful in forwarding their wool in merchantable condition, frequently wrapping tags and locks inside the fleeces. In the fall most of the southern wools contained more earth and sand than usual. The southern wools were in good condition, but very burry and seedy. Oregon wools have been in remarkably good condition, but have contained a lesser amount of combing and delaine. Fine wools have been most wanted this year. We see no reason, however, to think that California can compete with Australia or South America in raising fine wools. A medium grade seems to flourish best, especially where semi-annual shearing is so general; the result is longer staple and lighter shrinkage, and on an even market there would be less difference in value of fall and spring clips of medium grade than where effort has been made to raise exclusively fine wools.

## A Chance for the Low Lands.

We have now had a succession of seasons in which the rainfall has been up to or above an average, and as a consequence the elevated lands of the great central plains of the State have been fully saturated each winter, or rainy season, and have produced abundant crops. The occupants of them have almost come to believe that there had really a change come over the climate of California, and that such a dry season as that of 1862 and 1863 would never again occur. The present continued dry weather, however, is shaking the faith of these people in this supposition very materially, and they now see that there is danger ahead. On the other hand, the bottoms have had it rather too wet for comfort and large crops and good prices. They had also come to accept it as a certainty that the future winters were to continue wet, and that high water and overflow were to be the rule instead of the exception. They had, therefore, especially during the present winter, employed all their leisure time in strengthening their weak levees and in building new ones. They now begin to feel that while they may not have expended their labor and money in this regard without avail, yet they may not have any immediate use for these extra embankments, and that they are at last likely to come out all right as the wheel of fortune is revolved. Should the season prove as dry as it now promises, all the bottom lands will produce in great abundance, and as prices will rule high, the owners of these lands will make a good year of it. To secure the benefits of this favorable prospect, however, not a moment nor a point should be lost. Let every team and every plow be put to work at once, and let all the available land be turned over ready for the seed. The lowest lands can be seeded as late as the month of February. As the prospects now are that wheat will rule high for the year to come, not altogether because of our own dry season, but on account of the complications in the political world, it may be well to sow largely of this grain, wherever there is probability of making a fair crop.—S. F. Bulletin.

## The Ashtabula Disaster.

Details of a terrible railroad accident which occurred this week at Ashtabula, on the Lake Shore railroad, have been received by telegraph. It is now known that about two out of every three passengers were killed.

The disaster occurred shortly before eight o'clock. It was the wildest winter night of the year. The train was moving at a speed of less than ten miles an hour. The head-lamp threw but a short, dim flash of light in front, so thick was the air with the driving snow. The train crept across the bridge. The leading engine had reached the solid ground beyond, and its driver had just given it steam, when something in the under-gearing of the bridge snapped. For an instant there was a confused cracking of beams and girders, ending with a tremendous crash as the whole train, all but the leading engine, broke through the frame-work and fell in a heap of crushed and splintered ruins at the bottom. Notwithstanding the wind and storm, the crash was heard by people half a mile away. For a moment there was silence; then arose the cries of the maimed and suffering.

Those who were unhurt hastened to escape from the shattered cars. They crawled out of the windows into the freezing water, waist deep. Men, women and children, with limbs broken, bruised and pinched between timbers, and transfixed by jagged splinters, begged with their last breath for aid that no human power could give. Five minutes after the train fell a fire broke out in the cars piled against the abutments at the other end. A moment later the flames broke from the smoking car, and the first coach piled across the other, near the middle of the stream, less than 10 minutes after the catastrophe. Every car in the wreck was on fire, and the flames, fed by the dry varnished work, licked up the ruins as though they had been tinder. Men, who in the bewilderment of the shock sprang out and reached the solid ice, went back after the wives and children and found them suffocating and roasting in the flames. People living in the neighborhood were startled by the crash, and lighted to the scene by the conflagration, which made even their prompt assistance too late. By midnight the cremation was completed. The storm had subsided, but the wind blew fiercely, and the cold was even more intense.

The iron bridge structure was a single span of 159 feet, crossed by a double track, and was 70 feet above the water. The descent into the valley on either side is precipitous, and as the hill slopes are piled with heavy drifts of snow there was no little difficulty in reaching the wreck after the disaster became known. The bridge has been regarded as one of the very best of the kind in the country. It has been tried with six locomotives, and trains frequently crossed on both tracks simultaneously without causing more than a slight deflection of the structure. It is conceded, however, that the continued impact of heavy trains crossing these iron structures destroys in a measure the integrity of the iron or crystallizes it in such a manner as to weaken it; and in this case the extreme cold probably had a serious effect. The accident is one of the worst which ever occurred in the United States, but will have the effect no doubt of causing a minute and scientific examination of the railroad bridges all over the country, as the Brooklyn disaster called the attention of the police to the condition of theaters.

Too much care cannot be taken or too much caution exercised in building and keeping in repair structures on the strength of which so many lives depend, and a careful examination of the causes of this disaster may develop facts which will be of a protective nature to the traveling public. As the bridge fell the driver of the locomotive in front gave it a quick head of steam, which tore the draw-head from its tender, and the liberated engine shot forward and buried itself in the snow. The other locomotive, drawn backward by the falling train, tumbled over the pier and fell bottom upward on the express car next behind.

## The Drouth.

We have thought that at this time some facts concerning the rainfall of the past would be interesting and possibly assist our weather prophets in their speculations as to the future, and therefore present in tabular form the annual and monthly rainfalls for the past 26 years and for the 27th to date, from observations taken in this city:

Year.	Inches.	Year.	Inches.
1849-50.....	33.10	1863-64.....	10.08
1850-51.....	7.40	1864-65.....	24.73
1851-52.....	18.44	1865-66.....	22.93
1852-53.....	35.20	1866-67.....	34.92
1853-54.....	23.87	1867-68.....	38.84
1854-55.....	23.08	1868-69.....	21.35
1855-56.....	21.60	1869-70.....	19.31
1856-57.....	19.81	1870-71.....	14.10
1857-58.....	21.88	1871-72.....	34.71
1858-59.....	22.22	1872-73.....	18.02
1859-60.....	22.27	1873-74.....	23.98
1860-61.....	19.72	1874-75.....	18.40
1861-62.....	49.57	1875-76.....	25.91
1862-63.....	13.62		

The largest monthly fall for each season occurred during the months and in the quantities as follows:

Year.	Month.	Inches.
1849-50.....	November.....	8.60
	And in January nearly as much.	
1850-51.....	March.....	1.94
1851-52.....	December.....	7.10
	And in March nearly same.	
1852-53.....	December.....	13.20
1853-54.....	February.....	8.04
	Previous to January 1st we had only 5.12, not as much as during present season.	
1854-55.....	April.....	5.00
	Previous to January 1st, only 3.72.	
1855-56.....	January.....	9.40
	Previous to January 1st, only 6.43.	
1856-57.....	February.....	8.59
	Previous to January 1st, only 7.08.	
1857-58.....	February.....	5.55
1858-59.....	February.....	6.32
1859-60.....	November.....	7.28
1860-61.....	December.....	6.16
1861-62.....	January.....	24.34
1862-63.....	January.....	3.03
1863-64.....	November.....	2.65
1864-65.....	December.....	8.91
1865-66.....	January.....	10.88
	Previous to January 1st, a total of 5.27, 4.19 of which fell in November.	
1866-67.....	December.....	15.16
1867-68.....	December.....	10.69
1868-69.....	January.....	6.35
1869-70.....	February.....	4.78
1870-71.....	February.....	3.76
	Previous to January 1st, a total of 3.84, of which 3.38 fell in December. In January we had 3.07.	
1871-72.....	December.....	16.74
1872-73.....	December.....	7.25
1873-74.....	December.....	10.12
1874-75.....	January.....	6.97
1875-76.....	November.....	6.73
	And in January, 6.41.	

For the present season, as far as it has progressed, we have had a total of 5.28 inches, of which 2.10 fell in August, 0.26 in September, 2.69 in October, and 0.23 in November. The average for 27 seasons is 26.67 inches. The average for the month of January, our most prolific rain month, is 12.70. The average for November is 5.97, and for February it is 6.30.

By referring back to the season of 1856-57 we discover that previous to January 7.08 inches of rain had fallen, which was just enough to enable our farmers to get their plowing and sowing done in good shape. In January there were 2.45, and in February 8.59 inches, followed in March by 1.62, and in May by a very slight shower of 0.02. This was enough to insure good crops, but in June came 0.12 more, which caused much grain to lodge and rust. In 1866-67 we had our principal rain in December, amounting to 15.16 inches. In 1865-6, a season more resembling the present than any since the settlement of the country, there was a total fall of 5.27 inches previous to January 1st, of which 4.19 fell in November. In January there fell 10.88, and it continued late, giving us in February 2.12, March 3.04, April 0.12, May 1.46, and in June 0.04. That season was very like the present in respect of winds also, there

being almost none excepting in immediate connection with rain. There is no occasion yet for despondency, and we think we are warranted in predicting that rains will come in January and succeeding months sufficient to grow and mature a harvest at least as good as the average. As usual, however, those who are ahead with their plowing will reap the largest benefits. In many localities grain is already up and far enough advanced to wait for rain in its season; in others, farmers are plowing away and sowing in faith, and in others they will not begin operations until after rain. This latter class may find when it does come it will continue so as to prevent seeding until quite late, and then there may be a deficiency of late rain to mature the crop.

Now, a word as to the importance of observations. Every farmer should interest himself to such an extent as to keep a diary of events and a rain record. We believe that science will materially assist us in the ordinary affairs of life if we will only observe her laws and operate in harmony therewith. On this coast we must construct our own theories and build up our own science, and the sooner we begin the better.—S. F. Chronicle.

## General News Items.

THE Grand Duke Nicholas is convalescent.

THE Lykens Valley colliery, near Pottsville, Pa., is on fire.

A BILL, to be soon introduced into the House, provides substantially for a national registry law.

EIGHTY THREE AND THREE-TENTHS of the predictions of the Signal Service Bureau have been verified this year.

THE debt statement shows an increase during December of \$358,142; coin balance, \$95,517,418; currency, \$9,483,860.

THE German government has ordered the Imperial bank of Germany to resume the sale of silver for account of the German treasury.

THE Sutter Street wire-rope railroad commenced running on Monday, to comply with the law, and the trial was found to be satisfactory. The road will be in operation for the transportation of passengers in about two weeks.

## The People's and Grangers' Immigrant Bureau, 40 California St.

This institution, according to reports published in the daily papers, has provided situations free of charge for more than 6,000 applicants, and furnished 7,000 persons in search of lands for settlement with letters of introduction to prominent citizens in the interior. The services of the bureau are entirely free to all, as it is supported by subscription. It is just what we need in California, and should be supported. Orders for help will be filled free of charge to either employer or employee. Send them in. Hundreds of immigrants are waiting for them.

AMERICAN MANURES, OR FARMERS' AND PLANTERS' GUIDE.—Comprises a description of the elements and composition of plants and soils; the theory and practice of composting; the value of stable manure and waste products, etc. Also, a chemical analysis of the principal manufactured fertilizers—their assumed and real value—and a full exposure of the frauds practised upon purchasers. By Wm. H. Bruckner, Ph. D., Phila. Sold at this office. Price, \$1.75; post paid.

THE THRESHERS' GUIDE, by D. W. Hollihan, a practical operator with threshing machinery in California and other States. A book of useful and friendly hints to the grain growers, machine owners and threshing superintendents and workmen. Published at the RURAL Press office, in 1872. Price, \$1; in limp cloth binding, 75 cents; postage paid.

THOUGHTLESSNESS.—Persons sometimes return their paper, marked "stop this paper." Their name being pasted on the sheet they think that is all we need to be able to correct their names off. Now that is thoughtlessness. Your P. O. address is needed as much as your name. We have thousands of names arranged only according to locality. Our mailing clerk does not know where everybody lives.

To have the money needlessly spent every year would give substantial comfort to all. To have the money saved by buying SILVER TIPPED boots and shoes would buy each parent every year a pair of new shoes. Also try Wire Quilted Socks.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## Beware of Dry Seasons!

Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only five hours from San Francisco. Adapted to the growth of semi-tropical fruits and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA. Also, irrigated land for rent in quantities to suit, free of charge this season, adjoining the Colony, three miles from Fresno. Call or send for Maps, Circulars, etc. CENTRAL CALIFORNIA COLONY, 306 Pine Street, San Francisco. M. THEO. KEARNEY, Manager



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Jan. 3, 1877.

The trade of the week has been broken by another holiday. New Year's day was generally observed, and since then there has been but little life in the markets. The continued waiting for rain restricts trade; both sellers and buyers of produce refrain from business or else are so far apart in their views that trades are difficult. Yet there have been some slight fluctuations in prices, and some transactions during the week. Wheat has stood still; there is a dead lock between buyers and sellers, and the market is firm but inactive. To-day, Wednesday, private advices from Liverpool report a firm market, probably because of the new threatening in the East.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday	11s	@ 11s 4d	11s	3d @ 11s 8d
Friday	11s	@ 11s 4d	11s	3d @ 11s 8d
Saturday	11s	@ 11s 4d	11s	3d @ 11s 8d
Sunday	11s	@ 11s 4d	11s	3d @ 11s 8d
Monday	11s	@ 11s 4d	11s	3d @ 11s 8d
Tuesday	11s	@ 11s 4d	11s	3d @ 11s 8d
Wednesday	11s	@ 11s 4d	11s	3d @ 11s 8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1875	9s 10d @ 10s 4d	10s 4d @ 10s 9d		
1876	10s 5d @ 10s 10d	10s 10d @ 11s 6d		
1877	11s	@ 11s 3d	11s	2d @ 11s 8d

## The Foreign Review.

LONDON, January 1st.—The *Mark Lane Express* says: The grain trade at the country markets has been generally poor, but the decline of a shilling per quarter on Wheat last week has been received with unusual activity in trade. At Liverpool especially great animation prevailed. The general tone of the market ruled strong in consequence of decreased imports and the depletion of granaries. The same influences have strengthened the London trade. A slight tendency towards lower prices during the recent temporary lull, pervades trade than at any time during the year. Imports into London during the week have been limited, while exports show increasing continental demand. India continues to furnish the bulk of the weekly supply of foreign Wheat into London. American Wheat is now running very short, and holders have realized an advance of one shilling to two shillings per quarter on the week. Russian improved a shilling, with a steady milling demand and speculative inquiry for both. The trade presents a broader feature, millers seeming to derive confidence from the diminution of the stocks, the small shipments from America, and the knowledge that political events may occur to enhance the value of Wheat. With limited arrivals at ports of call, the floating cargo trade has shown considerable firmness. At the end of last week there was a very large business done in California floating cargoes, but the demand has slackened within the past few days.

## New York Grain Trade.

NEW YORK, December 31st, 1876.—Holiday week, as usual, has been an exceedingly dull one in most branches of trade. The grain trade of the week has been rather quiet, shippers' margin having been adverse, yet the position of the market has been very strong for prime Wheat, which has sold at \$1.32 @ 1.47 for graded spring, \$1.35 @ 1.50 for winter. Numbers, 4,200,000 bushels, against 6,371,000 bushels at the same time last year. The sentiment of leading operators is that prices must go higher during the winter. Corn has advanced to 63 @ 64c for prime shipping. The stock of Corn is 3,636,000 bushels, against less than three-fourths of a million bushels this time last year. Cereals are depressed, though prime Barley is firmly held. The stock is above three times as large as last year, but it consists chiefly of very inferior quality. Shipping Flour has advanced to \$5.75 for extra brand, with a stock less than half what it was a year ago. Most of the No. 2 spring Wheat here is held under Western limits fully 3 @ 5c above shipping limits.

## Freights and Charters.

During the past week, says the *Commercial News*, Wheat freights have remained very dull, and a trifling business only has been transacted at extremely low rates. The drought continues, and though there is still time for sufficient rain to fall to insure a good crop next year, the fact cannot be concealed that the situation is becoming serious. The uncertainty continues to act unfavorably on our freight market, and is undoubtedly the cause of the present stagnation. Taking the latest charters as a criterion, we quote wooden ships at \$2 to Liverpool, and iron ones at \$2 25 6d, with the usual advance in both cases for orders and the Continent. At the close we have 27,563 tons in port under engagement to load Wheat, 33,657 tons disengaged, and 10,165 miscellaneous. The latest charters reported are: Ship *Harvester*, 1,494 tons; Wheat to Liverpool, \$2; Cork, U. K., \$2 25 6d; Continent, \$2 75 6d. Ship *Granger*, 1,527 tons; Wheat to Liverpool, \$2; Cork, U. K., \$2 25 6d; Continent, \$2 75 6d. Br ship *Castlehead*, 853 tons; Wheat to Liverpool, \$2 25 6d. Br ship *Dunbritton*, 1,536 tons; Wheat to Cork or orders; owners' account.

## Receipts of Produce for the Half Year.

The following is a statement of the receipts of Domestic Produce at San Francisco from July 1st, 1876, to date, compared with the same period in the previous harvest year:

	July 1st, 1875, to Jan. 1st, 1876.	July 1st, 1876, to Dec. 30th, 1876.
Flour, qr sks	986,251	1,176,301
Wheat, 100-lb sks	4,566,703	8,658,805
Barley, 100-lb sacks	696,353	1,234,609
Oats, sks	180,058	177,015
Potatoes, sks	435,141	462,031
Corn, sks	92,709	108,268
Rye, sks	10,068	17,951
Buckwheat, sks	1,180	6,212
Beans, sks	76,254	78,584
Bran, sks	80,608	137,743
Hay, tons	36,175	48,352
Salt, tons	4,943	4,281
Wool, bales	59,698	80,561
Hides, No.	80,856	107,145
Raisins, 20-lb bxs	16,627	23,276
Quicksilver, flasks	29,301	35,957
Hops, bales		6,580

## Eastern Wool Markets.

NEW YORK, January 2d.—The condition of the Wool market is far from satisfactory, so far as the volume of trade is concerned, manufacturers being busy at home closing up their accounts and preparing to enter the field anew after the turn of the year. During the past three days fleece has attracted considerable attention from the few buyers that have visited the market, and if they came with an idea of purchasing parcels anything below previous current rates, they have found before this that, though the market presents but little animation, there is no disposition to offer a concession with a view of increasing the volume of trade. Stocks continue light, and re-

ceipts generally small; the statistical position is therefore favorable to holders. In California Wool there is little or nothing doing. Stocks, however, are carried with confidence. Sales for the week are: 12,000 lbs Western Texas, at 22 1/2c; 4,200 lbs Eastern do, 24 @ 26c; 187,000 lbs X and XX Ohio, 42 1/2 @ 48c; 50,000 lbs combing do, 55c; 10,000 lbs Western delaine, 48c; and 95 bales Cape for export to Canada, 37,000 lbs spring California, 20,000 lbs pulled do, 40,000 lbs Colorado, 40,000 lbs Western Texas, 5,000 lbs Eastern do, 14 bales No. 1 pulled, 39 do super do, 87 do X do, 25 do combing do, 12 do black do, 1,400 lbs State fleece, 20,000 lbs combing Ohio, and 80,000 lbs unwashed and unmerchantable do, on private terms. In Boston 800 bales Oregon sold at 36 1/2c for combing.

PHILADELPHIA, January 2d.—Wool in unimproved demand. Colorado washed, 18 @ 20c; unwashed 17 @ 18c; extra and merino, pulled, 33 @ 37c; No. 1 and super pulled, 33 @ 36c; Texas, fine and medium, 20 @ 25c; coarse, 16 @ 18c; California, fine and medium, 18 @ 28c; coarse, 17 @ 25c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Dec. 13.	WEEK Dec. 20.	WEEK Dec. 27.	WEEK Jan. 3.
Flour, quarter sacks	23,221	73,080	23,568	27,612
Wheat, centals	285,027	339,886	157,148	104,432
Barley, centals	38,708	25,206	32,061	22,220
Beans, sacks	5,749	4,092	3,449	1,383
Corn, centals	4,280	7,895	5,533	5,072
Oats, centals	5,290	9,960	3,788	3,119
Potatoes, sacks	17,189	23,392	19,210	13,520
Onions, sacks	1,148	1,252	1,743	1,200
Wool, bales	390	34	107	98
Hops, bales		420	65	46
Hay, bales	1,035	1,621	970	1,195

**Bags**—Our rates for Bags are reduced to 9 @ 9 1/2c for standard hand-sewed Wheat Bags. This is the jobbing price. Large lots at wholesale are obtainable for cash at a lower figure.

**Barley**—Feed Barley is about 5c per ctl higher than last week. Sales of dark Coast were made on Change this morning at \$1.22 1/2 per ctl, and better qualities at higher rates. We note Barley sales during the week as follows: 1,500 sks Coast Feed, \$1.17 1/2; 600 sks bright Coast Feed, at \$1.20, silver; 600 sks ordinary at \$1.17 1/2, and 160 sks burry, \$1.15, silver.

**Beans**—Prices are unchanged.

**Corn**—Corn has advanced and is now quotable at \$1.20 @ \$1.25 for both large Yellow and White. There has been a sale of 100 sks small round at \$1.27 1/2.

**Dairy Produce**—The depression in Butter finds no relief as yet. It has been hard during the last week to get 35c for the very best lots. This condition of affairs need not be long expected if the drought continues. Cheese is without change.

**Eggs**—Eggs are plenty and dull at 37 1/2.

**Feed**—Cornmeal is advanced to \$28 per ton, and Oil Cake Meal to \$37.50. Hay has sold at last week's prices, although \$18 per ton is only an occasional and extreme price for the choicest Wheat. We note sales of other descriptions as follows: 377 tons mixed Wheat and Oat, \$15.25; 30 tons stable, \$13.50; 60 tons stock, \$11.50 @ 12.50.

**Fruit**—Grapes are nearly out of the market and quotations are dropped. Limes are in excess and poor lots are hardly saleable. California Oranges also show wide range in quality and size, and some sell as low as \$10 per M.

**Hops**—The local market is without news. Except a few sent to Australia, the hops lie in the warehouses awaiting purchasers. The New York market for the week ending Dec. 22d, is reviewed by Emmet Wells as follows:

A large business has been doing this week, but at lower prices. The report that choice shipping Hops can be bought in the country at 25 cts per lb. and under, has caused a most depressing effect upon the trade here, and resulted in a decline of from 3 to 5 cents per lb. on medium and choice grades. The price is now coming to a point at which English shippers ought to be willing to buy of us; though they find a good deal of fault with the quality of our Hops this year, especially with the picking. It seems very hard for holders to be obliged to accept the prices now offered, yet they are gradually becoming reconciled to the situation, seeing there is little or no hope for a further demand from Germany. England takes from us this week, 800 bales, which is a very fair beginning. We hope for larger orders as prices become more settled. The receipts for the week foot up over 3,000 bales. Quotations—New Yorks, good to choice, 22 to 27c @ lb.; New Yorks, low to fair, 15 to 20c @ lb.; Eastern, 20 to 25c @ lb.; Wisconsin, 12 to 17c @ lb.; Yearlings, 10 to 15c @ lb.; Olds, all growths, 4 to 8c @ lb.; Californians, 23 to 25c @ lb.; Oregon, 23 to 25c @ lb.

**Oats**—Oats are firm and prices are maintained. We note sales: 300 sks Feed at \$1.90; 200 sks, \$1.95; 200 sks choice Humboldt Feed Oats, \$2 per ctl.

**Onions**—Onions have been received in larger supply than needed and prices have receded. The very best, both from Union City and Stockton, are quotable at \$1.12 1/2 per ctl.

**Potatoes**—Petaluma Potatoes have advanced a point, being now quotable at 85 @ 95c per ctl. Other sorts are unchanged, except Early Rose, which are scarce and rank as high as the best Petaluma, 95c.

**Poultry and Game**—The holiday demand is removed, and prices for Ducks, Turkeys and Geese have fallen. Full lists of prices may be found in our table.

**Provisions**—The market is well supplied with fresh Meat, and prices are low for the season. Provisions are quiet and unchanged in price. The demand for the interior is very light. Country merchants are holding off awaiting rain.

**Vegetables**—Our price list of Green Vegetables is becoming much reduced. We drop Tomatoes from the quotations. Few are received, and those so poor that the consumer prefers to go on canned stock. Marrowfat Squash has undergone extreme fluctuations during the week. One day the supply was small and the Squash was sold as high as \$27.50 at auction on the wharf. To-day the supply is ample, and the range is lower than a week ago, viz.: \$10 @ 15 per ton.

**Wheat**—The transactions of the week have been few. Holders are firm in their demand for \$2.25 for Shipping, and offers are at \$2.20. Holders are confident and at the moment are strengthened by the renewal of the war outlook in the East. We note a few sales during the week as follows: 300 cts good Milling at \$2.20; 8,000 do barely shipping quality at \$2.17 1/2; 6,000 do at \$2.20; and 4,000 do for shipment at \$2.22 1/2; 1,500 do choice Milling at \$2.20; 1,000 do smutty at \$1.90; 1,200 very choice at \$2.27 1/2; 300 sks fair Milling, \$2.10; 1,000 do Superfine do, \$1.90 per ctl.

**Wool**—The following, from a contemporary, agrees with our view of the trade in this city: There was probably never a time in the history of the Wool trade of this city when the stagnation was so perfect as it is at present. For a period of nearly a month there have been no orders from the East, and consequently no sales. The reasons given are that there is little or no demand in Eastern markets, as manufacturers are only buying in very small quantities and for immediate use, wishing to have as little stock on hand as possible at the close of the year, when the annual settlements take place. The unsold stock here is variously estimated at 3,500,000 to 4,000,000 lbs, much of it of as good quality as the State produces. Holders are firm, the general sentiment being in favor of holding for 20 cents for the best.

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY, M., Jan. 3, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat, 9 @ 9 1/2		Pacific Glue Co's	
Neville & Co's		Neatfoot, No 1	1.00 @ 90
Hand Sewed, 22x36, 9 @ 9 1/2		Castor, No 1	1.25 @ 90
24x36, 10 @ 10 1/2		Baker's A A	1.25 @ 30
24x48, 11 @ 11 1/2		Olive, Plagniol	1.25 @ 30
Machine Swd, 22x36, 9 @ 9 1/2		Possel	4.75 @ 90
Flour Sacks, halves	9 @ 11	Palin, B	9 @ 90
Quarters	6 @ 7	Linsed, Raw	75 @ 90
Eighths	4 1/2 @ 5	Boiled	80 @ 90
Hessian, 60 inch	11 @ 12	Cocanut	80 @ 90
45 inch	8 1/2 @ 9	China nut, cs	70 @ 90
40 inch	7 1/2 @ 8	Sperm	1.60 @ 65
Wool Sacks, 3 1/2 lb	45 @ 50	Coast Whales	60 @ 65
4 lb	50 @ 55	Polar, refined	62 1/2 @ 65
Standard Gunnies	11 1/2 @ 12	Lard	44 @ 45
Bean Bags	7 @ 8	Oleophene	44 @ 45
CANNED.		Devco's Britl	50 @ 45
Grant's	16 @ 16 1/2	Nonpareil	50 @ 45
Mitchell's	18 @ 18 1/2	Eureka	32 1/2 @ 38
CANNED GOODS.		Barrel kerosene	32 1/2 @ 38
Assorted Pie Fruits	2 1/2 @ 3	Downer Kern	45 @ 50
2 1/2 lb cans	2 1/2 @ 3	Elaine	45 @ 50
Table do.	3 75 @ 4 25		
Jams and Jellies	4 25 @ 5	Pure White Lead	95 @ 101
Pickles, hf gal	3 50 @ 4	Whiting	1 1/2 @ 101
Sardines, qr box	1 65 @ 90	Putty	4 @ 5
Hf Boxes	3 00 @ 4	Chalk	1 1/2 @ 10
COAL—Jobbing.		Paris White	2 1/2 @ 10
Australian, ton	8 00 @ 8 25	Ochre	3 1/2 @ 10
Coke Bay	8 00 @ 8 25	Venetian Red	3 1/2 @ 10
Bellingham Bay	8 00 @ 8 25	Averil Chemical	3 1/2 @ 10
Seattle	9 00 @ 9 25	Paint, gal	
Cumberland	14 00 @ 17 00	White & tints	2 00 @ 2 40
Mt Diablo	5 75 @ 7 75	Green, Blue &	
Lehigh	22 00 @ 25 00	Ch Yellow	3 00 @ 3 50
Liverpool	8 50 @ 9 00	Light Red	3 00 @ 3 50
West Hartley	14 00 @ 15 00	Metallic Roof	1 30 @ 1 60
Scotch	8 50 @ 9 00	RICE.	
Seranton	13 00 @ 16 00	China No. 1	5 1/2 @ 6
Vancouver Id.	10 50 @ 12 00	Hawaiian	7 @ 8
Charcoal, sack	75 @ 80	Carolina	10 @ 10
Coke, bbl	60 @ 65	SALT.	
COFFEE.		Cal. Bay, ton	10 00 @ 14 00
Sandwich Id, lb	21 @ 22	Common	5 00 @ 7 00
Costa Rica	21 @ 22	Armen Id.	12 00 @ 15 00
Guatemala	20 1/2 @ 21 1/2	Liverpool	20 00 @ 22 00
Java	23 @ 25	SOAP.	
Maula	20 @ 21	Castle, lb	10 @ 10 1/2
Ground, in cs	25 @ 26	Common brands	4 1/2 @ 6
Chicory	27 @ 28	Fancy brands	7 @ 8
FISH.		SPICES.	
Sac to Dry Cod	5 50 @ 7 1/2	Cloves, lb	45 @ 50
Bonclera	8 10 @ 10	Cassia, lb	22 1/2 @ 25
Eastern Cod	8 @ 8 1/2	Nutmeg, lb	35 @ 40
Salmon, bbls	6 50 @ 7 25	Pepper Grain	15 @ 17
Hf bbls	3 75 @ 4 00	Pimento	15 @ 16
2 lb cans	2 65 @ 3 00	Mustard, Cal,	
1 lb cans	1 80 @ 2 00	1 lb glass	1 50 @ 2
Col Riv, hf bbl	4 25 @ 4 50	STEAR, ETC.	
Pkld Cod, bbls	22 00 @ 25 00	Cal. Cube, lb	12 1/2 @ 12
Hf bbls	11 00 @ 12 00	Circle A crushed	12 1/2 @ 12
Mackerel, No. 1	11 00 @ 12 00	Pure lard	13 @ 13
Hf Bbls	11 00 @ 12 00	Fine crushed	12 1/2 @ 12
Extra	12 00 @ 12 00	Granulated	12 1/2 @ 12
In Kits	1 25 @ 2 50	Golden C	10 @ 11
Ex Mess, hf bl	12 00 @ 12 00	Hawaiian	10 @ 11
Pkld Herring, hx	3 00 @ 3 50	Cal. Syrup, kgs	72 1/2 @ 75
Boston Smk Hg	40 @ 50	Hawaiian Molasses	25 @ 27
LIME, ETC.		T.E.A.	
Lime, Sta Cruz		Young Hyson	
bbl	2 00 @ 2 25	Moyune, etc.	35 @ 50
Cement, Rosen-		Country pkd Guh-	
dale	2 75 @ 3 50	powder & lin-	
Portland	4 75 @ 5 50	perial	50 @ 60
Plaster, Golden		Hyson	30 @ 35
Gate Mills	3 00 @ 3 25	Foo Chow O	35 @ 60
Land Plaster, in 10	10 @ 12 50	Japan, 1st quality	40 @ 50
NAILS.		21 quality	25 @ 35
Assorted sizes, keg	3 25 @ 4 00		

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY, M., Jan. 3, 1877.

FRUIT MARKET.			
Oranges, Mex.		Plums, .....	3 @ 4
M. ....	30 00 @ 35 00	Pitted, .....	12 @ 14
Tahiti, .....	— @ —	Raisins, Cal, hx	1 50 @ 2 50
Cal. ....	10 00 @ 25 00	Figs, Black, lb.	4 @ 6
Limes, .....	4 00 @ 8 00	White, .....	10 @ 12
Lemons, Cal. ....	10 00 @ 15 00	Prunes, .....	10 @ 17
Sicily, bx. ....	9 00 @ 10 00	Quinces, .....	25 @ 30
Bananas, buch. ....	2 00 @ 3 50	Zante Currants, ..	9 @ 10
Cocoanuts, 100. ....	5 00 @ 6 00	VEGETABLES.	
Pineapples, doz 6 00 @ 8 00		Asparagus, lb. ....	— @ —
Apples, bx. ....	40 @ 1 00	Beets, cts. ....	60 @ 65
Crab, lb. ....	2 @ 3	Cabbage, 100 lbs	50 @ 60
Figs, lb. ....	4 @ 5	Carrots, .....	37 1/2 @ 40
Pomegranates, .....	— @ —	Cauliflower, doz	1 00 @ 1 25
Cranberries, bbl 10 @ 15 00		Celery, .....	75 @ 80
Pears, bx. ....	1 00 @ 2 50	Garlic, lb. ....	2 @ 2 1/2
Quinces, bx. ....	75 @ 1 00	Squash, Marrow-	
		fat, tn. ....	10 00 @ 15 00
DRIED FRUIT.		Artichokes, doz	— @ —
Apples, lb. ....	43 @ 45	Parasols, lb. ....	1 @ 1 1/2
Apricots, .....	10 @ 12 1/2	Lettuce, doz. ....	10 @ 12
Pears, .....	7 @ 8	Turnips, cts. ....	60 @ 75
Peaches, .....	7 @ 9	Mushrooms, .....	— @ —



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES - Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale - various ages - at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle - Bulls, Cows and Calves for sale.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

J. M. KERLINGER, Ellis, San Joaquin Co. Brown Leghorns a specialty.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

W. H. GROVES, Stockton, Cal., has for sale White Leghorn Fowls and Chicks and a few Light Brahma Fowls, for the next thirty days. Stock first-class. Enclose stamp for reply.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

# HEALD'S BUSINESS COLLEGE

No. 24 Post Street, SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT. Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT - In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.



## LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.



## CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for California and Nevada.

H. K. CUMMINGS, 1858.

H. H. BALSTON, 1876.

## HENRY K. CUMMINGS & CO.,

WHOLESALE FRUIT AND PRODUCE COMMISSION HOUSE.

ESTABLISHED 1858

No. 124 Battery Street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are all from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Commercial Hotel, San Francisco.

## Tule Lands.

FOR SALE OR TO LEASE. ABUNDANCE OF PASTURE ON THEM. Address,

MERCER & McAFEE,

426 Montgomery St., San Francisco.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).  
THOS. UPTON.  
L. C. STEELE.

THOS. FLINT.  
G. P. KELLOGG.  
W. L. OVERHOLSER.

G. HUBBELL.

D. CAMPBELL.

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - \$200,000 00  
ASSETS, OCT. 19, 1876, - 268,716 00

## MUTUAL PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Oct. 1, '76.	\$5,181,591.00	\$114,445.57
Less Amount Canceled.	300,644.00	6,207.50
Amount in force, Oct. 1, '76.	\$4,880,947.00	\$108,238.07
Losses paid.		\$7,251.00

## CASH PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Oct. 1, '76.	\$2,585,914.19	\$51,606.96
Less Canceled and Expired.	976,008.00	19,538.16
Amount in force, Oct. 1, '76.	\$1,609,906.19	\$32,068.80
Losses paid.		\$40,153.71

## OFFICERS.

J. D. BLANCHARD, President  
I. G. GARDNER, Vice-President  
G. P. KELLOGG, Treasurer  
A. W. THOMPSON, Attorney  
FERD. K. RULE, Secretary

## TRUSTEES.

	San Francisco	Salinas
J. D. Blanchard		
G. P. Kellogg		
I. G. Gardner		
Chas. Laird		Salinas
Uriah Wood		San Benito
A. R. Sully		Santa Rosa
A. W. Thompson		San Francisco
A. D. Logan		Colusa
I. C. Steele		San Mateo
G. W. Colby		Butte County
A. Wolf		Stockton
C. J. Cressey		Oakland
J. C. Merryfield		Dixon
E. W. Steele		San Luis Obispo
C. S. Abbott		Monterey
Dr. T. Flint		Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated accordingly to merit.



## FOR SALE.

A fine lot of seventy-five high grade Angora Goats will sell for cash, or trade for a pair of good horses and a heavy wagon. For particulars address

I. F. TABOR,

New Castle, Placer Co., Cal.



My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refund the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. *Vegetables a specialty.*

JAMES J. H. GREGORY,  
Marblehead, Mass.

## SANBORN &amp; BYRNES,

STAIR BUILDERS.  
Mechanics' Mills, Mission Street,  
bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Newsels and Balusters.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER CHOICE CALIFOR. NIA ALPHEA, Etc.  
Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRENCH ACUTALIAN BLUE GUM, or "FEVER TREE" SEED, together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

BERNARD NURSERY, F. K. FOREX, Bloomington, Ill. Price list free. Four Catalogues, 25c.

## Nurserymen.

RARE AND VALUABLE

## PLANTS AND TREES.

STRAWBERRIES. Ever-bearing French Bush Strawberries, with and without runners; the best of all in flavor and taste. Plants without runners make fine borders. Prices: With runners, 1,000 plants, \$10; 100, \$1.50; 12, 25c. Without runners, 1,000 plants, \$20; 100, \$3; 12, 50c.

TREES. The real Paulownia Imperialis, 50c. Two dollar each for trees from two to nine feet high. Walnuts, paper shell, the best of all, one year old, 50c each. Walnuts bearing three years from the seed. Four kinds of the finest French Chestnuts, just received from France, one and two years old, 50 and 75c. Twelve thousand Plants and Trees just received from France, including many new varieties.

For sale by

J. GRELOCK, Los Angeles.

P. O. Box 233.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, ALMOND, QUINCE, OLIVE, FIG, GRAPEVINES, AND SMALL FRUITS.

EUCALYPTUS, CYPRRESS, PINE, ACACIA, PEPPER, ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

## FRUIT, EVERGREEN, NEW AND RARE TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Pritchardia Filifera)

THE FASTEST GROWER AND MOST HARDY OF ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES, EVERGREENS, SHRUBS AND GREENHOUSE PLANTS.

Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons, And Other Tropical Fruits.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and the public on the

Most Reasonable Terms.

200,000

Australian Gum Trees For Sale,

AT

STRATTON'S GUM TREE FOREST NURSERY, HAYWARD, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$8 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

## PETALUMA NURSERIES.

Established - - - - - 1860.

We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an overstock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Arancaria, Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.

## PEPPER'S NURSERIES

ESTABLISHED IN 1858.

The largest and most complete stock of Fruit Trees north of San Francisco Bay, also, a general assortment of Shade Trees, Evergreen Trees and Shrubs, Green House Plants, etc.

Eucalyptus in variety. Prices low. Catalogues and list of prices furnished on application. Address, W. H. PEPPER, Petaluma, Cal.

## SPANISH CHUFA

Address

L. L. BEQUETTE,

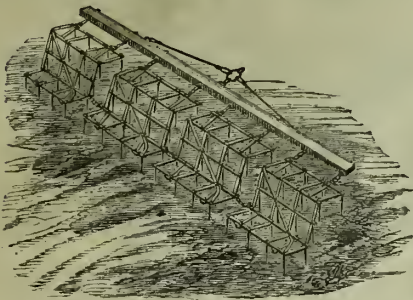
Downey City, Los Angeles County, Cal.

## SEED FOR SALE.



## Agricultural Articles.

## IRON SECTIONAL HARROW.



This Harrow was Awarded the First Premium at the California State Fair in 1875.

The undersigned, having purchased the patent right of this Harrow for California, are now manufacturing them in Roseville, Placer County, and would call the attention of Farmers to the superior merits of this Harrow over all others now in use.

As its name indicates, it is made in sections of about three feet in width, each section having four bars, in which the teeth are inserted, and by connecting the sections with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do all kinds of work, he should purchase six sections, which would be suitable for four horses, and would cut 18 feet in width; by disconnecting two sections he will have a two or three-horse Harrow, cutting about 13 feet. One section alone is complete in itself, and suitable for garden work, with one horse. The Harrows are made of the best quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superiority for these Harrows over all others in use on this Coast:

First—By the lightness of the draft, taking into consideration the amount of work it does.

Second—By working uneven or rolling ground just as well and as evenly as if it was entirely level.

Third—They are made of Iron and Steel, and therefore are not affected at all by sun or rain, or by heat and cold; they are always tight, and ready for use; they are also durable. A farmer purchasing one has a Harrow that will last a life time.

Fourth—The teeth being fastened with a nut and screw into the cross bars, should one break, another can be inserted in a moment. We are making three sizes, all being the same in width, but different in depth and weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

**BREWSTER & CO.,**

Roseville, Placer County.

Will be promptly attended to, and satisfaction guaranteed in all cases.

## CAUTION.

It has come to our notice that certain parties are now making this Harrow in this State, and that several of them have been sent here from the East. Now this is to caution all persons against making, selling or buying them, so made and offered for sale, as we shall enforce our rights in relation to the matter, and would call the attention of all persons infringing upon our patent, to the law in regard to it.

**BREWSTER & CO.**

Roseville, July 15th, 1876.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

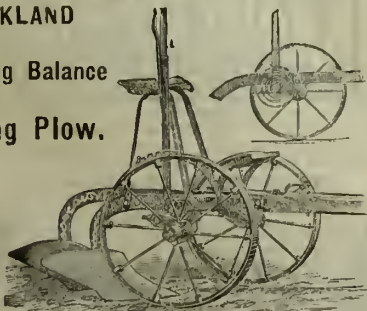
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
Stockton, Cal.

## OAKLAND

Spring Balance

Gang Plow.



Patented and manufactured by H. N. Dalton, at the Pacific Agricultural Implement Works, Pacheco, Cal. Established in 1858. Send for Circular and Price List.

**DAVIS & SUTTON,**

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

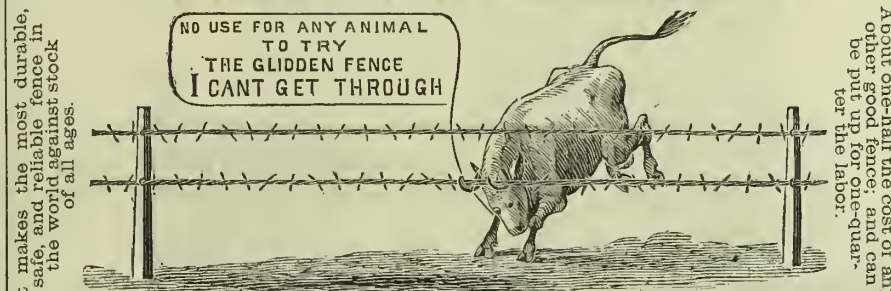
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30 extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 108 Battery Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb wire with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

**JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.**

Manufactured by Washburn & Moen Manufacturing Company.

## PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

## BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bung, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

**PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.**

**KITTLE & CO., Agents.**

## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lunhago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, S. F.

**50** Visiting Cards, with your name finely printed, sent for 25c. We have 100 styles. Agents Wanted. 9 samples sent for stamp. A. H. Fuller & Co., Brockton, Mass.

**ALEX. BUSWELL,**

**BOOK BINDER, PAPER RULER**

AND BLANK BOOK MANUFACTURER,

521 Clay Street, S. F.

Blank Books Ruled, Printed, and Bound to Order.

**ANGELL'S** CHARCOAL DENTAL SOAP for Whitening and Preserving the Teeth. J. W. ANGELL, Prop., San Francisco.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm Pumping, Railroad and Power

**WINDMILLS,**  
Pumps & Fixtures,



Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

**The "ENTERPRISE" FEED MILL**

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

**HORTON & KENNEDY,**

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

**Grangers' Bank of California,**

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTEPELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1871, for the transaction of a general banking business.

## CAUTION.

To Farmers and all others who put Barbs upon Wire Fences, Making a Barbed Wire Fence, and to all Manufacturers and Dealers in Fence Barbs and Barbed Fence Wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent, Nos. 66,182, 67,117, 74,379, 84,062, 153,965, 157,124, 157,508, 164,181, 173,667; reissues, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914, and other patents. Copies of our claims can be obtained of our attorneys, Coburn and Thacher, Chicago, Ill., or of our counsel, Thos. H. Dodge, Worcester, Mass.

**WASHBURN & MOEN MANUF'G CO.,**  
Worcester, Mass.

**I. L. ELLWOOD & CO.,**  
De Kalb, Ill.

Sole owners and manufacturers, to whom orders for Barb Fence or for Loose Barbs should be addressed.

## The Patron's Almanac for 1877.

Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cills, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

**S. HOWARD WILSON,**  
Mechanicsville, Bucks Co., Pa.

**INTERNATIONAL HOTEL,**

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco.

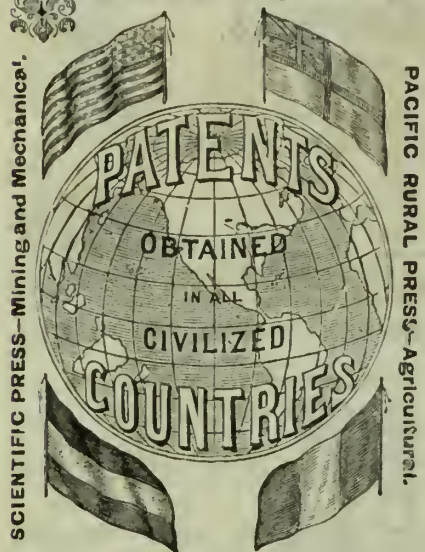
\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

**Dewey & Co.** { 224 Sanson St } Patent Agt's.



# DEWEY & CO'S SCIENTIFIC PRESS Patent Agency.



Publishers, Patent Agents and Engravers.  
224 SANSOME STREET, SAN FRANCISCO.



## Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious, able, and well conducted journal.  
Because it is the largest and best agricultural weekly west of the Rocky Mountains.  
That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.  
That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.  
That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.  
That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.  
That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

Subscription, \$4 a year in advance.

DEWEY & CO., Publishers.  
San Francisco, 1877.

**HARD ON THE PUBLISHERS.**—Some of our subscribers when called upon by our agents insist that they have sent us notices through (perhaps) a neighbor, the postmaster, or a letter, and we have taken no notice of their orders, for which they feel hard towards us. Now, we never received such notices without responding to them. It would be suicidal to our interests to ignore them. The fact is, letters, too frequently forget to put the right (or any other) kind of stamps on their letters; they too often send a copy of the paper back, which may never reach our business office, or if it does reach us, may lack the name of the town and county in which the subscriber lives, in which case we cannot (if we have his name) tell what part of our list to find it, to cross it off or change it, without looking over some 10,000 names. Postmasters and their clerks make omissions and mistakes as well. When you have business with this office remember postal cards and letter stamps are cheap, and ask no one to do that which you can well do yourself.

**PACIFIC RURAL PRESS.**—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the Grangers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribe at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid.—*Mountain Messenger, Dec. 15th.*

## FOR SALE.

Ninety acres of the Mount Pleasant Ranch, situated on the turnpike road between Auburn and New Castle, Placer county, being two miles from Auburn and one mile from New Castle. Both places are on the C. P. R. R. and have Express office, Post-office, etc., and are good shipping points for produce over the mountains. About twenty-five acres of said land are under improvement; two acres in Berries, a few choice Grapes, and a few Fruit Trees in bearing. The soil is from three to eight feet deep and well adapted to the growing of all kinds of Fruit, Grain or Alfalfa. Good facilities for irrigating from Bear River ditch. This is one of the best fruit sections in the State, large quantities of all kinds being shipped from here daily during the Summer season. The purchaser will be given house and barn room free until he can build. Reference may be made to the Postmaster at New Castle or Auburn, or to C. T. ADAMS, New Castle, who owns land adjoining mine. Title, U. S. Patent. My reason for wishing to sell is old age and inability to labor. Price, \$1,800. JAMES MUNSSELL, Sr.  
Apply to JAMES MUNSSELL, Jr., 224 Sansome Street, San Francisco, Cal.

**Trees, Plants,** Bulbs. Fall Price List and Bulb Catalogue GRATIS. Address, F. K. PHENIX, Bloomington Nursery, Ill.

# Live and Let Live Bull's Head Stock Yards.

Ninth and Howard Streets - - - - - San Francisco.

## REMEMBER!

No horse with a paper in his headstall will be allowed in the yards.  
No diseased horse will be allowed in the yards.  
All hills are Cash, before delivery of stock. No exception to rich or poor, friend or foe.  
I never gamble in mining stocks, and don't want any "points" or trades for any stock except live stock. Short stories and long friends.  
Report any complaints to the office, and I will see my business is attended to—promptly and square to all.

ROLLIN P. SAXE, Proprietor.

## AUCTION SALE OF HORSES.

The first auction sale of Horses and Buggies will take place at the Live and Let Live Bull's Head Stock Yards in about ten days. Parties having stock to sell can have them advertised and entered for the next six days. TERMS are as follows: Auction commission, five and one-fourth per cent. For horses and carriages (customers of the yard) no extra charge, except cost of advertising. For outside horses \$1 yard bill will be collected, and expenses of advertising, if advertised. Apply to ROLLIN P. SAXE, Ninth and Howard Streets, or CREGO & BOWLEY, Auctioneers, California Street.  
December 29th, 1876.

# AT THE AUCTION SALE OF LIVE STOCK TO BE HELD ABOUT The 8th or 9th instant. at the Live and Let Live Bull's Head Stock Yards,

CORNER NINTH AND HOWARD STS., WILL BE OFFERED A SIX-YEAR-OLD

## JET BLACK SUFFOLK PUNCH STALLION,

17½ Hands high, beautiful mane and tail, and fit to make a profitable season. Is well broke all ways and very kind

## TWO THOROUGHbred SHORT HORN BULLS,

American Herd Book recorded. Two years old, Red, and in fine condition. Have cost over \$400 each. These are the last two Bulls of the Saxe Importations, as we are now through importing. I will sell one of the above for good hay, grain, beef or Milch Cows. The other will be kept at the Yards for service of cows.

ROLLIN P. SAXE, Proprietor,

Live and Let Live Bull's Head Stock Yards,  
COR. NINTH AND HOWARD STREETS, - - - - - SAN FRANCISCO.



OFFICE OF THE  
Mining and Scientific Press, 224 Sansome St., San Francisco, CAL.

# DESIGNED AND ENGRAVED

IN THE HIGHEST STYLE OF THE ART.

E. SCHULTZE,  
MANAGER.

DEWEY & CO.,  
Publishers and Patent Agents.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address  
Rev. DAVID McCLURE, Principal,  
OAKLAND, CAL.

## THOROUGHbred FOWLS,

### BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL Eggs Shipped to  
OF FOWLS Any part of the  
GUARANTEED Coast to Hatch Af-  
ter Arrival.

Price List for 1877 now Ready. Address,  
M. EYRE, Napa, Cal.

(Please inclose stamp.)  
Also, Thoroughbred Southdown Sheep.

## WANTED AND FOR SALE.

### I HAVE AT THE

Bull's Head Live & Let Live Stock Yards,  
Cor. 9th, 10th and Howard Streets,  
SAN FRANCISCO.

Two Thoroughbred Short-Horn Bulls, imported from Kentucky, and two years old; RED, and fine pedigrees. As I have quit importing I will sell one of the above at \$550 (has cost me over \$900,) and take it in fresh Milch Cows or good hay, at the market price. A good chance to get a fine bull cheap.

ROLLIN P. SAXE, Proprietor,  
Bull's Head Live and Let Live Stock Yards.

30 NEW YEAR CARDS, seven styles, with name, 20 cents; 30 Masonic or Odd Fellow's Cards, with name, 20 cents; 30 Ladies' Embossed Cards, with name, 20 cents, postpaid. J. B. HUSTED, Nassau, Remss. Co., N. Y.

Dewey & Co. { 224 Sansome St } Patent Agt's.

# OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls.

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY-FIRST  
NO INFERIOR FOWLS SOLD AT ANY PRICE.  
Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to  
GEO. B. BAYLEY,  
P. O. Box 659, San Francisco, Cal

## M. FALLON,

Cor. Seventh & Oak Sts.,  
OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chickens in their season. Eggs packed with care and sent in rotation as orders are received.

## SMITH & WESSON'S

New Model. 38 Calibre. Central 1 in. With Automatic Cartridge Ejector

NOW READY.  
For convenience, power and accuracy, it is unequalled. If your merchant does not keep them, order direct from the Agency, 79 Chambers St. New York, M. W. Robinson, Gen'l Agent.

# Seedsman.

## SEEDS. SEEDS.

### IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New } Sweet Corn.

Early Canada }  
Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel }  
Yellow Globe } Beet Seed.  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

## R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application.  
My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.



Is the most beautiful work of the kind in the world. It contains nearly 150 pages, hundreds of fine illustrations, and six Chromo Plates of Flowers, beautifully drawn and colored from nature. Price, 50 cents in paper covers; \$1.00 in elegant cloth. Printed in German and English. Vick's Floral Guide quarterly, 25 cents a year. Vick's Catalogue 300 illustrations, only two cents. Address, JAMES VICK, Rochester, N. Y.



Contains over 1,200 varieties Vegetable and Flower Seeds. COLORED PLATES. Elegant wood-cuts of vegetables and flowers. Handsomest Guide Published! 50¢ Send for it. DETROIT SEED CO., Detroit, Mich.

We will send either of the following collections for 25cts., or all for \$1.00: 10 pkts. choice Flower Seeds, Annuals; 10 pkts. choice Ornamental Plants; 10 pkts. choice Perennials; 10 pkts. choice Everlastings & Ornamental Grasses; 10 pkts. choice Vegetable Seeds. A sample packet of the above seeds and our catalogue in the free. JENNIFER GREEN, HOUTS, Springfield, Ohio.

# SELECT AND HEAVY FLEECED MERINO SHEEP.

During the winter I will be in San Francisco with some Merino Rams and Ewes that are sold, and if correspondents in California and Texas send their orders with reluctance, we can deliver at same time.

JOHN S. GOE,  
Brownsville, Fayette Co., Pa.



# PACIFIC RURAL PRESS

Volume XIII.

SAN FRANCISCO, SATURDAY, JANUARY 13, 1877.

[Number 2.]

## Large-Horned Owl.

The large-horned owl, or cat owl, shown in our engraving, may be met with almost everywhere on this continent. All climates are alike to it, and it inhabits both the mountain and the valley, but is partial to the vicinity of rivers and lakes, probably because of the abundance of prey in such situations. It has been called the "Eagle of the night," and a "Nimrod of the feathered tribes," because of its prowess and courage. Next to the snowy owl, it is the largest of its genus, and is one of the most common along the shores of the Ohio and Mississippi, where it may be met with at all seasons, roosting in the young cottonwood trees and willows of the banks; and also upon the cypresses of the swamps. When the sun glares, it may be easily approached, but in cloudy weather it promptly retreats, and appears to know that a flight across the stream is conducive to its safety. Its flight at night is elevated, rapid and graceful. It sails with apparent ease, and circles wide, in the manner of an eagle, rising and descending without difficulty, merely by inclining its wings on its tail. At times it glides silently near the earth, with incomparable velocity, and falls, as if shot dead, on its prey beneath. At other times it alights on a fence or dead stump, shakes and adjusts its feathers and utters a horrid shriek, in which the woods echo; again, its sounds are like the barking of a cur dog; then a gurgling noise like the stifled groans and cries of a man in distress; and at other times its *hoo-hoo-hoo-e*, (in B flat, it is said,) uttered near the listener, seems like the cry of an owl a mile off. This is sometimes so well imitated by the human voice, that numbers of these owls are lured to the encampments of boatmen and hunters. In the intervals between these cries, it snaps its bill with vehemence, and turns its head from side to side in a ludicrous manner. Failing to repair to the woods before the return of day, it is obliged to settle down on some apparently quiet spot; but the little birds prove very annoying to it here, and, when the king-bird approaches, it is compelled to retreat, though unconscious of its way.

The food of this owl consists chiefly of half-grown wild turkeys, pheasants and domestic poultry of all kinds, together with several species of ducks. Hares, young opossums, squirrels and mice are equally agreeable to it, and whenever chance throws a dead fish on the shore it feeds on it with avidity.

Owls of this variety pair early in February, when the wooing and the nuptials are indicated by exceedingly grotesque manifestations of ceremonies and rejoicings. The nest, which is very bulky, is usually fixed on a large horizontal branch, not far from the trunk of the tree, or where two limbs branch off, but sometimes is made in a hollow tree, or in the fissure of a rock. It is composed externally of crooked sticks, and is lined with moss, coarse grass and some feathers, the whole measuring nearly three feet in diameter. The eggs are from three to six, almost globular, and of a dull-white. The male assists in sitting. But one brood is reared in a season. The young remain in the nest until fully fledged, and afterwards follow the parents for a considerable time, uttering a mournful sound in supplication for food, by which they are often detected by the hunter. They acquire full plumage the first spring.

The large-horned owl, after the breeding season, lives a solitary life, and a single one of them appropriates to himself the range of a neighborhood or farm, and the havoc it commits is very great, often to the extent of destroying all the poultry of a plantation during a winter. It is very powerful, and equally spirited, often attacking and mastering half-grown wild turkeys. Mallards, Guinea fowls and common fowls prove an easy prey to it, and it often enters hen-roosts in the Northern States, in quest of food. When wounded, it contends with its assailant with a revengeful spirit, protruding its talons, snapping its bill, and expanding its great goggle eyes.

The bill admitting Utah into the union is now in the hands of the House Territorial Committee. The scheme of admission will bring the Mormon question into prominence.

FROST IN FLORIDA.—Our Florida friends have had quite a severe "freeze." The *Florida Agriculturist* says: The recent cold spell was the longest and most severe that has occurred in our residence here of seven years. For a whole week, from November 30th to December 6th, inclusive, ice formed every night, and remained, in sheltered places, undissolved all that time. We were informed of the thermometer falling to

A RAISIN ENTERPRISE IN LOS ANGELES CO.—Some weeks since we made favorable mention of a sample of raisins made by Thos. P. Hinde, of Anaheim, and asked to be informed of the method of curing. In reply, Mr. Hinde writes as follows: "Respecting the drying of raisins, I can only say that the process is so very simple that I did not deem it necessary to describe it. I can say, however, that I carefully adhere to

## The Potato Product.

Our potato growers have not found their lines cast in very pleasant places this year. The market has been heavy almost since the incoming of the early crop, and those who found the balance of last year's crop, which they were holding, pushed to the wall by the new crop which then followed in the same course toward the masonry, have not met with much material encouragement for their labor. The city man has had cheap food and great quantities have gone to waste, but both these things have not rewarded the producer. There was a marvelous increase of the potato acreage last spring. We saw the planting pushed far up the mountains around Half Moon bay, and the same vigorous increase prevailed on the low lands along the Sacramento river. Other regions in the northern counties, and in Monterey county to the south, largely increased their planting, and, although the blight afflicted all severely, there was still an excess over needs, and the marketing has been unprofitable. The large amounts of potatoes which have been received in the city during the year appears in the following summary for the months:

	Sks.		Sks.
January.....	47,899	July.....	53,544
February.....	51,770	August.....	62,496
March.....	67,365	September.....	68,209
April.....	53,152	October.....	66,848
May.....	37,635	November.....	119,507
June.....	57,263	December.....	80,167
Total.....			775,915

Although these figures are large they do not at all represent the production, for the low prices have induced many producers to hold for the possibilities of the winter trade. This trade promises now to be remunerative, for, aside from the nervousness which all produce holders feel concerning the drouth, there is such a tendency to decay in the potatoes that anyone who can keep sound tubers stands a fair chance to sell them well. In our rambles among the commission merchants, we hear wide-spread complaints of the poor quality of the potatoes. The weather seems to spoil them, and the loss we are told is greater than during the seasons when rains have been plenty. We do not see the reason for such a state of affairs, but such is reported.

In sweet potatoes the experience of the growers has not been very different. The receipts in the city during 1876 amounted to 54,000 sacks, and the rates, as reported from week to week in our market column, have been exceedingly low.

On the whole it is claimed that the potato production of the year has met less reward than during any previous year. This will doubtless induce a smaller acreage next year, and the chances of those who maintain the growing will be improved.

DESERT LANDS.—A dispatch from Washington says: "House reported a bill for the sale of desert lands in California, Oregon, Nevada and the Territories. It provides for the filing of a declaration with a register and receiver of a land district in which the desert lands are situated, that the persons intend to reclaim the tract of desert lands, not exceeding one section, by conducting water upon the same within periods of three years thereafter, and upon subsequent proof of such reclamation and payment of \$1.25 per acre for such tract, a patent therefor shall be issued. All mineral and timber lands are excluded. Lands that will not, without irrigation, produce some agricultural crop, are to be deemed desert lands. The bill was passed."

PERSONAL.—We received a call during the week from our valued St. Helena contributor, Mr. John Mavity. He reports crops doing exceedingly well in his region, and a larger area in seed than ever before. He says he never saw such a favorable season for uninterrupted farm work, and it has been well used by the Napa county farmers. We are glad to have such reports to record.



THE LARGE-HORNED OWL.

18° in some places in the country, and we feared that the young orange trees had all been killed. But it is with gratification we can report that the damage is by no means what was expected. The leaves of even the large trees have been much scorched and will drop, and some of the smaller limbs have been killed, but if nothing worse comes this winter they will recover in the spring. The cold snap may be the means of bringing into bearing many trees that have hitherto been shy bearers. The ripe oranges on the trees, in some places, are undoubtedly injured, and we are unable, as yet, to say to what extent, such conflicting accounts have been received.

natural heat throughout, keeping all moisture away from the fruit whilst drying, and steadily expelling and carrying off the moisture emitted from the fruit itself. As I intend erecting a large drying establishment next season, I shall only be too glad to furnish you with all the information connected with the same that may tend to the development of raisin manufacture in this fine and rich climate." We trust Mr. Hinde will meet with success in his commendable enterprise, and hope he will write us fully of his plans as soon as they may be decided upon.

UTAH has more miles of narrow-gauge road in operation than any State or Territory in America.



## CORRESPONDENCE.

## Lake County.

EDITORS PRESS:—From your esteemed paper we see that the weather all over the State is much the same as here, only more so. We are having sunshine and cool north winds every day, varied occasionally by the wind chopping round to the south and threatening with a few clouds. But the clouds don't bring one drop of rain, only heavy frost at night. But the dry weather don't hurt us of Lake county one particle. Whatever the outlook in the lower counties, we are sure of a crop. The beautiful weather, after the heavy soaking rain of last October, has enabled us to plow and seed our land. Our grain is slowly sprouting and coming up. A good rain now would quicken its growth, provided it clears off warm, but we feel assured of a crop any way. This last season was one of unexampled hardship for this county, in fact, it was the nearest approach to a failure which we have ever seen. Owing to the weather, much of the grain was sown late, and the hot weather of early summer shrunk it and disappointed us all in the yield. But no such result can injure us this year. Our grain is in, and rain or no rain for a month, will return a bountiful yield.

In the section of country from which I write, to wit,

## Bachelor Valley,

In the northern end of the county, and 13 miles from Lakeport, the soil is excellent. It is blessed with a richness which no other portion of the county can equal. We and the head of Clear lake are defended by mountains on the north from drying winds, and the southerly breezes bring up to us the moisture from Clear and Tule lakes. We have here some fine farms, notably those of Mr. Balanger, E. C. Parker and Isaac Mitchell. Besides these, our valley is settled by smaller farmers, energetic, hard-working and prosperous. As an example of what our land will do, Mr. E. C. Parker has a farm of 280 acres, only 150 of which are in cultivation. He raises the usual farm products, wheat, barley and hogs. At the risk of "inconvenience," I will here remark that his place last year was farmed(?) in a rather slouchy style. But for all that the little place paid him \$3,800. Still he says he is not content. He wants to sell out and go down South on the frontier, where land is cheap and produce dear. Some people are never contented.

We have had no rain here lately, as I remarked, but our streams have risen, and some of them are flowing briskly. I have noticed the phenomenon frequently before, but cannot account for it.

There have been many strangers among us for some time past. Many from the lower counties and from the East have come in here to rent land, and some have bought farms among us. As a rule, however, a good farmer is not anxious to sell land up here. It is too good to keep. Without bragging, I may say that Lake is one of the most healthy of California counties. Still, a stranger would notice many invalids among us. These are called in by our mineral springs, of which we have many, such as Bartlett's, Pierson's, Witten, Highland and others; some of these, as I can testify from experience, performing almost miraculous cures.

## Crops.

We produce chiefly grain and hogs. There are quite a number of sheep in the county on the hills and in the mountains. A few hogs are being raised. Our grain is hauled and our hogs driven to Cloverdale and shipped there on the cars. We need a railroad. There was talk, a short time since, of one from Woodland to Humboldt via Lakeport and Blue lakes, but it has fallen through. Therefore we depend on a home market for grain and hay; that usually is staple. But high prices in the city call our grain out, and some times leave us in the lurch. That is the case just at present. Many have sent their grain below, until now even seed is scarce. Grain is now two cents, but owners all refuse to sell, and expect three, and will get it if they hold on, too.

## Information Asked.

I have told you about this place a little and I want to pick a crow with you, or rather some of your correspondents. They tell us about the capabilities of different counties and the farms therein till our mouth waters, and we wish we lived there, but they don't say a word about the chances for going. Now, next time, I wish some of your writers in Los Angeles, San Diego, San Bernardino, Fresno, and other places, would tell us a little about the land. Is there any down there for sale? What are the ruling prices? Is any Government land (good and arable I mean) yet to be had? Can one get water on the land cheaply and easily, or will it produce crops without? And how about the climate? Does it burn up in summer, or do they "still live"? Do the fogs shut off the view every once in a while and the rains float the country off in winter, or is everything in the shape of moisture a luxury to be dearly paid for?

Such information would be very interesting to many, and to some in this locality. And

lest I shame myself I will conclude by saying, that our crops never fail. Our climate is sufficiently moist to insure good crops, and is remarkably healthy. Not much land for sale, but good land held at \$30 to \$60 per acre, and some very extra and productive, near the head of the lake, even higher. For "good farming land" probable average is \$40. Range and pasture \$5 to \$10. TRAVELER.

## Curing Hops.

EDITORS PRESS:—I was requested by your agent, Mr. A. W. Strong, while here last fall, to furnish some items about the curing of hops for the benefit of many RURAL readers who wished such information.

As my friend and neighbor, Mr. A. Clock, is a gentleman and a man of large experience in the business, one whose hops bring the highest price in the market, a sample of which took the first premium at the late Centennial exhibition, I thought to interview him, as the proper person of all others, to furnish the desired information, and here are the facts as drawn from him.

When Mr. C. decided to go into the business of hop growing, the first thing he did was to work one summer for a grower near Sacramento gratis, that he might learn the business. The first lesson in curing he learned was, that in the common heating or drying furnaces the hops were too near together; hence by carelessness or otherwise, an excess of heat would scorch the hops and spoil the delicate flavor desired. To obviate this difficulty he had only to raise the drying floor up a greater distance from the heating furnaces below, and add proper ventilators, whereby he had control of the heat.

Mr. C. had often heard complaint from brewers that there was seldom a uniformity of strength in even a single bale of hops; you might open a bale and weigh out a given quantity for a brewing, and the same quantity next time would produce a beverage of a different strength. Mr. C. soon learned the difficulty. It was this: In removing the dried hops from the drying room to the sweating room, they had to be handled so much that the lupuline, or fine yellow powder or litter principle, was shaken off and worked its way down to the bottom of the bin; and as this is the strength or main principle of the hop, it can readily be seen why they are not of uniform strength when they reach the brewer. To obviate this difficulty he had his drying platform built up a ear, the floor of which was of wire gauze laid down in sections. When the hops are dry the platform or drying box is removed over a railway to the store or sweating room, where each section is lifted separately and emptied into the sweating bin, there to remain undisturbed while going through a sweat; after which they are ready for baling. By this improved method they are handled with the least possible chance of shaking off the lupuline, that delicate powder so necessary to be evenly distributed through the entire mass.

But the main difficulty was molding in the bale. This is doubtless caused, says Mr. C., by making only one picking, taking everything clean as they go. In doing this they will have more or less immature hops which, retaining more moisture than the ripe ones, will, when baled with them, spoil the whole mass.

It is best to make two or more pickings, dry them until the stems are quite brittle, and there will be no danger of mold. The extra weight of the fully matured hop, will, he says, more than compensate for the extra trouble in making several pickings.

The hop requires thorough culture and close attention to all the details in the process of curing, that the article produced may bring the highest price in the market, which is necessary to make the business a success.

I have said nothing about the laying out and after-culture of a hop farm; this may be the subject for another article. Neither have I undertaken to give dimensions and cost of buildings necessary for curing and storing, but would advise those who are in, or going into, the business and do not fully understand it, to visit Mr. Clock. They will find in him a gentleman, affable, ever ready to assist others in new enterprises. J. M.

St. Helena, Napa Co., Jan. 1st, 1877.

[We hope our correspondent will pursue the subject in other articles.—Eus. PRESS.]

## The "Bulletin" Among the Weather Prophets.

EDITORS PRESS: Last week an article entitled "A Meteorological Test," appeared in the *Weekly Bulletin*, and it struck me as most unphilosophical.

The gist of it was that we should probably have a dry season because the warm rains of October had melted some snow on the Sierras, in the vicinity of Grass Valley. On this snow melting a regular house-that-Jack-built story was founded. Snow won't cool air, air won't condense vapor, vapor won't form cloud, cloud won't give rain, rain won't soften ground, ground won't admit plow, etc.

Now, in the first place it is the southerly storms that bring us rain. How would snow on Sierras induce southerly storms? Surely cold in any district would act as a repellent to a

warm wind, at least on the earth's immediate surface.

Then, is it the snow that keeps the air cool on snow-capped mountains? When I last listened to Mr. Glaisher, he had found the upper atmosphere far below freezing point hundreds of miles from any snow, and with genial weather in the stratum of air which we usually inhabit.

I had presumed that it was not the snow that kept the mountains and circumpolar atmosphere cool, but that the cold of space, finding those altitudes unprotected by much of a blanket of aqueous vapor, came down and took possession; and, moreover, that when any moisture-laden air was driven by a southerly wind over the Sierras, it was condensed by the cold of those upper regions, and not by the cold of the snow-fields, which snow-fields themselves are only rendered possible by the afore-mentioned "cold of space."

I'm willing to bet a new hat that if only the southern wind will blow long enough and hard enough, that the necessary cold still remains just where it was, even if there be a trifle less snow near Grass Valley.

Why it does not rain here in summer appears to me to be for the simple reason that the sun is then sufficiently powerful to retain the aqueous vapor in the air in the form of vapor. Our Web-foot neighbors, receiving less direct sun rays, get rains, more or less, all the year.

What would raise a good southerly storm I am sure I don't know, but I am confident that putting a little more snow near Grass Valley would not do it!

Some people have a notion that the moon regulates the rainfall. This also seems to me a mistaken idea. Whatever aberrations that most constant satellite may have been guilty of in her youthful days, an astronomer can be sure of knowing just where to find her anytime for a thousand years to come, and knows where she was, to a minute, a thousand years ago; but he cannot tell whether or no it will rain to-morrow. There may be occult influences of which philosophy is at present not cognizant.

Our ignorance meets us at every turn of our every day life. In spite of our blatant boasts of self-congratulation on our vast strides toward omniscience, we remain still as feeble children groping our way painfully out of the darkness. One comfort is that this condition of things still leaves room for the heroic in the world, room for effort and struggle, room and work for all the Heraclides that California can raise.

EDWARD BERWICK.

Carmel Valley, Cal., Jan. 1st, 1877.

## Notes from Tuolumne County.

EDITORS PRESS: And as the years pass away, so do the weeks, bringing us the ever-to-be-trusted RURAL PRESS, with its diversified food for thought. Surely its practical lessons are much better adapted for instruction and use than volumes of novels. May the coming weeks and years find the PRESS in every rural hamlet of our extended domain. Knowledge is one of the most potent of the world's saviors. Knowledge is disseminated through a well-regulated press, but when the press panders to vitiated tastes and is a slave to policy and public plunder, public demoralization is sure to follow.

Tuolumne county has enjoyed a prosperous fruit season. The dried fruit is being sent to market by the ton. God only knows what the consequences will be if the rain keeps off much longer. The gardens depend more upon irrigation than rain in the winter, but if there is no fall of snow in the mountains the common supply will be cut off. At this writing—New Year's eve—there is not one sign of rain. The very heavens seem dried up. The result will be the advance of all farm products, which will be keenly felt by the poor and many in moderate circumstances. We must have faith in the goodness of an all-wise, almighty ruling power, believing that "everything is for the best," and perhaps these phenomenal visitations are necessary to teach us that we are only finite and mortal beings. Sometimes we may be forgetful of our responsibilities and accountability. If we have no storms to purify and cleanse the atmosphere, we have enough and to spare of mental storm and ambitious agitation. If such storms could only produce rain instead of gain we might pardon political hot-heads, but the mental storms will soon subside, and the storms of the Sierras inundate our fruitful valleys, making the husbandman to sing his rustic songs of thanksgiving.

There is a growing disposition in this county to build a narrow-gauge railroad to the waterfront of Stockton. In fact, a narrow-gauge or prismoidal railway is the only practical method of insuring success. Even in the heat of our last effort to secure a railway, we advocated just such a road, to terminate in Stockton, as being cheapest and best adapted to the interests of trade. It is to be hoped that the efforts now put forth will meet with success.

Mt. Pleasant, Jan. 1st. JOHN TAYLOR.

QUICKSILVER FIRE ALARM.—A fire signal, to indicate the breaking out of a fire, which has lately been patented in France by Angelin, operates as follows:—When the temperature of the apartment rises above a predetermined point, a quicksilver thermometer is caused thereby to break, and the quicksilver runs into a dish, where by its weight it sets in motion a clock work. This last is made to operate an alarm bell.

## HORTICULTURE.

## The Orange Scale Bug Again.

EDITORS PRESS: I have been greatly gratified in reading Mr. Garey's article in regard to the great orange pest. The views of one so long and largely conversant with orange culture, are entitled to the profoundest respect, still Mr. Garey seems to feel that though much is known on the subject, the bottom facts have not been reached, and I have no doubt desires that we should keep the ball rolling till we have found out whence the insect comes, and how to forestall his coming or oust him before he does much harm. I propose that we new recruits take hold with Mr. Garey and the old orchardists, and push our inquiries until we find a remedy for this evil. I am full of the faith, that a cure more efficient than has yet been tried can yet be discovered and will be, if we set our heart upon it. Don't let any one be afraid to advance a new theory of the cause or cure. What if it is brushed away in the discussion, the cleaning away of the rubbish helps to get at the truth as much as wiping dust from an eye-glass to make an object clearer. Only let us be candid, determined and persevering, and we will learn how to grow and protect for our homes the noblest tree which escaped the curse of Paradise.

Mr. Garey proposes that we do our best to keep the tree in vigorous growth, as the best means of preventing the insect from injuring the tree or fruit. I admit that thrifty trees and shoots are less likely to be attacked by the insect than those stunted and slow growing. Probably because the sap is less palatable than in the older and maturer parts of the tree. But Mr. Garey cites a case on the Azusa ranch, where one of the very thriftest trees was almost destroyed by the bug, and was the first to be attacked. In the Philippine islands it swept off nearly all the trees, thrifty as well as stunted. Take another case: Jonathan Mayhew, of Santa Barbara, a few years since had the handsomest olive orchard I ever saw. The land was very rich, the care superb, the growth wonderful. It was Mr. Mayhew's pride. But alas! the scale bug came, took possession, and effectually ruined it. Culture and rapid growth could not withstand them.

But how can we make the trees grow while the infestation of the insect destroys the function of the leaf, and his suction pumps draw the vital juices and albumen from the bark?

Mr. Garey, of Florida, holds to the same idea, that want of faithful culture is the cause of injury to the orange by the insect. But how will he account for this Santa Barbara fact on his theory? How for a thousand facts like that on the Azusa ranch, where very fine trees are devastated. While there is much in the views of the gentleman, there lingers in my mind the conviction that very largely the retarded growth was caused by the insect before it was observed, rather than that the insect was invited by the stunted growth.

Let me ask Mr. Garey what he thinks of the ash cure theory, broached in a former letter, where I stated that on a rainy day I took a hucket of dry ashes, and threw them in handfuls through and through the top of a pear tree and a large oleander which were infested by the scale bug. The ash dust rose through the tree like smoke, and settled on every leaf and stem on that side of the tree. When the wind veered to the opposite direction, I took my stand on the opposite side of the trees and did likewise. The trees looked dingy and sorry enough; like the ancient Israelites with ashes on their heads. But it did them good. Subsequent rains and dews leached these ashes on every leaf and stem, and every bug was destroyed. Tell us, friend Garey, how will this remedy apply to the orange disease?

S. BRISTOL.

## Pruning Fruit Trees.

EDITORS PRESS: In any country fruit trees should be so trained as to form a symmetrical head, but the trees in New England in some respects should be pruned and managed quite differently from what is required in this more genial soil and climate. In every case it is best to commence while they are small to form the tops of future years. The usual mode here of cutting off the ends of the branches to set back the growth is, in my opinion, not advisable; especially in some varieties of the apple it is a decided injury, virtually killing the tender shoots, and in most cases checking the natural flow of sap, which forces out from below many vigorous shoots. Otherwise limbs are multiplied at the end of the cutting off the twig the first year, and these are usually full of fruit the second year. This quadruples the amount of fruit at the extremities, tends to bend and break them down by the load. So the evil is not mitigated when the fruit culturist heads in to benefit his trees.

Of late I have employed my time and attention in laboring among a choice lot of bearing trees, not to be laid aside in after years as useless to the orchard.

There is skill and science to be used in a good orchard, and not many have the gift or knowl-



edge to do the tree justice. Many pruners may destroy \$10 value, while others will save the \$10, making \$20 difference in one day, so that the pruning hook should only be trusted in skillful hands. On this coast trees require more foliage to protect the growing fruit than in colder climates, and here fruit will over-load the trees more or less; even with the best of training it cannot be wholly avoided.

There is a remedy to prevent some measure damage by removing at or near the flowering time a portion of flowers or sets, which work will enhance the size and quality of the balance sufficient to remunerate the orchardist for the extra labor and trouble. All stone-bearing fruit trees require but little pruning, and that process of pruning which will avoid in the future a multiplicity of wounds will be the best practice to adopt. Like the rearing of children, the best mode is to lay the foundation while young, so that in mature years you shall reap the blessings, the fruits of your labor and save many a wounded heart.

I claim there is no standard to be strictly followed in tree pruning; these are only general principles, which I claim to be well to follow. I would like to hear from my old friend Mr. Gould (who has had wide experience and is a very practical nurseryman) through the RURAL PRESS.

SOLOMON W. JEWETT.

Merino Farm, Kern county, Jan. 4th, 1877.

[Mr. Jewett, whom some of our readers will remember as an old Californian, has come from Vermont to spend the winter with his prosperous sons in Kern county. We shall be pleased to hear from him on practical points during his stay in the State.—Eds. Press.]

## THE APIARY.

### Making Hives and Extractors.

EDITORS PRESS:—The simpler the hives are made the better. Unnecessary appendages are a delusion and a snare; a money-spender and a nest for moths. Make the sides of inch boards, 10 by 20 inches. The ends 14 inches long; the front end nine inches wide; the back end nine and three-eighths inches wide. Nail the back end even with the lower edges of the side boards; the front end three-eighths of an inch higher, so as to leave a passage-way for the bees all along under the front end. Close this space more or less, as occasion demands, with three-cornered pieces of boards, six inches long, three inches wide and with small grooves cut in the lower sides for moth eggs, which must be destroyed occasionally. Nail laths or narrow strips on the outer, upper edges of the ends, flush with the upper edges of the sides. This will leave the gains upon which are to rest the ends of the frames, 10 in number. Make the frames of thin stuff, an inch wide, nailed with finishing or lath nails; the frames of such size that the bees will have three-eighths inch space between the frames and the hive all around, top, bottom and sides. To induce bees to make straight combs—with a thin, wet strip laid on the under side of the upper strip of the frame as a guide, pour a little melted beeswax from end to end. This is better and cheaper than triangles. Make the bottom board four or five inches longer than the hive, for the bees to alight upon. Nail two strips three inches wide edgewise under the bottom board. This will raise the hive sufficiently from the ground. The top board must also be clamped with strips nailed across. Fasten neither top nor bottom to the hive. For surplus honey, remove the top board and set a hive in its place. It is not essential, but it is best to plane the boards outside and inside. Paint them or wash them with waterline in skimmed milk. This makes a lead color, looking at a short distance as well as a paint. Every stockraiser should introduce Durham, or other improved blood, into his herds. Every beekeeper should Italianize his bees. He can do this in a short time by purchasing one pure Italian queen. Every one who keeps half a dozen stocks of bees—and this should be every farmer and many town people—should have a

### Honey Extractor.

Nail three cleats across a half inch board, 10½ by 10½ inches. At the four corners of this, nail four uprights, three-eighths by one and one-half inches and 19 inches long, notched into the 10½ by 10½ board so as to be flush, sides and ends. Stay these four uprights with strips nailed across from upright to upright, at the top. Nail two strips of lath 12½ inches long like a cross. At the center of this cross make a half-inch hole, also at the center of the square board make a half-inch hole, through which holes is to pass a round, half-inch iron rod, 30 inches long, with a hole for a nail three inches from the bottom of the rod, upon which nail the frame is to rest. Upon the two opposite sides of the frame nail wire gauze. Through opposite corners of the square board cut holes to receive the projecting ends of the frames of honey, so that the combs will lie against the wire gauze. The combs must previously be uncapped with a thin, long, sharp knife, occasionally dipped in hot water. The rod must be rounded and sharpened at the lower end, to play in a hole in a block of wood nailed in the center of the bottom of a barrel.

Put two frames of honey in place, run the rod up through the center of the extractor, slip the cross on at the top; crowd it a little into the extractor to hold all fast; to hold the rod in place at top, fasten a strip across the top of the barrel, with a half-inch hole, through which the rod is to pass. Then, with the open hands, whirl the extractor rapidly. It would be more complete with a whirl on the upper end of the rod, connected with a band to a wheel and crank.

I repeat, let every one keep bees, especially in California, the bees' paradise. I had two poor swarms last March. In four months I had 12 good swarms, besides using perhaps a hundred pounds of honey. This is doing very well, although I am aware that many bee men have done far better.

S. P. SNOW.

Santa Barbara, Cal., Dec. 30th, 1876.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Thoroughbred Instead of Common Fowls.

The best breeds, such as the Leghorns and Brahmas, eventually conquer the prejudices of those who see no sense in paying "fancy" prices for "fancy" fowls. When they are first introduced into a neighborhood nearly every one thinks it nonsense to pay for the improved breeds, but they eventually are forced to acknowledge that, as a question of dollars and cents, it will pay to procure such fowls at any price.

The following letter from Navarro Ridge, where the first "fancy" fowls were those raised from eggs sent to the writer, attests this truth.

Fowls are a crop which never fail and which pay in dry years and in wet, and with one-half the care yield ten times the profit of any stock or crop raised on the farm. The demand, and at very high prices, far exceeds the supply; and it is a fact patent in every part of this State that the improved breeds pay many times as much as the common dunghill fowl. No matter what the cost of fine specimens, it will pay any farmer to improve his common stock. The difference in the yield of eggs from half-breed Leghorns will pay five times the cost of cocks to get those half-breeds. Here are extracts from the letter I refer to:

NAVARRO RIDGE, Cal., Jan. 1st, 1876.

MR. EYRE, Dear Sir:—I wrote you my success with the fowls from the eggs I got from you, and now tell you I obtained from them in 1876 5,000 eggs. I am much pleased with the Brown Leghorns. I have my old birds nice for breeders. I sold no eggs for hatching; no one wanted to pay the price, and we would not put them down sold eggs to San Francisco only; but they all want them now when they see my 22 nice hens laying when eggs have been so few. I am so pleased with the stock I got from you that you must excuse me for writing a little "looney" about the hens.

MRS. T. P. TULLOGE.

## ARBORICULTURE.

### The Catalpa Tree.

We notice that prominent railroad men are discussing the value of the catalpa tree for furnishing timber most suitable for railroad ties. We find in the *Railway Age* several letters, from which we make extracts to show the value of the wood to the mechanic and indirectly the advantage which it would be to our tree planters to grow it:

In the spring of 1871, in conversation with Wm. R. Arthur, formerly superintendent of the Illinois Central railroad, he stated that catalpa ties would last forever; that it was easily cultivated, was of rapid growth, and when planted in groves grew straight and tall as any forest tree; that he had several groves then growing on his farm that had been planted but four years and were 20 to 30 feet high; that he had planted them for fence posts, but had subsequently learned that they would hold a spike as well as oak and would not split. Hence their value for cross-ties.

Three years ago I cut from a catalpa tree, that had been cut down after growing 30 years as a shade tree, two railroad cross-ties, and placed them in a track over which trains pass every hour, one under a rail joint. The spikes show no signs of loosening. The catalpa does not hold a spike as well as oak, but sufficiently well for all practical purposes. It does not split easily. While not as tough as some woods, it should not be termed brittle, as stated in Millikin's essay. I subjected pieces of catalpa, oak and ash, one inch square, to a breaking pressure twelve inches between supports. The catalpa broke under a pressure of 703 pounds; ash 890 pounds; one piece of oak at 577, one at 709, and one at 1,141 pounds. The catalpa deflected three times as much as the oak or ash before breaking.

This handsome and valuable tree is native in all the southwestern States, but is everywhere rare. It is distinguished by its silver-gray, slightly furrowed bark, its wide-spreading head, the fewness of its branches, and the fine, pale green of its very large heart-shaped leaves. It is a very profuse bloomer except in wet summers. The flowers are very showy, large, bell-shaped, white, slightly tinged with violet, and dotted with purple in the throat. They are succeeded by long bean-shaped seed pods, which

hang till the next spring, when they open, and the small, thin, broadly-winged seeds are borne away on the winds. The "Farmers' and Planters' Encyclopedia" says the rapid growth of the catalpa in almost every situation in which it can be placed in the Middle States, and the adaptation of its wood to fence posts and other useful purposes, make it deserving the attention of farmers. The wood, though light, is very compact, of fine texture, and susceptible of the most brilliant polish, its fine straw color producing a fine effect in cabinet work and inside finish for houses.

Those wishing to propagate the catalpa should gather the seed pods this or next month; put in a dry place secured from mice. They may be found hanging from the catalpa tree, planted as a shade tree in most of the cities and towns in Ohio. There are fifty or more seeds in each pod. Plant in spring, in good soil, in rows three or four feet apart, six inches in the row, and thin down to one foot. Keep the ground clean and let them grow three years; then transplant, placing them in rows ten feet apart north and south, and six feet apart east and west. In from six to eight years remove each alternate tree in rows running north and south for fence posts and telegraph poles, leaving the remaining trees ten feet apart one way and twelve the other, 363 to the acre. In from six to eight years more these will be large enough to make four to eight railroad ties each, if they have been planted in good ground. They should be split or sawed through the middle and the round side placed on the ground. The catalpa has only a film of sap one-sixteenth inch thick.

Each acre and a half of ground, thus planted and properly cared for, will furnish enough fence posts and telegraph poles in from eight to twelve years to pay for the land and all expense of planting, care and protection, and in from fifteen to eighteen years furnish railroad ties for one mile of track, which at fifty cents each (cheap considering their quality) will pay \$50 per year on each acre of ground for each year they have been growing. Can a farmer make a better investment for himself and family than to plant ten or twelve acres in catalpa trees? A railroad once tied with catalpa would find its annual expenses for repairs diminished \$200 per mile, a saving that would add 10% to the value of the property.

### Abies Venusta.

In the vegetable kingdom the conifers bear a markedly high and deserved rank, but none more so than the *abies*, or fir family. One variety of the *abies* is found alone within the borders of San Luis Obispo county, and is so rare that, until quite recently, but one specimen was to be found in all Europe. So rare is a knowledge even of this beautiful tree that we have heard but two persons mention it in our two years' residence in San Luis. These gentlemen were Dr. W. W. Hays and Mr. Ernst Krebs. Mr. Krebs has spent large sums of money to obtain specimens, but has never succeeded in getting healthy ones until the present week, when he received seventeen fine young plants. The foliage resembles, slightly, the common firs of the forest. It is far more delicate, the leaves longer and not so crowded upon the limbs, which are slender and graceful. The upper side of the leaf is a deep bright green, while the under surface is striated with silver, white and pale sea green, perfectly beautiful in their delicate blending. It is said to be the most beautiful object among all California's forest treasures, and when the wind puts in motion its airy branches is said to resemble undulating waves of silver foam. From these young specimens in the grounds of Mr. Krebs, we can imagine what a forest would be where the spiral trunks rear themselves to a height of 50 or 60 feet, and are clothed with a profusion of its delicate foliage.

The habitat of this treasure is a circumscribed spot of a few acres in the deep recesses of the Santa Lucia mountains, on the border of Monterey county, and so inaccessible that but few, even of the hardy hunters, have ever seen it. This is said to be the only spot in the known world where the tree is found. In the early days of California the padres used to send Indians to gather the resin that exudes from the trees where scarified by accident or design; and this resin was burned in the censurers before the high altars upon great occasions. From this fact it derives the local name of "Pinabeta de los Padres." Mr. Krebs has made arrangements to have a supply of seed gathered next season, and will, we hope, be successful in introducing it into common cultivation.—*San Luis Obispo Tribune*.

## THE DAIRY.

### Milk Fever.

We hear that our readers have lost cows of late from milk fever. This is a disease which every dairyman should be on guard against, and should know how to meet when it comes. We give below a treatment for the disease as practiced by A. L. Fish, one of the veteran dairymen of Herkimer county, New York, who has saved many a cow for himself and his neighbors by prompt and intelligent action. He writes: It behooves those with cows coming in to milk to be watchful in the care and habits of such cows to ward off the destructive malady known

as milk fever. The old axiom, that an ounce of prevention is worth a pound of cure, is applicable in milk fever. Causes that are fruitful in producing it are full feed, exposure from excess of heat, sudden chill from drinking too much. In this type of the disease I have found by immediate *post mortem* examination from the first fit, the blood in the large arteries, extending under the back to the udder, so clotted as to be drawn out of the arteries like a rope. In this state, bleeding would be followed by death. So would any other prescription. It is in this type of the disease in its advanced stage that bleeding is found to be an untrustworthy remedy. But the chances are in favor of bleeding if the arteries are not already clotted. No time should be lost in applying the lancet at the first symptoms described. Administer at the same time an active purgative, followed by aconite and mix (if treated homeopathically), alternately once in two hours with a half gallon of water with each dose. A dose should be 20 times larger than for an adult person, and so continue until the fever abates.

### Another Type.

Another type of the disease is marked by lassitude, a staggering gait, falling with inability to rise, shrinkage of milk, cold extremities, dull eyes, and inattention to movements around her. She inclines to lie prostrate on her side for want of strength to lie in a natural position, indicating a general prostration of the nervous system with a morbid circulation. Although this type of the disease is not so immediately dangerous as the former, it requires thorough administration of remedies, and constant care to keep the patient lying in a natural position while the remedies given are working in the system. A well cow will die from lying on her side in eight and forty hours. So the fate of the sick cow is often fixed by neglect in care when she cannot care for herself.

cold water, a drenching shower, and lack of a needed supply of water to drink, which suppress important changes in circulating fluids in the system about the time they are turning to a flow of milk. It often happens after cows are turned to pasture, that they calve far away from water, and will not leave their calf till it will follow. The cow then being diseased by thirst, on reaching water drinks too much, or if separated from the calf she may worry herself in the heat to over fatigue, and cause depression of the nervous system, all of which may be avoided by judicious treatment.

To prepare the system of the cow for the changes that must take place at parturition, care is necessary. It may be done by taking four quarts of blood from the neck, a day or two previous, and administering a half a pound of salts with one teaspoonful of saltpeter, dissolved. This course will prevent a morbid condition of the system, and may be a means of preventing an attack of the fever. By all means keep the cow from excess of heat or excitement; and do not over-feed either before or after parturition. After being four or five days in milk, her feed may be increased with her full flow of milk.

### Treatment of the Disease.

The most virulent type of the disease is manifested in the attack by a wild, glaring look, high excited movement of the head, irregular, giddy steps, with no apparent loss of strength, until the cow falls in a convulsive fit, which lasts but a few moments. If the arterial circulation is not impeded, she rises and dashes about wildly till prostrated with another attack.

There are but few cows, after having been to grass a few weeks, that do not require bleeding in an attack of milk fever in any form. It has been my practice, attended with good success, to first bleed in nine cases out of ten, from four to eight quarts, according to size and condition of the cow. Dissolve one pound of epsom salts and one-half ounce of saltpeter in two quarts of thoroughbred tea of good strength and give it a dose; in two hours after, give two ounces of laudanum, with a gallon of water, and repeat the laudanum and water once in two hours till eight ounces of laudanum are given; no other medicine should be given to counteract those given which are found sufficient to carry the patient through from a severe attack. After the first administration of bleeding and physic laudanum and water are relied upon to raise the patient, which requires from 12 to 48 hours. When she rises, exchange the medicine for nourishing diet. In bleeding, the strength and condition of the patient should be duly considered. If in low condition and the pulse is weak and wavering, do not bleed, but give physic and stimulate with laudanum as directed. If in high condition, with quick, wiry pulse, lose no time in drawing blood, being always watchful of the pulse, and stop the blood if irregular beats are observed to increase by the flow of blood. If the pulse grows softer from the flow of blood, do not be afraid to take from eight to ten quarts from a large, strong cow. After bleeding largely, do not neglect to administer water freely, because it passes through the system, and carries the medicine with it and induces a flow of milk.

PERSIAN RAILWAY.—Since reversing his concessions to Baron Reuter, the Shah of Persia has thought better of it. We are informed that he has authorized the construction of a railroad six miles long to join the capital with a palace south of Teheran. It is to be hoped that this may be the forerunner of many other Persian railways, independent of any through routes that may be arranged eventually to shorten the distance in traveling from Europe to India.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### To the Sisters.

EDITORS PRESS:—Often have I felt a strong desire when reading the soul-inspiring words of cheer and council given by the good sisters through your valuable paper, to express my sympathy and views, if only to say, "God bless you; we love and prize your wise and noble efforts for our good." Dear sister Grangers all, can we not in this new year step up higher and do more than has yet been accomplished? The Grange, as I have seen it, appears to have a void between the grave and necessary business and the gay and social dance. Should there not be something at once instructive and entertaining, especially for the young? I have waited, hoping some one more capable than myself would broach the subject; but as none should excuse themselves, believing they possess but the one talent, I offer a few thoughts.

Is not this a part of the work the sisters can help to do? Are we filling our true position in the Grange? It is claimed that our institution is in advance of all others in placing woman in her true and God-given position in the human family. We are supposed each according to our ability to have an equal share in the labor of the emblematical farm. But is it practically so? Taking the installation of officers as an exponent of the general sentiment, what do we infer? It struck me quite forcibly when witnessing that ceremony for the first time. The newly elected brothers, some nine or ten, were separately instructed each in the duties of some part of the labor of the farm and some implement of labor given into their hands. The ladies, four in number, came forward in turn. Ceres, the goddess of harvest, was crowned with a wreath of ripe grain, Pomona crowned with ripe fruit, Flora with flowers, and my teacherous memory can remember only something about the cultivation of grace, beauty and flowers. Then, so garlanded, they take their seats facing the audience (Emblematical Goddesses! how can we complain of a low position in the Grange?) apparently as objects of adoration. Is that not fast becoming the general view that woman must be set apart from the toil, decked out for admiration, and smile benignly on the workers. The Lady Assistant Steward receives a crook, emblem of labor, and really has a part in the work of the Order. I don't object to ladies being the ornamental part of the Grange, but unfortunately we cannot all be either young or beautiful. For us elderly, hard working Matrons to sit as emblematical goddesses would be rather awkward had the members the bad taste to elect us there. Is there then no use for us in the Grange? Have we really become so useless that our brothers, while honestly striving to give us our part, assign us only this mythological ornamental position. "Oh, yes," I can hear the gallant gentlemen hastening to say, "any position you want, ladies, work, talk, write, all you please."

Thank you, I believe you are in earnest, and that if we would but wake up the situation is ours, but it evidently was not expected, and it requires some moral courage to step aside or advance beyond the generally accepted sphere of woman. Given a position whose duties are positive and well-defined, I believe women can be found with courage to strive to fill them. We listened lately to a stirring lecture from our Worthy State Lecturer, upon the needs of the day, higher manhood, etc. We have a higher womanhood in our Grange, he said, which I shall tell you of by-and-by; but I own I felt somewhat disappointed to hear little more than the customary "encourage and sustain" the fathers, husbands and brothers in the conflict. Our position in the Grange was compared to that of the women in the revolutionary times. Now do we advance? Do we indeed stand in this struggle nobly as they did? They laid hold of the spindle and the loom, the ancient emblems of woman's work, and heartily worked for the cause. Our worthy brother doubtless said as much as could be said considering the part we really take in the Grange. Thank him that his remarks agitated the subject in one mind at least.

I do not ask that we should plow the land and fell the trees, in other words do the heavy business of the concern, not many of us being educated to command that situation. Our little Grange may not be a fair sample of all Granges, but here, except at recess, and after closing, a stranger might suppose St. Paul had issued the command: "Let your women keep silence in the Grange."

What is the true work and design of the Grange? Is it not the intellectual and moral elevation of the farmers and their families? And is not all this financial question but a stepping-stone to the ultimate end? Are we striving for money to build costly houses and wear fine

clothes? Do these things in themselves bring culture and refinement? Would all the shining silks, exquisite laces and flowers of France showered upon the savage African lift him one step in the scale of intellectual and moral refinement? Do we not rather look forward to the time when we can somewhat lay aside the cares of business and attend more directly to our higher nature? Shall we not sometime get beyond the old question, "Wherewithal shall we be fed and clothed?"

Our Grange has now been in operation some three or four years, and we are not satisfied with the progress in this direction. What have we to offer our children when at the tender age of 16 they are admitted within our doors? It is not to be expected they will care to listen very attentively to the deliberations of those who have grown gray solving the vexed question of ways and means. They simply endure until, the business over, their part of the work, the social dance, comes in, and the excuse offered for the extreme to which this is carried is, there is nothing else. Nothing else? Is this so, and must it always be so? Can we offer our children, blooming into manhood and womanhood, nothing better, nothing more than they can find in any ball-room?

Dear Sisters, you who rejoice in your freedom from fashion's thrall and wear in triumph your reform garments, can you not urge "the children of Israel that they go forward?"

Can we not have some system of literary reviews, current news, essays, select reading, etc., that every meeting may be both interesting and instructive to the young, and teach them that the elevation we seek is not to vie with the indolent votary of fashion in dress and style? Must we discard anything that will foster the idea that higher womanhood means more elaborate dress and artificial make-up. Let us impress the conviction if possible on the rising generation that a mind well stored with useful information, a fervent love for the right, that can lay aside selfish ends and work for the general good, and that old-fashioned virtue and common sense can make the true nobleman and complete woman though clothed in homespun and calico.

But I must throw aside this pen; it runs too fast, and has already far exceeded the modest suggestions I intended to advance.

Please tell us, those who have live, interesting meetings, how you do it? Help us while we strive to help ourselves.

"Awake, oh north wind, and come, thou south, blow upon my garden that the spices thereof may flow out." A SISTER GRANGER.

Ellis, San Joaquin Co., Cal., Jan. 9th, 1877.

### Sister Jeanne C. Carr's Address.

Our readers who were present at the late meeting of our State Grange will remember the interesting address by Sister Jeanne C. Carr on the educational and agricultural features of the Centennial exposition. Sister Carr has been delighting audiences in different parts of the State with her graphic descriptions and apt lessons drawn from her observations. We find in the Los Angeles Express an outline of the address, as delivered at the Los Angeles Teachers' Institute, which our readers will be glad to see:

She premised her lecture by saying that Prof. Carr's duties, under the law, prevented him from meeting with the great congress of teachers from the whole world, which assembled in Philadelphia during the present year, and that, in consequence, she had gone there at his proxy. To attempt to give an outline of the vast array of interesting facts which she gathered during her trip, of their lucid arrangement, of their photographic suggestiveness, so to speak, would be to mar a most valuable picture and detract from the merits of a piece of literary work which we hope to possess in the enduring form of a handsomely-bound volume. Sketch after sketch of the exhibits of the various States of the Union, in the matter of educational progress, followed each other, and as one sketch was completed the hearer wondered whether the next could possibly present anything new, fresh or interesting, and still the interest was renewed and kept unflaggingly alive until the close. If we are not mistaken the most gratifying declaration that the lady made was that the State of Missouri had, all things considered, made the most rapid advance of all her sisters in the great work of providing for the educational needs of her immense and constantly increasing population. It was not very flattering to the amour propre of a Californian audience to hear the exhibits of Maine, Massachusetts, Michigan, New York, Pennsylvania, Delaware and a score of other States praised and extolled, and not a word said of our display, but we must hope for better things in our own behalf at the next Centennial. Cerebrius has got his sop, however, in the shape of the statement of the speaker that a distinguished educator in the East remarked to her, that "if his State had such excellent and well-defined laws of education as California, especially in the matter of compulsory attendance and rigid examinations, then they could hope to accomplish great things." Standing upon this vantage ground, let us hope that due advantage will be taken of the facilities which are at our command for perfecting our system and building up a splendid superstructure upon the foundations so well and strongly laid.

The lecturer said that from a survey of the whole field the four nations of the world which occupied the front rank in the great field of popular education were Brazil, Russia, Japan and

the United States. She said she would not say all she could say complimentary of Brazil, for fear she should inspire an exodus of teachers to that country which would result disastrously to our own interests. In Brazil, the teacher, having passed a satisfactory examination—an exhaustive one, by the way—becomes a Government official. After five years' service he has, in addition to an increased salary, a small pension and a home. After ten years' service, salary and pension are again increased and a life insurance policy sufficient to maintain his family after his death is provided. After twenty years' service, he has the liberty of continuing his labors, but if he chooses to retire, his wants are provided for. Where so much is done for the teacher, one may be sure that the whole subject in all of its ramifications is well attended to. So much, said the lecturer, for Dom Pedro, the enlightened ruler of Brazil, and the educational system of the empire. The audience showed their high appreciation of Dom Pedro by hearty applause. The lecturer next paid a glowing tribute to Russia's system, which seems to be under the general supervision of the local military boards. Separable diagrams showing the topography of every division of the empire, ethnological diagrams exhibiting the features, modes of dress, etc., of the sixty or more different tribes which compose the population of the empire, charts exhibiting in relief the alphabets of the different languages, and many other valuable adjuncts of the school-room are integral parts of the system by which Russia is elevating her whole population to the proud table-land of intelligent free thought. Japan, said the lecturer, has selected three great educational centers, one in France, one in England and one in the United States, at each of which the brightest and most promising of her youth are storing their apt and singularly receptive minds with whatever is best and most valuable in the learning and science of the two continents. She would not say that the best systems of education had been universally adopted throughout Japan, but it was an indisputable and most pleasing fact that in many parts of the empire the best results which follow the adoption of the best systems had followed their introduction, and that the channels in which their gracious influences ran were widening and broadening and would soon fertilize the whole land and bring forth abundant fruit. What the lecturer said about the United States as one of the proud galaxy of nations thoroughly imbued with the idea of the importance of popular education, has already been hinted at in this report, which is but a mere glance at the lecturer's instructive resume. She led the audience by pleasant paths of descriptive conversation through the agricultural, industrial and scientific schools of France, Belgium, Switzerland, Lapland, and many other tribes and tongues. Looking back upon the hour and a quarter we spent so pleasantly in her company we sincerely feel that in the pleasant pictures which she drew of nation after nation, striving manfully to advance the educational interests of the people, we see a better guarantee of peace, permanence and prosperity among the nations of the earth than if we had been told of a world in arms and eager for the fray. Mrs. Carr paid a glowing tribute to the kindergarten system of education, and said that the reason why the system seemed to be of so slow a growth was because it required talent of a peculiar kind seldom found—but most valuable when found. She endorsed the eminent fitness of the lady who had founded the kindergarten in Los Angeles for the task she had undertaken, and said that she could wish the city of Los Angeles no better good fortune than that she might succeed fully in her undertaking, and build the foundations of the system here so firm and strong that they would remain unshaken for all time. We have not followed the lecturer's arrangement of her topics in this report, which has been written without notes, but only from a memory profoundly impressed with the value and importance of her most suggestive address. The report is but a glance at what we hope we shall soon possess in an enduring form, as a book of reference and a constant incitement to renewed interest in the great subject of education.

Mrs. Carr also delivered her lecture at the San Bernardino County Teachers' Institute, and the following resolution was adopted:

We present our hearty thanks to Mrs. Carr for her careful, comprehensive and eloquent review of the educational exhibit at Philadelphia, and that we esteem ourselves peculiarly happy in being made partakers of her abundant knowledge.

### In Memoriam.

MATTOLLE GRANGE, No. 201, P. of H., Petrolia, Humboldt county, Cal., Nov. 18th, 1876.

WHEREAS, Our Divine Master in his all-wise Providence has seen fit to remove from our midst Brother JOHN A. COON, who was among the first settlers of this valley and one of our charter members, respected by all, therefore be it

Resolved, That in the death of Brother COON our Grange has lost a good and true-hearted member and the community a worthy citizen.

Resolved, That we extend our heartfelt sympathy to the family and friends of our deceased brother.

Resolved, That in respect to his memory the charter of our Grange be draped in mourning and that all the members wear the usual badge of mourning for 30 days; that these resolutions be spread upon the minutes of the Grange, and that a copy thereof be transmitted to the family of the deceased, also to the West Coast Signal, Humboldt Times, Weekly Standard and PACIFIC RURAL PRESS for publication.—Committee: M. J. Conklin, David Simmons, Jacob Miner.

PERSONAL.—We have the pleasure of greeting Bro. J. W. A. Wright on his return to California after his long voyaging. We are glad to see him hale and hearty. He will probably pass the winter in this State.

### Farmers and Grangers.

Open Meetings—Invitations Extended to all—Further Appointments.

The large and enthusiastic meetings which greeted Bro. Pilkington, the Worthy Lecturer of the State Grange, at Petaluma, Rockville, Elmira, Sacramento, Yuba City, etc., to listen to his able exposition of the principles and objects of our Order, have encouraged and induced further appointments to be made for the winter months. Meetings will be held as follows:

Saturday, January 13th.....	Roseville
Monday, January 15th.....	Grass Valley
Tuesday, January 16th.....	New Castle
Wednesday, January 17th.....	Wheatland
Friday, January 19th.....	Dixon
Saturday, January 20th.....	Vallejo

AMOS ADAMS,  
Sec'y State Grange.

### Election of Officers.

COLUSA GRANGE, No. 45, COLUSA Co.—Election, December 29th: J. R. Totman, M.; David Lewis, O.; Joseph Kimbrel, L.; C. S. Jones, S.; L. T. Stomer, A. S.; F. B. Reed, C.; John Watts, T.; R. Jones, Sec'y; Will S. Green, G. K.; Mrs. C. R. Webley, Ceres; Mrs. L. M. Totman, Pomona; Mrs. L. G. Stomer, Flora; Miss Katie Jones, L. A. S.

MT. WHITNEY GRANGE, No. 231, TULARE Co.—Election, Dec. 16th: G. W. Duncan, M.; O. H. P. Duncan, O.; O. W. Catlin, L.; H. S. Witt, S.; O. G. Foot, Jr., A. S.; L. W. Gregg, C.; O. G. Foot, T.; A. F. Thompson, Sec'y; W. G. Rose, G. K.; Mrs. M. Moore, Ceres; Mrs. L. A. Duncan, Pomona; Mrs. A. M. Hotchkiss, Flora; Mrs. A. Catlin, L. A. S.

NICASIO GRANGE, No. 135, MARIN Co.—Election, Dec. 30th: C. L. Estey, M.; F. Rodgers, O.; T. B. Roy, L.; H. Thies, S.; D. W. Taylor, A. S.; B. F. Partee, C.; M. McNamara, T.; H. F. Taft, Sec'y; J. Schaub, G. K.; Mrs. C. Thies, Ceres; Mrs. H. E. Estey, Pomona; Miss Mary McNamara, Flora; Mrs. Mary Cornwall, L. A. S.

OAKDALE GRANGE, No. 160, STANISLAUS Co.—S. P. Bailey, M.; G. F. LeClerc, O.; D. Monroe, L.; F. G. Whitby, C.; B. Seybourn, S.; Wm. Litt, A. S.; Wm. Waters, G. K.; Robt. Lovel, T.; C. B. Ingalls, Sec'y; Mrs. R. Lovel, Ceres; Mrs. A. S. Emery, Pomona; Mrs. E. V. Ingalls, Flora; Mrs. S. P. Bailey, L. A. S.

OJAI GRANGE, No. 165, VENTURA COUNTY.—Election, Dec. 30th: Joseph Hobart, M.; Theodore Todd, O.; J. S. Wait, L.; H. N. McLean, S.; T. B. Steepleton, A. S.; Wm. Perri, C.; R. Ayres, T.; Eva Fisher, Sec'y; John Pinkerton, G. K.; Mrs. H. N. McLean, Ceres; Mrs. C. E. Soules, Pomona; Mrs. J. S. Wait, Flora; Mrs. John Reith, L. A. S.

PILOT HILL GRANGE, No. 1, EL DORADO Co.—Election, Dec. 30th: P. D. Brown, M.; John Bishop, O.; Mrs. M. F. Stoddard, L.; C. S. Rogers, T.; J. H. Robb, S.; Silas Hays, C.; Wm. Taylor, Sec'y; J. J. Orr, G. K.; Miss Mary Jones, Ceres; Mrs. A. Dobbis, Pomona; Miss Jennie Bayley, Flora; Mrs. S. Orr, L. A. S.; John Stegeman, Trustee.

SANTA ROSA GRANGE, No. 17, SONOMA Co.—Election, Dec. 23d: S. T. Coulter, M.; Mr. Saliday, O.; A. J. Mills, S.; Theo. Staley, A. S.; L. Hendrix, C.; John Adams, L.; E. W. Davis, Sec'y; W. W. Gaudin, T.; T. Wall, G. K.; Mrs. S. T. Coulter, Ceres; Mrs. A. J. Mills, Pomona; Mrs. E. H. Light, Flora; Mrs. W. W. Gaudin, L. A. S.; Trustee for three years, G. W. Davis.

TABLE BLUFF GRANGE, No. 101, HUMBOLDT Co., CAL.—E. B. Long, M.; Chas. C. Dickson, O.; L. Y. Clyde, L.; Wm. Parrott, S.; Robt. Niles, A. S.; B. H. C. Pollard, C.; J. Sawyer, T.; James H. Still, Sec'y; E. Tirny, G. K.; Mrs. Jessie Dickson, Ceres; Mrs. Hannah Sawyer, Pomona; Mrs. E. B. Long, Flora; Mrs. Wm. Parrott, L. A. S.

TULARE GRANGE, No. 198, TULARE Co.—A. P. Merritt, M.; T. W. Maples, O.; Mrs. T. W. Maples, L.; Joseph Merritt, S.; G. W. Wray, A. S.; E. M. Wilson, C.; J. A. Goodwin, T.; J. H. Hart, Sec'y; P. S. Tracy, G. K.; Mrs. J. A. Goodwin, Ceres; Mrs. W. W. Wright, Pomona; Mrs. G. W. Wray, Flora; Mrs. Joseph Merritt, L. A. S.

WALNUT CREEK GRANGE, No. 119, CONTRA COSTA Co.—Election, December 23d: M. L. Gray, M.; A. W. Hammitte, O.; N. Jones, L.; C. S. Whitcomb, C.; W. K. Daly, S.; Wm. Bradley, A. S.; J. Larkey, T.; Mrs. M. L. Huston, Sec'y; J. W. Jones, G. K.; Mrs. W. Renwick, Ceres; Mrs. A. W. Hammitte, Pomona; Miss Lizzie Bradley, Flora; Miss Melissa Hammitte, L. A. S.

WEST GRAFTON GRANGE, No. 89, YOLO Co.—Geo. Sharpnack, M.; E. Harley, O.; A. W. Morris, L.; J. G. Bower, Sr., S.; J. T. Hadley, C.; S. M. Maper, T.; J. G. Bower, Jr., Sec'y; A. Harley, G. K.; Miss Mary Watson, Ceres; Miss Alice Bower, Pomona; Miss Susan Cullin, Flora; Mrs. Mary Harley, L. A. S.

WALNUT CREEK GRANGE.—EDITORS PRESS:—Our meetings are well attended. There will be a public installation of officers elect on Saturday, January 13th, at one o'clock P. M., which all members and friends are cordially invited to attend. Mrs. M. L. Huston, Sec'y.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**SHEEP KILLED.**—*Independent*, Jan. 6: A complaint has been filed in the Fourth District Court by E. W. Peet and A. J. Severance, to recover \$2,000 from the Central Pacific railroad company, the value of 10 Spanish merino sheep, alleged to have been run over and killed by an engine near Niles station, Alameda county, on the 2d of January, 1875. Plaintiffs claim that the train approached the station about 10 o'clock in the morning, and that the engineer saw the sheep, but instead of slackening his speed, drove ahead, and before they could escape from the track, overtook them and crushed them to death.

## CALAVERAS.

**IRRIGATING COMPANY.**—*Stockton Independent*, Jan. 6: There were filed last Wednesday, in the office of the Secretary of State, articles of incorporation of the Calaveras irrigating company. The directors are John E. Moore, John C. Hussey, Charles Sperry, Charles M. Weber and Benjamin S. Clowes. The principal place of business will be in this city.

## COLUSA.

**FUTURE RAINS.**—*Independent*, Jan. 7: A great many have entirely suspended plowing; but some are still going ahead as if the north wind did not blow. Those who are plowing say that if it rains it will produce a crop this year, and if it does not it will get one year's rest, and then make an extraordinary yield next year.

## CONTRA COSTA.

**CATTLE STOLEN.**—*Gazette*, Dec. 30: Some 60 or 70 head of cattle belonging to Mr. William Rice were stolen from his pasture inclosure in Ygnacio valley, about a mile from Walnut creek, some time last week. An opening for driving out the cattle was made on the east side of the inclosure by removing a length of boards, which were found lying together by the side of the opening. Diligent search instituted immediately on discovery that the cattle were gone, has not yet disclosed any trace of them or of the thieves. It is supposed they must have been driven out over the Pine canyon divide towards either Tassajara or the Point of Timber; but how thieves could get far away in any direction with such a band of cattle, as the country is now fenced and settled up, is past conjecture; and it is the boldest operation in the line, as well as the largest, that we have recollection of in our section of country. It will, moreover, be very strange if no discovery of the stolen cattle or the thieves should be made.

**EDITORS PRESS:**—The farmers in this valley are beginning to be a little restless on account of the continued dry weather. The majority are well along with seeding. The grain that was put in in the fore part of the season looks well, considering the dry weather. I have been a resident of this county for 16 years, and never have seen an entire failure of crops in this valley. We think that we have the banner valley in the State for raising all kinds of cereals. Vegetables do well here when planted and well cared for, although the most of our farmers depend upon the vegetable pedlars, of which there are two running regular, twice a week, through the valley. One of the gardens is located upon the laguna, owned by Senora Francisca Galinda. It is near the beautiful and prosperous town of Todas Santas, in Pacheco valley. We will give you the average price of land in this vicinity, viz.: from \$20 to \$80 per acre, owing to location, improvements and quality. There is some very fine land, well located, that can be had at \$65 to \$70 per acre. In looking over your correspondence of the PRESS, we often wonder why it is they fail to give the average price of land in their respective counties. We think if they would do so it would be a great source of information, and would suggest that they give it.—*RURAL*, Walnut Creek, Jan. 8th, 1877.

## KERN.

**THE SQUARE.**—*Courier*, Jan. 6: Messrs. Haggin & Carr have purchased section 16, township 29, range 27, and will inclose it with a substantial board fence. It will complete the square form of their ranch, which now contains 7,000 acres.

**TEHICHAPE.**—When the railroad reached and passed us, and freight teams were driven off in consequence, the market for hay and barley was pretty much destroyed, the prices reduced about one-half, and farmers here have come to the conclusion to abandon in part those products and raise mostly wheat in future, believing it a surer and more profitable crop, for which they can get two cents per pound delivered at the flour mill of William Baker. It is certainly worth while trying to produce at home the flour consumed in this part of the county, for the drain of money for that article alone is enormous. This scribble would be too tedious if I undertook to say all I wish to about the farming and other interests in this and the adjacent valleys at this time, and must therefore pass on. Owners of stock are nervous over the grass question, and although horned cattle have not suffered as yet, there is every reason to believe they will soon. Sheep are suffering badly, and as there is no grass on the plains there is no use to drive them there, and are as well off here until the winter storms set in.

## LOS ANGELES.

**SENDING FRUIT TO MARKET.**—*Herald*, Dec. 30: Mr. W. C. Furrey, who has just returned from San Francisco, has called our attention to a matter which deserves more than passing mention. A great deal of fruit is sent from Los Angeles improperly prepared for the market. While our county is, of course, the great orange producing section of California, it is by no means the only section of the State where the orange can be raised. The same may be said of limes and lemons. Mr. Furrey says that the Sonoma orange is arriving in the San Francisco market in excellent shape, and it is really a very fine specimen of this popular fruit. Special care is taken in its selection and packing, and inferior oranges are not allowed to leave the orchards. The same cannot be said as to our orange packers. Unripe and inferior fruit is packed and sent to San Francisco with a recklessness which seriously menaces the reputation of our oranges. For the same reason the Mexican lime is rapidly coming to supersede the Los Angeles lime, although our county, by right, should have a monopoly of the market of California. Half ripe and refuse limes are thrown in with good fruit by the packers, and the sale and reputation of Los Angeles products suffer accordingly. Owing to the care taken by the Sonoma orange growers, the oranges of that county have been retailed in the San Francisco markets at \$1 a dozen, or upwards of \$80 per 1,000. It will thus be seen that there is money in giving this matter the closest attention. Our latitude and facilities for irrigation enable us to command the semi-tropical fruit market if we only have good sense enough not to neutralize our advantages by culpable negligence. Give Los Angeles fruit a fair show.

## MONTEREY.

**RECLAMATION.**—*Democrat*, Jan. 6: The protracted dry weather has resulted in one good effect, at least, for we shall owe to it beyond doubt the early reclamation of the marshes east of the town. The draining ditch has already placed a considerable body of land within reach of the plow, and it has attained a point from which operations may be prosecuted during the ensuing summer with very little difficulty.

## NAPA.

**THE SEASON.**—*EDITORS PRESS:*—The season so far has been the most remarkable the writer has ever experienced in 26 years' residence in California. Farmers are nearly done seeding, and this too without an hour's rain since they commenced after the October rains. The area of ground seeded at present in Napa county is perhaps equal to that of any previous season and I need not add that we all want rain. There is plenty of time yet to make a rich harvest if the rain only comes. The feeling here is "not despondent and yet not hopeful." Happy New Year to the *RURAL* and all its friends.—J. T. I., Monticello.

**GRAPES.**—*Register*, Jan. 6: The low price of grapes last year was somewhat discouraging to the producers, but the low price of the past season should not lead anybody to abandon the business of grape growing, especially in this valley, which is so favorable to viticulture and wine making. It is the opinion of prominent wine men that grape culture will become more profitable as the superior quality of our wines becomes more thoroughly known, an opinion which is based on a good understanding of the business, and on sound sense. California is bound to be the grape, raisin and wine producing section of the country, if not of the world; and instead of pulling up their vines, the true policy of our vineyardists is to persevere in the business, and cultivate the best varieties. During the past season, many of the Napa valley grape-growers devoted part of their time to raisin-making, more as an experiment than with any view to make money. But their success was such as to warrant their going more heavily into the work, and next season will probably see raisin-making a leading industry in Napa valley. For several years thrifty housewives have been in the habit of drying a sufficient quantity of raisins to supply the household demand, and we presume that the sale of imported raisins in Napa has fallen away in consequence.

**THE CROP PROSPECT.**—*Reporter*, Jan. 6: So far our Napa farmers have nothing to be frightened at in the continued dry weather. They say that the early rains allowed most of them to finish seeding their crops early, and that much the larger part of the area seeded is up and growing. True, it is not growing very rampantly in these cold nights, but it is gaining.

## PLACER.

**WINTER FRUITS.**—*Argus*, Jan. 6: On New Year's day James Munsell, Sr., left at this office a box of ripe tomatoes of excellent quality, grown in the open air on his place just below town. With the tomatoes were a few full grown and well ripened strawberries, and it may be well to remark that these were not merely a few isolated specimens. On the contrary, Mr. Munsell brought to market quite a lot of tomatoes for which he found a ready sale. We know of no more striking commentary on our climate and soil. A locality where tomatoes and strawberries can be gathered for market on New Year's day is certainly a favored one.

## SANTA BARBARA.

**NOTES ON DRY SEASONS.**—*EDITORS PRESS:*—I like to read the weather items, so will send you one or two for others to read. Our weather is of the most pleasant kind. It seems too clear and warm to ever rain again. We had a shower in October; since then but a threat or two. We are not suffering for rain, but bountiful

rains would set the farmer's heart at rest for the coming crop. We need not despair yet, as there is ample time for plenty of rain. We have had no disagreeable winds at all. The leaves are quiet where they fell. Never have I known a season so free from wind. To show you that it has been dry before I will quote from my diary: "Dec. 31st, 1869. Not enough rain through the month to lay the dust. Roads dusty as July and no grass. Jan. 31st, 1870. January has been very dry; but one light shower of rain, which came the 5th. Grass, the little that had started, is drying up. Some are plowing and sowing, expecting rain to make a crop. Feb. 28th, 1870. Very dry until the 20th, when we had a fine shower. A heavy rain the 23d and 24th." We had good crops in 1870, but the season started in just as unfavorably as this, and farmers were not as well prepared for a dry season as now. We can get good crops with little rain if it comes when we need it most, which will be later in the season, and we have plenty of time for our seedtime. My notes for Jan. 31st, 1871, read thus: "Has been very dry; very little rain; grass started some but is drying up again. Stock are looking well, but rain must come soon to prevent suffering." We had but little rain in 1871, which made our crops very light. It was a hard year for farmers in California, being one of the driest on record. It will do us no good to repine. We are better prepared for a dry season than ever before, and it need not injure us a great deal. A dry season once in a while will not be altogether a loss to us, as it may make some more careful of what they have grown in more favorable seasons. I have been in California since July, 1853, and I have had a fair crop every year. I could have done no better anywhere else and have no reason to complain now.—O. N. CADWELL, Carpinteria, Cal., Jan. 4th, 1877.

## SANTA CLARA.

**HOPES.**—*Enterprise*, Dec. 30: Notwithstanding the unpromising outlook, most of the farmers keep a stiff upper lip and will be entirely content if they can get good rains in the next six weeks. They claim that their most prosperous seasons have been when the rains fell late; that growing crops are more likely in such a year to receive the much needed moisture from spring showers; that experience has proven that heavy early fall rains have almost invariably been succeeded by a dry spring.

## SANTA CLARA.

**HINTS FOR THE SEASON.**—*EDITORS PRESS:*—As we are still having warm, dry weather, farmers in this and, I suppose, in many other localities in this State, are beginning to feel quite anxious for rain. Those who sowed early in many localities have their grain up and it is looking tolerable fair, but will dry up if we do not get rain in a few weeks more. Considerable grain has been put in among the foothills, and many farmers are now trying dry plowing in the valleys—afraid of too much rain if they wait any longer. I see no other way only to watch and pray for those that cannot do any better. It is a good time for farmers to clean up around the farm and get material on for fencing, etc., when it is needed. Because a farmer cannot plow and sow he should not think there is not anything else that should be attended to. Stock needs careful attention at such dry times that their feed is not wasted, and they should be kept well salted. All farm implements may be repaired, and it is a splendid time to clean and repair harness, break colts, and many such things. Some I see are trimming their fruit trees. The general business among merchants and mechanics appears to be somewhat dull in Gilroy, but it may be only for a short duration, waiting for rain to revive trade as well as farming.—E. H. LEWIS, Gilroy.

**AGRICULTURAL SOCIETY.**—*Mercury*, Jan. 5: The annual meeting of the Santa Clara Valley Agricultural Society was held Thursday, January 4th. The treasurer's report showed a total of receipts for the year, \$10,707.45, and expenditures, \$9,716.59, leaving a balance of \$990.86. The above balance is in form of deposit receipt, due January 6th, which with interest makes a total of funds on hand of \$1,304.60. The treasurer announced that about \$1,523 had been expended on the grounds during the year, in permanent improvements, leaving the balance in the treasury comparatively small. The following officers were elected: President, Cary Peebles; Vice-Presidents, H. W. Seale, John Trimble; Directors, A. B. Wharton, Mrs. L. J. Watkins; Treasurer, John H. Moore; Secretary, E. K. Campbell; Delegates to the State Agricultural Society, Mrs. S. L. Knox, Hon. Cyrus Jones, Wm. C. Wilson, and J. R. Weller. Resolutions were adopted looking to the erection of a pavilion and extending the premium list.

## SANTA CRUZ.

**STRAWBERRIES.**—*Courier*, Jan. 6: The lands of Samuels and Thompson, which are now producing large quantities of strawberries, are about 500 feet above the level of the sea, in the Santa Cruz mountains. The land has a southern exposure, is sheltered from the north winds and is especially free from frost. The gentlemen named are confident they can pick berries for market every month in the year.

## SONOMA.

**THE CROPS.**—*Democrat*, Jan. 6: H. T. Hewitt, of this city, has been traveling through the county within the past two weeks. He is a close and intelligent observer. Having a deep interest in the matter, he examined the growing crops carefully and reports to us that there is no suffering yet in any part of the county for rain. The grain sown after the heavy October

rains universally looks well, and its too rank growth has been advantageously checked by the continued frosts. The grass is not looking as well as the grain, but no scarcity is anywhere reported. With the excellent start which the crop has made it will require but light rains to perfect it, and we have the fogs of spring to depend on. It is estimated that four fogs equal a good rain, and we not infrequently have a month or six weeks of heavy fog, just at that most trying period when the head of grain is forming in the stalk. Up to this time there is no cause for apprehension in regard to the crop unless we should have neither rain nor fog, a contingency too remote for consideration.

## TULARE.

**THE MAD ITCH.**—*Delta*, Dec. 30: Mr. C. H. Robinson, near Jonesa, has recently lost a number of cattle by this disease, which was described in the *Delta* in connection with a similar loss of stock by another party, the feed in the former case having been sugar cane, which was supposed to have been poisoned by having been first masticated by hogs. As this disease has proved fatal in all the cases we have heard of, the particulars should be given to the public, so that those who have stock similarly afflicted may be able, by experiment, to find a remedy which will save others from loss.

**USE THE MOIST LANDS.**—Our stirring farmers have been dry plowing and seeding their ground, and it is probable that, even should the season prove a poor one, on ground once deeply plowed a crop of hay or light grain will be made. On our moist lands we regret to see that not much is doing in the way of putting in crops. On these soils a crop can be made every year; and as wheat and barley always command a higher price in poor seasons, it has invariably turned out the most profitable to cultivators of such lands. In fact, we know that several farmers who live on the dry plains have aimed to own moist lands on the river bottoms to be sure of making expenses in bad seasons. Yet most of our moist lands remain untilled from year to year, growing rank with weeds, diffusing their malarious and pestilential influence over all their surroundings.

**OUR SHEEP INDUSTRY.**—The sheep interest in this county has, in years past, contributed largely to our prosperity, when most all other sources of revenue have failed. Now it seems that, in addition to dry seasons for the farmer, we are likely to experience heavy losses in our sheep interests. A visit to the plains south of here will reveal a deplorable state of things extending into Kern county. Dead sheep are lying in all directions, along the road-sides and across the commons, in numbers which in summer time would produce very unpleasant odors. All the flocks we saw in that direction looked very hard pushed, and many of the feeble ones staggered around in a confused way at the sight of a strange man or dog. The owners of many flocks are buying feed, which can be had for about \$10 per ton, and will probably be able to carry most of them over the season. But we hear that even these are suffering many losses. There is no disguising the fact that the country is overstocked with sheep, by owners who have no means of saving them from starvation during such a season as this. A society for the prevention of cruelty to dumb animals would here find ample scope for their sympathy. We are inclined to believe that the losses which threaten a certain class of sheep owners, are the result of ignorance of their business, and want of forecast peculiar to some old and many new Californians. There has never been, either in the local or agricultural press of the State, as far as we have observed, any effort on the part of experienced sheep men to enlighten and warn the inexperienced; and perhaps this is to some extent due to the fact that nearly every season being different, brings something new against which nothing but tillage of the soil for crops of hay can guard.

The west side of the county we hear of much less fear of the drouth, and less of suffering in the sheep interest. The reason is, obviously, that the feed is still fresh and green from irrigation. Irrigation and the culture of alfalfa is the remedy, and we hope to see it adopted as quickly as possible.

## Oregon.

**FARMING ITEMS.**—*Oregonian*, Dec. 30: About 900 hogs have been slaughtered at Salem this season. John Morgan, of Hillsboro, sold 45 acres of land last week, located near Newton, for \$10 an acre, three acres beaver dam, the rest fir timber upland. The Grand Ronde valley wheat is worth 50 cents per bushel, oats and barley, 75 cents per 100 pounds; flour, \$3 per barrel; butter, 25 cents per pound; eggs, 25 cents; potatoes, 75 cents per 100 pounds; pork, 5 cents per pound gross, 7½ cents net; green apples, 3½ cents per pound. The farmers of Utah, who plowed up their ground after the grasshoppers deposited their eggs, find that the eggs have been entirely destroyed by the heavy frosts. This will shorten the hopper crop several million, but there will undoubtedly be enough left to go round next spring. Says the Port Townsend *Argus*: We have examined some magnificent looking fruit in Judge Swan's office, which was raised by John Bennett, of Whatcom, and intended to have been exhibited at the Centennial, but was received here too late to send to Philadelphia. We measured a couple of apples which we selected at random from the box, and they measured, respectively, 11½ by 12½ and 12 by 11½ inches. The largest one belonged to the Dodge crimson variety; the other we should name Bennett's Nonpareil.





### The Last Pine.

Where the fallow-colored hill  
Juts against a cloudy wreath—  
Gray the sky, the ground beneath  
White with shreds from winter's quill—

Holds a pine of giant girth  
All alone a patience grim  
In the ghastly cold, the dim  
Sifted light that wraps the earth;

Like a soldier strictly charged  
Never from his watch to yield:  
Long ago was hushed the field,  
All his comrades long discharged;

Solid hangs the icy tear,  
Numb his arms with creeping frost,  
And his senses four are lost  
In a bitter strife to hear:

Yet unmoved he keepeth post,  
Dim of sight but listening still,  
Lest across the lonely hill  
Call the bugles of the host.

Once upon a silent day  
Heaved the tree such breaths profound,  
Airs were carded into sound;  
Thus the pine was heard to say:

"One by one,  
Though they towered high and wide,  
Sank my brothers by my side;  
Fell away my friends of youth:  
Death on them had never ruth.

One by one  
Dropped my warning arms of green,  
Till I stand of branches lean;  
Straight the woodpecker may shoot  
From my crown to knotted root:  
All is done!

"I am past,  
Once I dwelt with fellows dear,  
Once I felt the green soil near:  
Year by year

In the choir of our wood  
Crashed a singer where he stood,  
And the boughs that rained forever,  
Lowest first, then upward ever,

On his bier,  
Me with their wide loss did sever  
Still the more from things I love  
Into this drear air above.

"I might last  
Happy, if my shadow east  
One deep roof of solid eel  
On a wise man, on a fool,  
On the lowest shape that passed;  
If the sun, like this harsh air,  
Lingered in my scattered hair;  
But no grace from me descends  
While I drag to useless ends  
Life at last."

C. DeKay, in Scribner for January.

### East and West.—No. 9.

[Written for the RURAL PRESS by PHILMORE.]

We arrived in San Francisco on the 16th day of May, 1852, and about one week after found us on the old steamer *Confidence*, going up the Sacramento river.

The hills were covered with wild oats, that waved in the breeze, while flowers of every hue were everywhere seen. Just this side of Benicia we saw a number of antelope upon the bank. They looked at us with apparent admiration as we steamed past them. On the hills about Benicia they were cutting wild oats for hay, and as we remember, the crop was much larger than it has been ever since.

Arrived in Sacramento, we took an early stage for Coloma, which seemed to be the gold hunters' Mecca, that being the place where gold was first discovered by Mr. Marshall. Our way to the mines was through seas of flowers, that rivalled Eden in beauty. The plains were carpeted with them, of every shade from a pure white to a dark purple; but, alas! they had no perfume, and amid all this floral splendor we could but look back to our own New England fields, that were then strewn with violets, whose fragrance filled the air and charmed us though unseen. So much for modest worth.

"It has a scent as though love for its dower  
Had on it all its odorous arrows tost."

And this great lack in California wild flowers we cannot quite account for. Indeed, we cannot reconcile them with our standard of floral worth, and it so with the very foliage of the forest trees. Who that has been through a New England wood in summer can forget the fragrance that is exhaled from every leaf that trembles in the breeze; even the mossy rocks lead a perfume that here we may seek for in vain.

What reader from the Eastern States that does not remember the "old cart path" where wood and timber was gotten out during the winter and spring months, now grown up to pennyroyal, that greets you with fragrance as you ruthlessly crush it beneath your feet. And then the berries and small fruits that grew in such abundance! We have never seen or tasted such in this country, and we know it is not fancy, for but a few years since we visited the same familiar spots, and the flowers were never

more fragrant nor the berries sweeter than then. In Autumn the wild grapes fill the swamps with a perfume that Lubin can never counterfeit, and the boasted "extract of a thousand flowers" cannot compare in grateful odor to the little gem that was crushed unheeded in our boyish rambles.

We intended this article for a comparison between our California climate and the more severe and changeable climate of the Eastern States. Even now, while we revel in balmy spring, with roses in bloom in our gardens, there it is bitter cold, and every unprotected flower is long since dead. Our winters are nothing but one long spring, when all nature dons her gayest attire. Apples, yellow and red, may hang upon the trees all winter unless the severe storms of wind shake and beat them off. We have picked last year's apples from the trees in the month of May and they were uninjured by the frosts. One of our very severe winters might ruin them, perhaps, in most localities, but there are some favored spots where they might remain upon the trees all winter with perfect safety.

The Eastern States have their pleasures in summer, and even the cold winter months are not without them. Think of the sleigh-rides, and the skating and the "beautiful snow!" What scenes for the pencil and brush. How few comparatively know what a scene a cedar swamp presents immediately after a long, steady, still fall of snow.

Whole forests are loaded with the light and feathery snow until the great bulk is too much for the slender branches and they bow gracefully to the inevitable, and their beauty is enhanced. Such are those that receive troubles uncomplainingly. Underneath these monarchs of the forest are the homes of many of its denizens—and quite comfortable homes they are for birds or beasts. By-and-by the cold rain comes and the beautiful snow-clad trees are decked with diamonds, that glisten and glitter in the sun until the beholder almost dreams he is in fairy-land, where diamonds are too common to care for such howling storms, such bitter cold. Uncared-for cattle bellow with pain that excites pity in the sternest breast.

An incident that the writer has heard repeated many times in his old home, around the blazing hearth: How his father and a young man went to a town, about 14 miles distant, with a four-ox team. It was snowing some when they started, early in the morning, which continued all day, and night set in with a fearful storm. An immense quantity of snow had fallen during the day, and it commenced blowing and drifting badly before night, and by dark the roads and highways were impassable, the snow banks covered the walls and fences for many miles. It was growing late and no signs of the travelers yet. Midnight came; the storm increased, the anxious wife and mother listened in vain another hour—no drowsy eyes were there. At last, oh joy, the welcome voice is heard, and gratitude fills the eyes! The team had struggled for ten miles or more on their homeward journey, when all hope of reaching home with the vehicle was at an end. So the cattle were unyoked, and driven across fields and through the treacherous drifts, one ahead of another in single file, until the poor animals, nearly famished and exhausted, staggered against their stable door, and the welcome "whoa!" startled the watchers from their anxious reveries, and the dimly-burning candle in the window increased its flame as the snuffers removed its blackened wick. An armful of oily hickory wood was laid upon the fire, while the long-kept meal was spread upon the table in a manner to tempt one less hungry than those heroes of the hour. Such was one of the realities of a New England winter 30 years ago.

### Encouragement of Labor.

The Empress Eugenie has been interviewed by a newspaper man, and amongst other things tells of the various schemes she and the Emperor devised to benefit the poor laboring man. Among other things was a sort of loan society to lend money to those who were really willing to go down to work on the land, but had not money enough to enable them to subsist till the crops came in. The Empress said it was remarkable to note that hundreds applied for loans for every imaginable purpose—every one who wanted help to go down to actual labor. But she and the Emperor kept strictly to their point. No security was exacted but honor for the return of the money. The parties borrowing had to have their honor vouched for by reputable persons, and the only penalty for refusal to pay was that the voucher's words were not taken for any subsequent case. They lent out 1,000,000 francs in this way, of which all but 1,000 francs was duly returned.

This little incident proves how many people there are who will rather live by their wits than by honest labor, a hundred to one, says the Empress; and then it proves how honest real honest labor is. It proves a point we have often urged, that encouragement to earnest and honest labor is among the greatest wants of our time. We would not have "education" any less elaborate or perfect than now; but the education which encourages a whole population to live by their wits rather than by their hands, is defective, and we certainly ought to do more to encourage hard work, both in the interest of humanity in a practical sense, as well as in the interest of good morals.—*Germantown Telegraph*.

An honorable man honors his wife.

### The Social Position of Country People.

[By MRS. L. T. WHITE.]

Can the social position of country people be improved? It can; but in only two ways, viz.: by individual improvement and home improvement. These two will bring about all other necessary improvements. But, in order to accomplish this, we must first see the necessity for it. If our lives must be given wholly to hard work, and nothing else, there will be but little time, or inclination, for the advancement of intellectual and social life.

But why all this hard work! men do not wear out their lives for nothing, and this work has seemingly become a necessity, from the fact that money is made by it. Individual improvement implies a separate work for each one. The time has been when this could not be done. But in this age of privileges there is no plausible excuse. If we go back about three generations, we will find that farmers had to devote their whole time to gain a living for themselves and families. Comforts and improvements were far in the future of their lives. The next generation started in better circumstances. They settled down with the idea of economizing for a few years, and then they would enjoy themselves. About the time they began to live comfortably, there would be a farm for sale in the neighborhood, or somewhere else, and it must be bought; for each of the boys must have a farm. Then comes the tug of war again. Interest to pay, debts to meet, then more land yet. What a pity so many farmers are wrecked just here! Why not have fewer acres and more dollars?

Said a young man: "When I am twenty-one, I shall go into the city. I have had to plow ever since I was big enough." "Have you failed to become a good plowman?" I asked. "Oh, no; I should like to see the man that can beat me." "Very well, then; you have gained a point some men have striven all their lives for—to excel in their business." "I know it's all very well," he said, "but there is no promotion; the old place looks the same ever since I can remember. I want an elegant city home." "Don't go into the city for it; fit up your country home as they do in the city, and it will exceed it for beauty and health. Perhaps you do not appreciate the beauty that is about your home?" "Yes, I do. Mother and the girls have fitted up the house inside, but it takes money to fit up the grounds." "Take it, then; your father is considered a rich man." "He would be if he would sell the lower farm and use the money." Ah! thought I, here is a lesson for many. No wonder young men wish to leave the farm, where they have lived from babyhood to manhood and see no improvements. There are too many lower farms. Men need less land and more capital. Every farm is a scientific world in itself. The soil, trees, shrubs, plants, flowers, fruit, bees, birds, insects and many other things, need to be thoroughly studied. Consequently men without brains cannot be successful farmers.

It certainly is not very flattering to the present generation, or else our forefathers had a poor opinion of their children. They began with very little education, and very little money, and succeeded. The next with more money and more education. The present with a good education, land and money, and are not able to live well yet, and cannot afford convenient and comfortable homes. This eagerness for wealth has been the greatest barrier to social life the world ever knew.

Home improvement suggests a domestic affair. Women lay the foundation; men must help to build, or the structure will fall to pieces. Two men met at a depot. "Have you heard of this great temperance movement?" "Well, no, nothing in particular. Are you posted?" "Yes." "It seems the women have started it." Just so, the women are at the bottom of everything. If the women are at the bottom, is it necessary they should remain there? But I hope they will ever be at the bottom of every good and noble work. Now, I hold there is not a nobler or better class of women than those in the country. And no class receives so little encouragement as they. It has been said that when a man builds a house, it will be either an hospital, or a grave, or a home for his family. Many a dull and cheerless home has been the grave of a wife's mind. Knowing, then, that it is necessary to man's existence to have a home, why not make it the brightest and most attractive place on earth?

A certain man wrote an elaborate piece on "Woman," and finished by saying "she would endure any amount of toil and trouble, with a bit of green comfort now and then." I do not know why he should call it green comfort, unless because it is a very pleasing color to the eye. Now there are a great many bits we might have—a pail of water, an armful of wood, or a word of approval, are pleasant bits. You may call them green if you please, or any other color, but let us have plenty of them.

But what has all this to do with the improvement of home, you ask? It is this: Home and women will improve but slowly as long as woman must work hard six days out of seven. And in the same ratio that women improve, will be the advancement of social life to a higher standard.

The kitchen is the wheel-house, from which proceeds the power that propels the whole domestic machinery. Why can it not be fitted up so that two days' work can be done as easily as

one is now. We would then have half the time to devote to arts and sciences, and the heap of mending which is always to be done. One reason our kitchens are not well fitted up is that the men consider housework so trifling as not to pay the cost. Talk about trifling work. Think of the 1,095 meals to get in the year. And if there are five in a family, which is far below the average, there will be 5,475 persons consume the victuals each year. And this is only one item of housekeeping.

Another reason, the men are doubtful if we would improve the time. Let me ask, how do the men occupy their time, since machines took the place of handwork? Life is not what we intend or hope to do, but what we actually do. It is therefore necessary that we do well. In youth it is natural to look forward to the future. In old age we look back to the past. For this reason we ought to lay a useful and happy foundation. Our childhood may have lacked many things. But if every home in the country were fitted up as it might be, the children that now occupy them would have a rich store of pleasant memories to look back upon. Let not the children be defrauded of their birthright to a happy childhood.

Fit up your homes, farmers. Let us have flowers, arbors and shady lawns in summer, and cosy rooms in winter, with books, papers, maps, paintings and music, a bright fireside and brighter faces. Convenient and beautiful homes will bring about a grand result. We do not wait too long for the golden sometime. We do not half realize how fast we are growing old, neither do we half realize the importance of living well.

Let us grasp the golden sometime now, so that when old age creeps upon us, and our minds become too enfeebled to participate in passing events, we may sit in our easy-chairs and revel in the treasured memories of the past.—*Farmers' Home Journal*.

### Industry.

[Written for the RURAL PRESS by G. W. WORTHEN.]

To be free is to be a slave to good habits. "It is only by labor that thought can be made healthy, and only by thought that labor can be made happy, and the two cannot be separated with impunity."

Industry is the mainspring of every attainment; by it the ancient orators acquired their eloquence. It is not by starts of application, or by a few years' preparation of study, afterwards discontinued, that eminence can be attained. No; it can be attained only by means of regular industry, grown into a habit, and ready to be exerted on every occasion that calls for industry.

Nothing is so great an enemy both to honorable attainments and to the real, to the brisk and spirited enjoyment of life, as that relaxed state of mind that arises from indolence and dissipation. Is it not a significant fact that our greatest scholars, most eminent statesmen, have become such on account of native talent, home influences, poverty, singly or combined? I once heard a physician say that it is not because of the efficacy of medicine that our patients recover, but mainly because the constitution of the patient is strong enough to resist the combined effects of medicine and the disease.

The halls of learning were open. Daniel Webster, the boy in his suit of jeans, entered. In spite of military discipline, bazing, dissipation and effeminating influence (he had no time for these) he struggled on and our country beheld the result.

Why have we not more strong, honest men to-day? Are our times too degenerate? No. The "bone and sinew" of the country are virtuous. But they are too indifferent, too willing to leave the management of the Government to a few demagogues. The working class must be aroused; the people must come to the front. Meantime, our entire educational system must be renovated. The work must commence at home, be carried on in schools, to train the child to habits of untiring, well-directed industry.

It takes so little to make a child happy that it is a pity in a world so full of sunshine and pleasant things, that there should be any wistful faces, empty hands, or lonely little hearts. Keep the child interested, make work play, keep him fairly employed, observe in what he takes the most delight, knowing very well that where the heart is the mind works the best. Then will the rod seldom need be used. Instead, it will be a sufficient lesson to deprive the child of that in which he takes his chief delight. It has been well said, keep the child busy or he will keep you busy.

"Labor is life! 'tis the still water falleth;  
Idleness ever despaireth, bewaileth;  
Keep the watch wound, for the dark rust assaileth;  
Flowers droop and die at the stillness of noon."

We should furnish in every town and village throughout the land, to as many as will receive it, that complete and general education of mind, heart and hand, which, as Milton says, fits a man to perform, justly, skillfully, and magnanimously, all the offices, both public and private, in peace and in war.

"GREAT men" said Themistocles, "are like the oaks, under the branches of which men are happy in finding a refuge in the time of storm and rain." But when they have to spend a sunny day under them, they take pleasure in cutting the bark and breaking the branches.—*Gæthe*.



## Mrs. Prim on Scandal.

No, my dear—goodness be thanked!—no person can say that I ever scandalized any one, not even my worst enemy, no matter what he or she may do! I've had chance enough to talk, if I had a mind to, as every one in this town knows full well. Of course, living right here in the High street of town, I can't help seeing a great many queer things; and when our windows are open and the blinds shut in the summer time, I can hear them too! But I never repeat them—I scorn to make mischief. I never hiss a word, except when I get hold of some person, like you, my dear, that I can trust. And if a body is never to open her mouth among her intimate friends, why the world isn't worth living in—is it? But that isn't scandal, you know. I hate and abhor that just as much as you, and I don't think any one can say I was ever guilty of it in all my life.

But then, as I said before, it isn't for want of the chance. Why, only last evening as ever was, who do you think I saw walking up by here, in the bright moonlight, as brazen as you please, but Miss Lennox and Colonel Parke. Fact, as sure as you sit in that chair! and they were walking close together, and talking so confidential!

I suppose you know all about that disgraceful affair with the school-girls? No? My dear, you must really live in the dark! Why, they have been writing a lot of anonymous letters to people here in the town, and the postmaster suspected what was up at last, and he has just kept a quiet lookout and caught some of them putting the letters in. I don't know what Miss Clackett will do. Expel them, I hope; great girls like those have no business to act so!

There's Mrs. Price going by. I suppose she has been down to cheapen a fowl, or get a half penny or two taken off a joint of meat. She's the stingiest thing, my dear; it would really make your heart ache to hear of the way she manages and contrives! And there is her husband, one of the richest men in the town, and folks do say that he can't get a decent meal of victuals in his own house. Wouldn't you—

What! going? Can't you stay any longer? Well, do come again very soon, won't you? Good-bye!

Thank goodness, she has gone! I really thought she was going to stay all night. I heard a nice story about her, by the way, last week—how shamefully she treats all her servants! Suppose she thinks I don't know it. I might make mischief enough in her family if I chose. But I abhor scandal.

## The Fatal Keg.

Daniel Sexton, of San Bernardino, having read the story of the box which lay embedded in the sand for three years, as told lately in the *RURAL*, sends us the following incident:

EDITORS PRESS:—I see in the paper something about an old box. Now I will tell you about a keg: In the year 1846, Gen. John Bidwell was in San Diego with some ten or fifteen men. He had warning that fighting had commenced in Los Angeles, and that was all he could hear about it. So he thought he would take a whale boat with three or four men and come up the coast as far as San Pedro to see if he could hear something more about it. He got up the coast as far as the Mission of San Juan, and there he met a storm from the northwest that came near swamping his boat. So he wrote about the situation that he was in and put the paper in a keg, so that in case he got lost his friends might hear some time or other what had become of him. About four months afterward Commodore Stockton was marching toward Los Angeles by the way of San Juan, and General Flores went there to give him battle. At the same time one of the Mission Indians was down on the beach fishing and found the fatal keg that had washed ashore. He thought he had found something nice for himself, so he took the keg up to the Mission to show his friends what he had found. On his way he was met by one of Flores's officers. The officer took charge of the Indian and also of the keg, and took them to Gen. Flores, the commander, and the papers being in it, and nobody there being able to read them, the Indian was condemned as a dispatch carrier and shot. Mr. John Foster, hearing that they were going to shoot an Indian, and living near the Mission, he thought he would go and see what was the matter. When he got there the Indian was already shot. The papers were handed to Foster to interpret, and he told General Flores that he had shot an innocent man; that the papers were from parties in distress out at sea. Now if I have not told this story correctly Gen. John Bidwell and Mr. John Foster will please correct it.

TRUE ECONOMY OF LIFE.—The true economy of human life looks at ends rather than incidents and adjusts expenditures to a moral scale of values. De Quincy pictures a woman sailing over the water, awakening out of sleep to find her necklace untied and one end hanging over the stream, while pearl after pearl drops from the string beyond her reach; while she clutches at one just falling another drops beyond recovery. Our days drop one after another by our carelessness, like pearls from a string, as we sail the sea of life. Prudence requires a wise husbanding of time to see that none of these golden coins are spent for nothing. The waste of time is a more serious loss than extravagance, against which there is such loud acclaim.



"Great Expectations."

## Young Folks' Column.

## How Babies are Treated in Different Countries.

By the side of the Ganges we can see the little traveler of the Parsees, a people who came long ago from Persia, and who worshiped the sun. The peculiarity of this fair-faced baby in the land of darker colors is that he is never seen with his head uncovered. Man, woman, or child, old or young, rich or poor, day or night, asleep or awake, indoors or out—the Parsee must always keep his head covered. He wears a pretty cap of silk or velvet or linen, which is very becoming. His dress is always of silk, covered with embroidery, gold and jewels, according to the wealth of his family, and the little Parsee is a very picturesque object among the naked babies of the poorer classes.

The little traveler in Italy, with his droll little cap, and dress like his grandmother's, goes in leading strings, or a walking-frame of wicker work. On the Cornice road he goes to market with mamma, riding in a basket hung to the sides of a donkey, with a brother or sister in a similar basket on the other side. The vegetables, which mamma sells, and the babies, ride very contentedly together; while the mother, with her parasol hat, crowns the droll load, busily engaged in knitting or spinning as she rides along.

In Algiers, baby rides "pick-a-back," and in Bavaria tied flat to his nurse's back; but if he belongs to the poorer classes he has the best time in France. Have you heard of that most beautiful charity of Paris called "The Cradle" (Creche), where the babies of mothers who must go out to work are kept all day—bathed, freshly dressed, fed, doctored and amused till their mothers return home at night? The late Mrs. Field, in her pleasant letters from France, tells about it, and how the children of the richer parents are interested in it, saving their money to pay for a cradle in the house, and then going to visit it, and feeling a particular interest in the baby which lies in their cradle.

There is another charity in Paris as well as in many other places, for the little traveler who is "left out in the cold" by poor or unhappy parents. Here he is apt to start on his life journey from somebody's door-step, from which he is sent by the owner to a foundling home, provided for such unfortunate waifs; but in Paris the charitable home for this little traveler has, in its door-way, a box which turns on a pivot. When a mother, from poverty or any other reason, feels obliged to give away her baby (and none can tell what a mother must feel before she comes to that), she goes to this door, lays the little creature in the movable box, and turns it around out of her sight, ringing the door-bell as she does so. An attendant takes the gift, carries it to kind-hearted women within, who dress and feed it, and bring up the motherless baby, and in time teach it some trade, and give it a start in life.

The little traveler on our side the water has a variety of fashions. In Lima he swings in a hammock; in Yucatan he toddles around amply dressed in a straw hat and a pair of sandals. Among the Indians of our prairies he begins life as a passive bundle, hung over his mother's back or from the limb of a tree. His head is made to grow flat by means of a board if he is to have the honor of being a Flathead Indian. Waste no pity on him; it would be the sorrow and disgrace of his life if his head were shaped like yours. He will in future select his slaves from round-headed races, and proudly declare that no Flat-head was ever a slave!

When the little travelers come in pairs, they make confusion in the world. Among our Pinte Indians (as I lately read in a Nevada paper), when this happens, it becomes necessary, by Indian law, for the dignified, pompous papa himself to take care of the superfluous baby. When you remember that an Indian never deigns to notice, much less to touch, a papoose, you can imagine what a mortification this must be to him.

Among some peoples the extra baby is at once put out of the way; but in one African tribe a curious custom prevails. The hut containing the unfortunate pair is marked by a cloth hung before the door, and a row of white pegs driven in to the ground in front of it. If any one except the parents goes in, he is at once seized and sold into slavery. The twins cannot play with other children, and no one can use anything out of that house. The mother is allowed to go out to work in the field, bring wood and other necessary things, but she cannot speak to any one out of her own family. This performance goes on till the unwelcome pair are six years old, when they have a great ceremony—music, marching, feasting and dancing; and when this is done, the banished family takes its place among respectful people again.—*St. Nicholas for January.*

## GOOD HEALTH.

## Dyspepsia.

The nervous energy is the motive power of the whole man, spiritual, mental and physical. When that power is equally distributed the body is well, the brain is clear and the heart is buoyant. If the brain has more than its share, it burns itself up, and makes the "lean Cassius,"—the restless body and the anxious countenance.

As there is a given quantity of nervous influence for the whole body, if the brain has more than its natural portion, the stomach has less, consequently the food is not thoroughly assimilated, or, as we call it, "digested." This being the case, the requisite amount of nutriment is not derived from the food, and the whole body suffers, doubly suffers; for not only is the supply of nutriment deficient, but the quality is imperfect. These things go on, aggravating each other, until there is not a sound spot in the whole body; the whole machinery of the man is by turns the seat of some ache or pain, or "symptom." This is a common form of aggravated dyspepsia.

Such being the facts, some useful practical lessons may be learned.

1. Never sit down to a table with an anxious or disturbed mind; better a hundred-fold intermit that meal, for there will then be that much more food in the world for hungrier stomachs than yours; and besides, eating under such circumstances can only, and will always, prolong and aggravate the condition of things.

2. Never sit down to a meal after any intense mental effort, for physical and mental injury is inevitable, and no man has a right deliberately to injure body, mind or estate.

3. Never go to a full table during bodily exhaustion; designated by some as being worn out, tired to death, used up, done over, and the like. The wisest thing you can do under such circumstances is to take a cracker and a cup of warm tea, either black or green, and no more. In ten minutes you will feel a degree of refreshment and liveliness which will be pleasantly surprising to you; not of the transient kind, which a glass of liquor affords, but permanent, for the tea gives present stimulus and a little strength, and, before it subsides, nutriment begins to be drawn from the sugar and cream and bread, thus allowing the body, gradually and by safe degrees, to regain its usual vigor. Then, in a couple of hours you may take a full meal, provided it does not bring it later than two hours before sundown; if later, then take nothing for that day, in addition to the cracker and tea, and the next day you will feel a freshness and vigor not recently known. No reader will require to be advised a second time, who will make a trial as above, while it is a fact of no unusual observation among intelligent physicians, that eating heartily, under bodily exhaustion, is not an infrequent cause of alarming and painful illness, and sometimes of sudden death. These things being so, let every family make it a point to assemble around the family board with kindly feelings, with a cheerful humor and a courteous spirit; and let that member be sent from the table in disgrace, who presumes to mar the ought-to-be blest reunion, by sullen silence, or impatient look, or angry tone, or complaining tongue. Eat in thankful gladness, or away with you to the kitchen, you graceless churl, you ungrateful, pestilent lout that you are. There was grand and good philosophy in the old time custom of having a buffet, or music, at the dinner-table.—*Hall's Journal of Health.*

## Carpets and Disease.

Is it true that carpets are a fruitful source of disease? that organic particles from the sick become entangled in them?

We answer emphatically, *yes*, and we quote Prof. Tyndall, in "Fragments of Science," who says, in regard to a case of scarlatina of apparently spontaneous origin: "But then the question arose, how did the young lady catch scarlatina? She had come there on a visit two months previously, and it was only after she had been a month in the house that she was taken ill. The housekeeper at once cleared up the mystery. The young lady, on her arrival, had expressed a wish to occupy a nice room in an isolated tower; and in this room six months previously a visitor had been confined with an attack of scarlatina. The room had been swept and whitewashed, but the carpets had been permitted to remain. This is one case in many. So long as the seeds of disease are kept alive epidemics must occur, and so long as certain habits and customs prevail, then seeds must be kept alive. Imperfect sewerage, unrenovated walls, uncleaned floors and carpets, are among the leading causes of retained disease.

Sewerage in these days is receiving a fair share of public and private attention, and the walls of houses, where contagious diseases have been, are very generally cleaned, whitewashed or newly papered; but carpets are too often overlooked as the carrier of disease. The truth is that *they*, more than any article of furniture, more even than the walls of the room, gather and retain dust; and this dust, though chiefly inorganic, and comparatively harmless, contains organic germs, which only need to be raised into the air and taken into the human economy to develop into active disease; croaking, under favorable circumstances, an epidemic.

## DOMESTIC ECONOMY.

## How to Cook a Tough Fowl.

Madame De Coureil gives the following directions: Select the toughest and cheapest old turkey, chicken or goose that the market affords; do not be afraid to take one that every one else would reject—it must, of course, be sweet, but no matter how venerable and tough, the process to which we will subject it will reduce it to perfect tenderness. Rub it well with vinegar and hang in a cool place, repeating the rubbing every day until you cook it. When that time arrives, put a stick across a pot of boiling water, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness, turning once during the time, that the upper side be immersed, and replenishing the water, from the supply in the teakettle, which should be kept boiling for the purpose. When the fowl is quite tender take it up, leaving the giblets in the water, and stuff it with a highly-seasoned dressing of bread-crumbs, in which should be some chopped fried salt pork or pieces of cold sausage; rub pork drippings all over the back, wings and legs, and tie thin slices of fat salt pork upon the breast; put it in a pan with peeled raw potatoes surrounding it, tie a string to it, and suspend the fowl in such a way that he is partially immersed in the water; cover closely with towels to keep in the steam, and let it cook four or five hours, according to toughness





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. B. DEWEY. G. H. STONE. J. L. BOONE.  
Principal Editor..... W. B. DEWEY, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
Advertising Rates: 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 2.00 5.00  
Per inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... .200 5.00 14.00 40.00

Four weeks are rated a month.  
Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

Address all letters to the firm, and not to individual members, or others, who may at any time be absent.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, January 13, 1877.

### TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Large-Horned Owl; Frost in Florida; A Raisin Enterprise in Los Angeles County; The Potato Product; Desert Lands; Personal; 17. The Week; The Record of the Year; Cooked Food for Dairy Stock; 24. The Isthmus Canal; Death of Commodore Vanderbilt; Rainfall and Forests; New Publications; The Bull's Head Stock Yards; 25.

**ILLUSTRATIONS.**—The Large-Horned Owl, 17. The Late Cornelius Vanderbilt; The Nicaragua Route, 25.

**CORRESPONDENCE.**—Lake County; Curing Hogs; The Bulletin Among the Weather Prophets; Notes from Tuolumne County, 18.

**HORTICULTURE.**—The Orange Scale Bug Again; Pruning Fruit Trees, 18.

**THE APIARY.**—Making Hives and Extractors, 19.

**POULTRY YARD.**—Thoroughbred Instead of Common Fowls, 19.

**ARBORICULTURE.**—The Catalpa Tree; Abies Venusta, 19.

**THE DAIRY.**—Milk Fever, 19.

**PATRONS OF HUSBANDRY.**—To the Sisters; Sister Joanne C. Carr's Address; In Memoriam; Farmers and Grangers; Election of Officers, 20.

**AGRICULTURAL NOTES** from various counties in California and Oregon, 21.

**HOME CIRCLE.**—The Last Pine, (Poetry); East and West.—No. 9; Encouragement of Labor; The Social Position of Country People; Industry; Mrs. Prim on Scandal; The Fatal Keg; True Economy of Life, 22-23.

**YOUNG FOLKS' COLUMN.**—How Babies are Treated in Different Countries, 23.

**GOOD HEALTH.**—Dyspepsia; Carpets and Disease, 23.

**DOMESTIC ECONOMY.**—How to Cook a Tough Fowl; Stewed Rabbit; Tomato Gravy; A Cheap Plum Pudding; Molded Sago; Indian Pudding, 23.

**QUERIES AND REPLIES.**—Ramie in Mexico; Rainfall in Lower California and Mexico; The Apple Tree Cuts; Cuts on Apple Trees Again; Uprooting Willows, 24.

**GENERAL NEWS ITEMS** on page 28 and other pages.

**MISCELLANEOUS.**—Quicksilver Fire Alarm, 18.

**Persian Railway, 19. The Delirious Question, 26-27. Oil from Wood, 27. California Pisciculture; Public Health, 28.**

### NEW ADVERTISEMENTS.

Fragrifericulture, F. Gilbert, Nevada City, Nevada; The Southrup Pump, J. M. Keeler & Co., S. F.; Vegetables and Seeds, J. Vick, Rochester, N. Y.; Spooner's Gardening Catalogue, Wm. H. Spooner, Boston, Mass.; Wm. Reunie, Toronto, Canada; Sugar Trough Guard, W. F. Brown, Oxford, O.; Your Names Printed, Clifton Bros., Clintonville, Ct.

### The Week.

We have seen the clouds gather and disperse. We have felt the warm air which betokens the coming of the rain storm. We have polished the barometer and dusted the rain gauge and viewed the skies at midnight and the early morning, so that no indication of a change in the arid condition of sky and earth could escape us. No indication has indeed escaped, but the rain has fled to parts unknown. And yet, to-night, the signs are again favorable and the clouds which have appeared and vanished thrice to-day may fall at last.

The fears of prolonged drouth have accomplished an advance in nearly all kinds of grain and feeds in our markets. At the same time the European markets are growing firmer because the surety of a war in the East becomes daily greater. It would be indeed glad for the prosperity of our farming population if our season's outlook for growth in grain-fields were like that of a year ago. Everything promises a brisk and profitable demand for all the wheat which we can put into ships at the next harvest and it would be well to have the amount large. In those counties, where the harvest never fails, there is promise of rewards greater than have been known for years. For those who can yet lead the rivers upon their fields, there is every incentive to effort. And for those who have surety, neither natural nor artificial, there yet remains hope—hope which, like charity, suffereth long and is kind, strengthening the heart for whatever befalls.

### The Record of the Year.

The Californian who rejoices in the growth of his State may find many gratifying figures in the trade statistics of the year which has just closed. It was, upon the whole, a year of great activity in nearly all productive enterprises. In agriculture, in which, of course, our keenest interest is awakened, there were steps of progress of which all may be proud. The records of the trade organizations which show the amount of produce received in the city, and the records of the Custom House, which show the amounts exported to foreign ports, furnish data by which we may measure the results attained with plow and separator, with the shears, with the wine press and with vat and churn.

Let us note, first, the production of the leading cereal. The copious rains of last winter and the extent of land under the plow, set our statisticians fairly wild in their early estimates of the surplus of wheat we would have for export. It soon became apparent that their lines were overdrawn, and yet the result is grand enough. It is shown by the receipts reported by the Produce Exchange that there were shipped from the interior to this city 10,516,913 ctls. of wheat.

In 1875 there were received 7,676,007 ctls. Our gain this year is, therefore, 2,840,906 ctls. Of flour the receipts from our mills were 519,114 bbls., in 1875, 491,408 bbls.; a gain this year of 27,706 bbls. The Custom House records show the exports of these articles. We sent abroad in 1876 9,920,117 ctls. of wheat, and 506,974 lbs. of flour; in 1875, 7,546,207 ctls. of wheat and 467,719 bbls. of flour. The gain this year in export was, therefore, 2,373,910 ctls. of wheat, and 139,255 bbls. of flour. The total value of wheat and flour exported during the year was \$18,564,525. This is a gain of \$2,000,000 in value over the value of 1875.

In barley there is also a notable percentage of gain. The receipts in 1876 were 1,626,066 ctls.; in 1875, 988,280 ctls.; an increase this year of 637,786 ctls. The exports of this grain have grown in a more rapid percentage than the production. In 1876 the exports were 350,022 ctls.; in 1875, 125,158 ctls.; an increase this year of 224,864 ctls. Our barley has this year been brought more prominently to the attention of Eastern buyers than formerly and there was for a few weeks quite a brisk movement both by rail and sea. The advance of railway rates, just as the movement was fairly started, embarrassed the shippers and reduced the trade. Then it was that we saw barley shipped around the Horn to New York, to be re-shipped by car to St. Louis, because all this distance could be compassed for less money than the 2,000 miles of rail hence to St. Louis.

As all our shepherds know to their sorrow, the wool trade of the year was exceedingly unfavorable, and both clips came upon a dull market. Thus, although the grand totals of amounts of wool produced take their place in the columns of increase, the low rates received detract greatly from the satisfaction which might have been felt over the result. Last week we gave the complete figures in wool, but in this connection it will be well to repeat that the total shipment from the State by land and sea was 52,333,923 lbs. In 1875, 48,183,017 lbs. were exported. This shows an increase to the amount of 4,450,906 lbs, but the low prices prevailing reduced the increase in value to a low figure.

The increase in dairy production during the year is quite notable. The dairy has been carried into regions which were formerly thought unfitted for it, and there has been a tendency to increase of cowage in the older dairy counties. The figures as compiled by Mr. Stone, the statistician, show that the receipts of butter during the year have been 10,927,200 pounds. In 1875, the receipts were 9,551,500 pounds, an increase this year of 1,375,700 pounds. The receipts of cheese were 7,017,300 pounds; in 1875, 6,021,000 pounds; an increase this year of 996,300 pounds. From these data, with estimates of the value of the commodities, it is safe to say that the aggregate value of the dairy products received in this city during the year was \$4,500,000. This indicates that our dairy industry is of no mean importance, as it can show a produced value of one-half the value of our famous wool clip, and one-quarter the value of our wheat and flour surplus, which gives us a reputation all over the world. The year has closed with butter and cheese at much lower figures than were common, but the present prospect is that this will find compensation in the coming months. The drouth, if continued, will prove serious to many of the interior ventures, and will restrict the weight of production to the northern coast and the ranches on the river low-lands.

In other lines of agricultural production, the year has some points of increase and some of decrease. The production and export of green fruits has been much larger than heretofore. Raisins have been numbered by the ten thousands of boxes. On the other hand, the wine export has shown but a very narrow margin of increase, only a value of \$6,460 over the record of 1875 being recorded. Hides, which years ago were almost the sole article of export from this coast, are now yearly decreasing in amount, and leather is also figuring in smaller numerals. Thus the usual course of productive growth is followed by our State as it changes more and

more from the lower to the higher agricultural arts.

Aside from agriculture, the productive industries of our State and coast show praiseworthy results. The production of the precious metals for the coast has increased from a value of \$80,889,037 in 1875 to \$90,875,173 in 1876. The coinage of our mints shows a total of \$32,069,000 in 1875 to \$42,704,500 in 1876.

Not the least favorable deduction from the figures of the year is that we are growing in the line of independence, and our home production is satisfying the needs of our people. The Custom House figures show that the duties collected on foreign imports were, in 1875, \$8,131,637, and in 1876, \$7,817,736, a decrease this year of \$313,901. At the same time the gross value of our exports was \$73,463,250 in 1875 and \$80,421,971 in 1876, an increase of \$6,958,721. Reducing our expenditures for foreign goods and at the same time increasing our sales of produce for export, is throwing the balance of trade more and more in our favor and storing up a surplus of wealth among our own people. This movement can continually go on if our men of wealth will but do their State the justice of patronizing home industries and if those in charge of productive enterprises will do justice to our splendid conditions of soil and climate and produce wisely all that it enters into the mind of our citizens to desire.

### Cooked Food for Dairy Stock.

One of the leading dairymen of Gilroy informs us that he has completed arrangements for cooking food for his dairy cows, using the steam from the boiler that furnishes heat to the cheese vats. We learn also that one of our largest owners of dairy lands in Marin county contemplates the erection of a large steam cookery for the same purpose. These facts lead us to make a few comments on cooking food for dairy stock, expecting to discuss the matter further at some future time.

The prime advantage of cooking fodder and ground feeds for cows lies in the fact that by cooking the substances are better fitted for assimilation by the animal economy, and consequently richer results are obtained from the feed. This is most apparent when coarse hay, straw, corn fodder and other dry foods are employed in milk making. It has been proved that cooking such substances fits them for quick and perfect digestion, and by thus feeding the flow of milk may be retained longer than by the dry feed commonly given when the pastures fail.

By cooking, poor hay may be made to take the place of good hay; for it has been shown by the experience of Eastern dairymen that coarse marsh grass cut and steamed, with a small addition of bran or mill stuffs, becomes very desirable dairy food. This fact may, perhaps, be very profitably used in this State if the present season should prove as dry as is now expected. The coarse vegetation which will grow in the low places may be thus turned to profit in the maintenance of the herds in the scarcity of pasture and good hay and roots. We add some testimony of practical men on this point:

Col. Waring, of Rhode Island, writes to the *American Agriculturist* as follows: "Our home-grown hay was cut early and stored in the barn. It was sweet, palatable, and nutritious, and would have been but little, if at all, benefited by cutting and steaming. When we steamed corn-fodder and poorer purchased hay, we found that we got the same effect from it that we did when we used our own hay unsteamed, and the effect was not sensibly improved when we used our own hay in the steamed mixture. This indicates that the result of steaming late cut or poor hay, is to bring it more to the condition of good hay; and that really good hay—young, tender, and sweet—is not materially improved by steaming. Probably the cellulose in good hay is naturally in a condition to be digested by stock, while that in poor hay is too much hardened by age, and needs the softening action of cooking to make it digestible. Then, too, any slight taint of must or mold, which would cause cattle to refuse the hay, is corrected by steaming, and the appetizing flavor of the meal or bran added to the mixed fodder, is diffused throughout the mass, and causes it to be eaten more readily. The hard stalks of corn, and the harder kinds of straw, are made more tender, and their nutritive parts become more readily available. To sum up the case: all inferior food is made enough better by steaming to pay any reasonable cost of the operation, while good food is already so good that it does not receive enough improvement to make steaming profitable."

A. H. Proctor, of Columbus, Ohio, writes to the *Ohio Farmer* that he has been taking some testimony as to the results of feeding grain in its natural and in its cooked state, and he says: "For the last year I have traveled very extensively among the farmers of Ohio and Indiana, and find that this matter has attracted their serious attention. If 20 acres of corn cooked for feed is worth 30 acres feed raw, then the subject is worthy of the best judgment. For the proof of the proposition, I not only submit the testimony as given to me of hundreds who have practiced cooking corn, or oats, barley, buckwheat, potatoes, roots, all kinds of ground feed, etc., but give a few proofs of the many who have, by actual tests, found that on all kinds of grain an average of one-third is saved, and on

potatoes and all kinds of roots, fully three-quarters. Messrs. Wilson & Bros., dairymen, of Muncie, Ind., cook ground feed for their cows, and say that since they commenced cooking the feed their cows have increased their milk fully one-third. Mr. M. M. Lohr, of Licking county, Ohio, has practiced, for a long time, cooking corn in the ear for his milch cows, and testifies to the same thing."

As we remarked before, these facts are worthy of consideration at this time, for if the drouth cuts off feed and the dairy must be maintained on purchased food, it is important that the dairyman should so conduct his operation that the greatest food value can be gained from the purchased material. If indeed the season comes to this, there will be an increased market value of dairy products, which will pay the dairyman for keeping up his milk at an increased cost.

## QUERIES AND REPLIES.

### Ramie in Mexico.

**EDITOR'S PRESS.**—Being an old California resident and farmer, I take the liberty of asking you for information in regard to the working of ramie. The article grows here around Colima and near the coast luxuriantly and almost without care or cultivation, and the only drawback to its becoming an article of exportation lies in the fact that there is no machinery here to extract the fiber, nor is any method known here how to do it. You would oblige me by informing me whether or not it can be shipped in bulk or whether it is necessary to have the fiber extracted for shipment; whether there is machinery to do it; its cost, and where to be got? Also whether there are treatises on its cultivation and subsequent treatment; the market price of the raw material and the price of the extracted fiber? Whether it can be sold in California, or has to be shipped to the East or Europe?—E. GROTHAS, Colima, Mexico.

We cannot give very satisfactory information on these points; indeed we know very little more on the subject than we stated in answering similar queries two months ago. We can say, however, that the fiber must be extracted before shipping; that there is reported to be a successful machine for this purpose in England and in Louisiana, and another, invented upon this coast, is working successfully in the Sandwich islands. The cost of these machines and where they can be had we cannot tell at present. Prof. Hilgard offered to aid us in getting information of the Louisiana machine, but we have not heard that he has succeeded as yet. We do not know of any special treatise on ramie, nor can we learn of any available in this city. There is no market for the fiber in this city. That which has been produced in the Sandwich islands is shipped to England. We shall be pleased to hear from any reader who can enlighten us on this subject.

### Rainfall in Lower California and Mexico.

**EDITOR'S PRESS.**—Will you or some of your scientific readers be kind enough to inform the farming community what relation, if any, exists between the rainy seasons of Mexico and Lower California and our own; both as regards the amount of rainfall and the period at which it occurs, with reference more particularly to its bearing on our present dry season? There is a deep impression on the minds of many that the data furnished from that quarter would "forewarn," and therefore partially "forearm" us against the evils of a drouth in this State. With the facts before the public, I may recur shortly to the subject again.—AGRICOLA, Woodbridge, Cal.

We have nothing definite at hand concerning exact dates and amounts of rainfall in the countries named. The following from Appleton's New Encyclopedia gives the facts in a general way. Of Lower California it says: "In winter there are heavy rains and terrific tornadoes. In summer and autumn, especially on the gulf coast, rain often falls from a cloudless sky."

Of Mexico the notes on the subject are: "Properly there are but two seasons in all Mexico: the dry from October to May, and the rainy comprising the remaining months. The heaviest rains fall in August and September." If our querist will state more definitely the way in which he means to draw an analogy between the seasons of our southern neighbors and our own, we will endeavor to procure the needed data.

### The Apple Tree Cuts.

We receive from J. T. J., of Monticello, Napa county, a letter on the cuts reported from Mr. Greenfield, in which he agrees with Mr. Caldwell, of San Jose, attributing the evil to the "sap-sucker." He says further: "Go after him with a shot-gun between the hours of 10 A. M. and 2 P. M. Listen for a shrill note, like that of the cricket, more loud and with a metallic ring. He seldom chirps, except when on the wing, and he flies like the woodpecker."

### Cuts on Apple Trees Again

**EDITOR'S PRESS.**—Referring to communication of W. C. Greenfield, Lake county, as to horse track marks on young apple trees, it is probable they are the work of wood-rats, the most mischievous pests of the orchardist in some localities. I slaughtered hundreds of harmless rabbits before I discovered that the rats had done the mischief. My antidote is, first, good cats, and then if that does not prove sufficiently effective, then poison, which they take readily, in the shape of corn or wheat prepared with phosphorus or strychnine.—F. M. SHAW, Santa Monica, Cal.

### Uprooting Willows.

**EDITOR'S PRESS.**—I see that a subscriber inquires as to the easiest way to exterminate willows. One of my neighbors had a piece of wet land, thickly set with willows and ash. He drained it partially, cut the brush all down close, burnt it and then turned on sheep. By the time the willows sprouted, the sheep had everything else eaten, and then turned their attention to the willows, which they ate with avidity, and kept so close trimmed that they died and were easily uprooted. It is an easy and profitable way and worth trying.—C. J. Uliak, Cal.

**ON FILE.**—"Tree and Vine Planting," W. A. S.; "The W. L. at Stockton," G. W. H.; Inquiries concerning "Plows," "Oakland Nurserymen;" Notes from "Sonora," and "Ferndale" Granges.



## The Isthmus Canal.

Last week we alluded to the fact that a decision had been handed to President Grant in favor of what is known as the Nicaragua route for the isthmus canal. As this is a matter of such deep interest to the industries of our coast and now seems nearer realization than at any former time since the project was broached we have prepared a little engraving showing the route along which our produce may soon be speeding to the European markets. By this engraving the following report of the commission may be better understood:

To the President of the United States—Sir:

The commission for the United States appointed by you to consider the subject of communication by canal between the Atlantic and Pacific oceans, across, over, or near the isthmus connecting North and South America, have the honor to submit, in advance of their more elaborate and final report, containing data for their conclusions, and after a careful and minute study of the several surveys of the various routes across the continent, the following unanimous report:

First. That the route known as the Nicaraguan route, beginning on the Atlantic side at or near San Juan de Nicaragua, known to Americans at Greytown, running by canal to the San Juan river, following it by slack water navigation to Lake Nicaragua, across that Lake to Rio del Medio, and thence by canal to Rio del Brito, on the Pacific coast, possesses, both for construction and maintenance of a canal, greater advantages, and offers fewer difficulties from engineering, commercial and economical points of view, than any one of the other routes shown to be practicable sufficiently in detail to enable a judgment to be formed of their relative merits.

Second. That the summit level of this route to Lake Nicaragua is designed to be kept at a permanent height of 108 feet above the level of the sea. This height is to be overcome in the Atlantic slope with four dams in the San Juan river and ten lift-locks, and in the Pacific slope with ten lift-locks. The total distance from the Greytown end to that at Brito is 181 33-100 miles. Of this distance the Atlantic slope division from Greytown to San Carlos, at Lake Nicaragua, comprises 108 5-10 miles, of which 63 miles are by slackwater navigation, and 45 5-10 miles by canal. The summit level division comprises 56 5-10 miles by Lake Nicaragua from San Carlos, at the head of the San Juan river to Rio del Medio. The Pacific slope division comprises 16 33-100 miles by canal from the mouth of the Rio del Medio to the mouth of the Rio del Brito. The dimensions of the locks proposed are 400 by 70 feet, with 26 feet depth of water. Artificial harbors must be constructed at Brito and near Greytown, and although that at Greytown presents unusual features, requiring careful study and skillful treatment, there is no question of its practicability.

Third. That the cost of construction of this canal and harbor, with all the necessary adjuncts, will be at least \$100,000,000, and that the cost by any other route will greatly exceed the cost by this route.

Fourth. That after all the preliminary arrangements have been made, the time required for actual construction should not exceed 10 years.

Fifth. That an interoceanic canal across this continent should be under the protection of all nations interested, and that they should guarantee not only the neutrality of the canal, but also of a contiguous strip of territory on each side of not less than 50 miles in breadth, and of ocean approaches for a distance of not less than 100 nautical miles in any direction along the coast and out seaward from each end.

The prospects for an early commencement of the work are considered extremely favorable. Under the direction of the President the principle maritime powers of Europe have been severally addressed upon the subject of the canal, the satisfactory results of the surveys which have been made, and also the views embodied in the above report as to the best route. Answers have been received from some of the governments, in which they express themselves favorable to an early prosecution of the work, and admit the wisdom of according it an international character by an equal participation in its construction, and in the maintenance for it of an inviolable neutrality. As soon as the views of all nations communicated with have been received the President contemplates submitting all the papers and correspondence in a special message to Congress, in which he will urge that the United States take the steps necessary to the inauguration of this great enterprise.

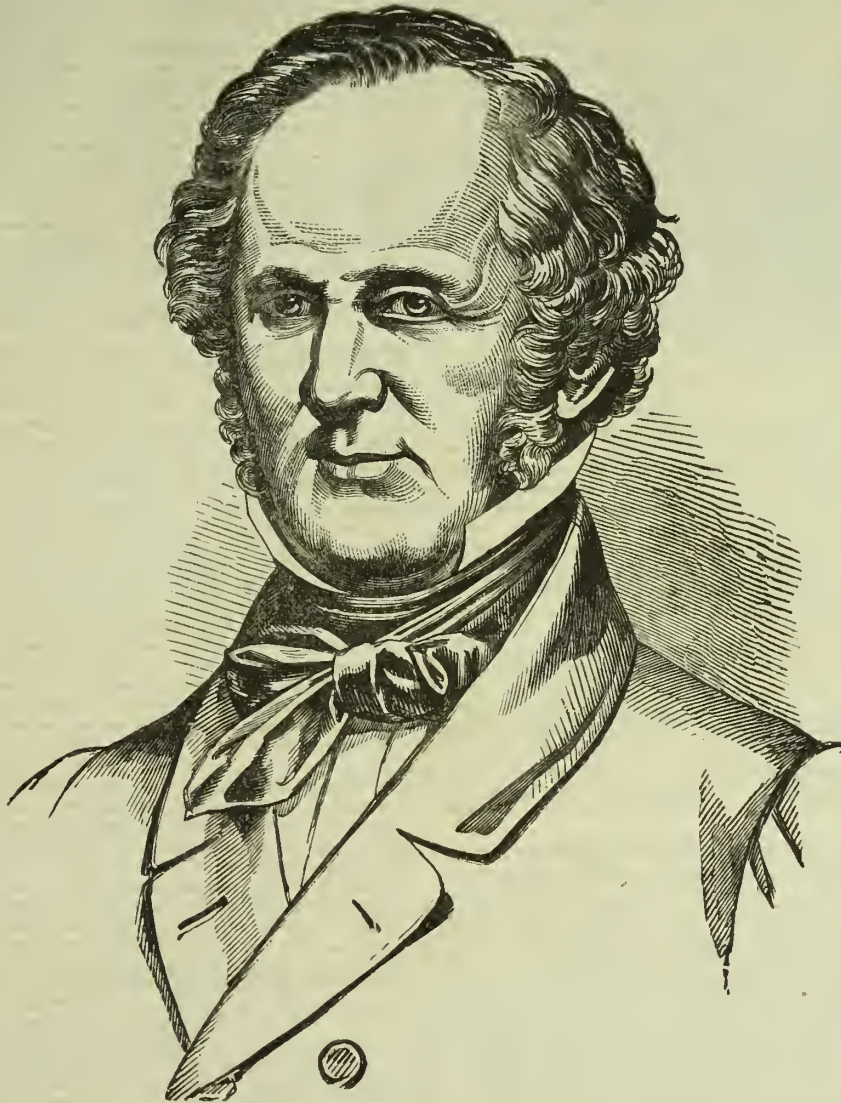
GERMAN ALMANAC.—The "San Francisco Kalender," (German,) for 1877, published by Wenzel & Huefner of this city, has just been issued. It is a large pamphlet, containing, beside the usual tabular matter, several illustrated articles of much interest.

## Death of Commodore Vanderbilt.

During the week the richest man in the United States has gone to his grave, and the dust has accorded him no warmer welcome than it gives a pauper's clay. His efforts were in the line of fortune building and his success was great. During his lifetime he cared but little for the welfare and opinion of men, and in his death his fellow men have for him but the eulogy of silence.

Commodore Vanderbilt died in New York city January 3d, aged 82 years. He was a man for whom we had but little admiration, except

referred which would have caused a nation to honor a life which was at least generous in its last impulses. But no such thought came to the dying Commodore. His great fortune is placed in the hands of his son, with no hint of charity except to a few of those who directly served him. The example of Astor and Stewart taught him nothing. Instead of building, as did they, for the welfare of the helpless and the enlightenment of the ignorant, Vanderbilt remands his fortune to the vortex of stocks and monopolies whence it came, and where, unless its present owner prove himself wiser than the time, it may soon pass away and leave no trace of its existence except upon the page of the historian. How much better to have made a part of it, tell



THE LATE CORNELIUS VANDERBILT

as we cannot restrain a certain admiration for the genius and will which can push enterprises into profit. He was largely engaged in undertakings in which the public had deep interest, and yet we can remember no undertaking of his which was not founded upon the abstract idea of gain to himself, irrespective of the comfort and good of others. If he broke a monopoly it was only with the idea of squeezing money from it and not of relieving the oppressed. There are thousands of witnesses in this State, whose silent

for all time in the upholding of the unfortunate. It is true that through the solicitation of his wife he gave a pittance to a university in one of the Southern States, but this little good, like a ray of light in the gloom, but casts a deeper shadow upon the theme. It is true a man can do as he will with his own; and according to his deeds the world can praise or keep silent. Vanderbilt has earned naught but charitable silence.

RAINFALL AND FORESTS.—Mr. Meehan, of



testimony is that they have nothing to thank him for.

Commodore Vanderbilt figured quite largely in the early history of this State and we give on this page an engraving, taken from a portrait, which shows the man as he appeared in his prime, 25 years ago, when his "tubs" were floating in emigrants to this State by the thousands. Since that time age has greatly changed his features, but our engraving is true to the man when he had most to do in our affairs. That he was a man of great executive power, of strong will, of acute perceptions, and of no mean share of what men call talent, none can deny. What he lacked was heart, fellow-feeling, philanthropy.

This great fortune-maker died possessed of \$85,000,000. What a massive accumulation of wealth. What possibilities for good lay in the power which such a fortune carried in its wake. What peerless monuments could have been

the *Gardeners' Monthly*, is evidently an infidel on the rainfall-forest faith. He says: "Our European friends are finding some curious 'facts' in regard to rainfall and forests. In France, a Mr. Fautral found that there was much more rain fell in a forest than on a sandy plain not a great way from it. It so happened, however, that another forester kept an account in a forest about the same distance from the sandy plain, and the figures do not agree. Most persons would have suspected an error in ascribing much influence to the forests, but these two fell to discussing the nature of the forests themselves; and now it is asked of us to believe, that while ten per cent. more rain will fall on a pine forest than on a sandy plain, only five per cent. more falls on an oak one. The only wonder is that 95 per cent. should fall on the treeless plain."

The Lick contesting heirs have relinquished all claims to that estate.

## New Publications.

One of the very best of recent contributions to the literature of agriculture is written by our well known contributor, Felix Gillet, of Nevada City, California. It is entitled: "Fragiculture, or the Culture of the Strawberry," and is a practical treatise on the culture, propagation, management and marketing of strawberries, illustrated with photographs, representing the average size of best varieties, especially adapted to the family garden. It is a handsome pamphlet, and in its treatment of the subject covers the whole ground of the selection of varieties, soil, methods of cultivation, propagation, picking, packing and shipping, and a host of other themes closely allied thereto, and which will make the thoughtful reader master of the art of strawberry culture. We are exceedingly pleased with the publication. It is illustrated with handsome photographs from the fruit. The price depends upon the number of photographs. With two photographs and the text complete the price is 50 cents, post paid; five photographs, 75 cents; eight photographs, \$1.00; twelve photographs, \$1.25. In each case the reading matter is the same. It is the cheapest, most complete, practical and interesting treatise on strawberry culture ever published in the United States.

A very interesting book entitled, "The Life of Major-General George A. Custer," has been compiled by Captain Frederick Whittaker, and is for sale for \$4.50 by A. Roman & Co., in this city. The work is a very interesting and exciting one, and describes in a vivid manner the numerous daring exploits of the "gallant Custer." It gives a complete history of his life from his boyhood, with a detailed account of his fighting during the civil war, and also of the Indian campaigns, in the last of which he lost his life, fighting to the last. The portrait drawn seems like that of a knight of romance, and after reading the history of this dashing soldier one feels inclined to take him as an ideal hero. He is so looked upon by thousands in the nation for which he fought and died, and a history of this brave young officer should be on the shelves of all who admire patriotism, bravery, skill and other qualities which go to make a successful soldier. The book is well illustrated and comprises about 650 pages.

## The Bull's Head Stock Yards.

The enterprise of Mr. Rollin P. Saxe, in establishing the "Bull's Head Stock Yards" in this city, has awakened so much interest among our readers, through the advertisements which have appeared in our columns, that we have received a number of inquiries concerning the establishment. With a view to answering all who may be interested, we made a trip during the week to the Bull's Head. The yards are located at the corner of Ninth and Howard streets, easily accessible by the street cars. Here Mr. Saxe has leased a large piece of land, 500 feet long by 285 feet wide. Around the exterior and up through the center he has erected rows of closed and open stalls. He has in all 140 separate stalls. On one side of the dividing line of stalls he has four commodious corrals for stock, and on the other side there are two sales corrals, one fitted with seats capable of holding 2,000 people, and a stand for the auctioneer. These are intended for the auction sales of stock and horses, and the conveniences are as good as are employed at the large stock sales at the East. The first auction sale was held this week with these arrangements.

Other valuable accessories to the institution are Dr. Dunbar's veterinary offices and smithing shops, a closed amphitheater for breaking vicious horses, and stables and granaries for the storage of feed.

The best commentary which can be made upon the success of the establishment is that within two weeks after the opening day the stalls were all occupied by animals sent in for sale. Large consignments both of horses and cattle were received from Oregon and the interior of this State. Of course, as

sales are made, vacancies are occurring in the stalls for new arrivals. So far as we can see, the institution meets a popular need of our cattle growers and horsemen, as is shown by the quick patronage which was received. The plain advantages of the concern are, first, establishing headquarters where sellers and buyers can meet and have the fullest opportunity both to display and examine animals; second, by offering accommodations for large numbers of animals, prices for keep and care can be reduced far below the prices charged in the cramped stables of the city. Besides these there are minor advantages which are obvious.

The Bull's Head is apparently managed with much enterprise and spirit. It appears already that the needs of the establishment are wider than its space, and Mr. Saxe is planning to devote the present quarters exclusively to the horse trade, and prepare larger yards for stock.



## The Debris Question.

### A Miner's Review of the Situation.

We reprint from the columns of the *Mining and Scientific Press*, of this city, the following review of the debris question, in order that our readers may have information of the way the difficulty is viewed from the miner's standpoint:

For many years past the farmers owning and cultivating the bottom lands along the several rivers and minor streams that traverse or have their sources near the great auriferous gravel deposits in which hydraulic mining is being carried on, have been complaining of the damage done such lands by the detritus carried down these streams and deposited thereon. The rivers along which this injury has been most extensive are the Feather, Bear and the Main Yuba, although some harm has also been done to the lands lying on or adjacent to Dry creek, Butte county, and to those along the American and Cosumnes rivers, with some little caused elsewhere in the counties most exposed to the encroachments of sedimentary matter. During all the earlier history of these mining operations, when the population engaged therein, being much more numerous than now, constituted the best customers of those who cultivated the soil, buying at liberal prices and consuming largely of their products, the farmers raised no objection to the evil they now complain of, nor did they or any one else then question the right of the miners to run their tailings into the rivers and canyons as they are doing at present. And even for many years after these tailings began to prove troublesome, the farmers did no more than murmur and protest, being deterred from precipitating a legal conflict because of the great expense and the uncertain results that might be expected to attend the same.

### Inaugurating Hostilities.

And so matters were suffered to remain until about three years ago, when a farmer named Crumb, owning a small place on Dry creek, Butte county, brought an action against the Spring Valley canal and mining company, to recover damages for injury done his land by the tailings flowing from their mines. This company, washing four or five miles above, conducted operations on a large scale, running a heavy head of water the year round, and, as a consequence, sent down great quantities of these tailings, which were gradually covering up the plaintiff's grounds, a portion of his peach orchard having been destroyed prior to the commencement of this suit. Although Crumb appeared alone as plaintiff in this action, it was understood that he received aid and encouragement from other parties in the neighborhood who had similar grievances to be redressed, it being intended that this should serve as a test case, in which the question of the liability of the miners for injuries of this kind should be judicially determined. This suit was tried at Oroville, before a mixed jury of farmers and miners, and resulted in a verdict for the defendants, the jury deciding that there was no cause of action. While this verdict was, as a matter of course, satisfactory to the defendants on the question of damages, the main issue in the suit, it did not dispose of several

### Special Issues

That had been raised in the course of the trial, the determination of which was by the miners deemed of more importance than the mere matter of damages, which could in no event have been large, the sum claimed by the plaintiff amounting to no more than \$10,000. Among other questions of moment, these special issues involved that of the right of the miners after having discharged these tailings upon their own ground to run or suffer them to flow into the creeks and rivers adjacent, as well, also, as that of their right to augment the volume of water naturally flowing in these streams by conducting water from other sources, and after using to empty it into them, thereby increasing the quantity of sand, gravel and sediment brought down and deposited by them on the lands below.

The defense introduced a large amount of affirmative testimony on these several points, but, as the jury failed to pass upon them, they were left open and unsettled, except in so far as they might be considered inferentially determined by the finding of the jury on the main issue. A certain amount of damage, though not large, was shown to have been sustained by the plaintiff, and upon what hypothesis this verdict was based, save that the defendants had a right to inflict this damage, it is difficult to conceive. However this might have been, the defendants were themselves so little satisfied with the result of the suit, that they resolved to get rid of further annoyance of this sort by buying up all the lands injuriously affected by the tailings from their mine, a policy which they have since fully carried out, some fifteen thousand acres of these lands having been purchased by them. By carefully distributing a portion of their tailings over these lands, the company have been able to not only preserve them from further injury, but have so improved their quality that they hope to more than indemnify themselves in the end for the money expended in their purchase and improvement. That portion of their tailings not thus utilized are conducted by a ditch several miles long and discharged upon the tule lands that here border the Sacramento river. This company have found by practical trials that these tailings, when

properly distributed over the heavy clay soils of which these river bottoms mainly consist, greatly benefit the same, while for the purpose of reclaiming the tule swamps they will prove of incalculable value.

### An Attempt to Procure Seasonable Legislation.

During the last session of the California Legislature, some of the larger and more influential mine owners sought to procure the appointment by that body of a committee to examine and ascertain the amount of damage done and hereafter likely to be done by this mining debris, and suggest what measures, if any, should in their opinion be adopted for averting the same, this committee to report the result of their labors to the Legislature at their next session. This effort, so timely and well worthy of attention, proved, however, of no avail, these legislators either failing to comprehend the urgent and momentous nature of the subject, or being deterred from undertaking a task involving so many new and important questions and beset with such inherent difficulties. Later in the session the Committee on Mines and Mining, to whom this business had been referred, recommended in their report on the subject, that Congress be memorialized for the appointment of a commission of engineers to investigate the matter with a view to having the National Legislature provide some general plan for disposing of these tailings without prejudice to the interests of either the farmers or the miners; and in this shape the matter stands at present, so far as Congress and the State Legislature are concerned.

### The Farmers Meet and Deliberate.

Early in the month of January last, the farmers of Sutter and Yuba counties, including some other classes of business men, began holding meetings in Marysville to consider this question and devise some feasible plan looking to its final adjustment. At these meetings a wide diversity of opinion prevailed as to the proper means to be pursued for gaining the end proposed, those present thereat not being agreed in regard to the rights and liabilities of the miners in the premises. These deliberations, however, finally culminated in the appointment of a committee, charged with the duty of preparing a bill to be submitted to the State Legislature then in session, by the provisions of which all hydraulic miners are to be made responsible for injuries of this kind in amounts proportioned to the quantity of tailings they run off, it having been further determined to petition that body for the enactment of a law whereby the damage arising from hydraulic washings may be, if possible, prevented.

### They Finally Combine for Aggressive Purposes—The Legal Contest Renewed.

Along in the early part of the summer the land owners, after much conference, began forming associations in the several townships most affected by the accumulation of this hydraulic debris. Towards the latter part of July, James H. Keyes, a farmer residing on Lower Bear river, where he owned and cultivated about 1,000 acres of bottom land, commenced a suit in the Fourth Judicial District against the principal hydraulic miners tailing into Bear river and its tributaries, it being understood that Keyes, in this action, represented the Farmers' Association of Wheatland township, Sutter county. The defendants to this suit consist of 22 different parties, some of them incorporated companies and others individual or partnership concerns; there being included in the number several properties of considerable value, and which are being operated on a moderately large scale, but none that rank among the first class in the State. This suit is brought in equity for the reason, as the plaintiff alleges, that he would, in a court of law, be without remedy. Having set forth his cause of grievance, the complainant prays that by a decree of the Court the defendants be perpetually enjoined and restrained from depositing the tailings and debris of their several mining claims in the channel of Bear river or any of its tributaries, or suffering them to flow therein, as well also as from fouling or polluting the water of those streams, thereby rendering it unfit for domestic use or the purpose of irrigation; and, further, that the defendants be by order of the Court restrained from committing any of said acts during the pendency of this suit, and that the plaintiff have judgment for costs incurred in prosecuting the same. That he has proceeded to seek relief in equity instead of instituting an action for damages in law against each of these defendants is, as the plaintiff avers, because this latter course would necessitate the commencement by him of at least 50 different actions, to say nothing of others afterwards required to prevent a repetition of these wrongful doings, the costs of which would greatly exceed any amount of damages he might hope to recover, even if a judgment obtained against these parties could be collected, which, owing to their being transient and irresponsible persons, it could not.

### Damage—Past and Prospective.

In this complaint it is affirmed that the defendants are running these tailings into the streams mentioned at the rate of 8,000,000 cubic yards per annum, they having within the past three years deposited over 20,000,000 cubic yards therein; that the bodies of gravel upon which they are operating are of such magnitude that they cannot be run off in the course of 20 years, during which time, if the sending down of these tailings is suffered to go on without effectual measures being taken to prevent their lodgment upon the bottom lands along Bear river, amounting to some 40,000 acres, these

lands will be so covered up as to render them unfit for cultivation, 10,000 acres thereof having already been covered by a stratum of this material to a depth of three feet or more; and, finally, that a part of the complainant's land, of which he has over a thousand acres, has already in this manner been inundated to a depth varying from three inches to three feet, and that more of it would have been so overflowed had he not, at an expense of several thousand dollars, constricted levees for its protection.

### The Miners also League Together for Mutual Protection.

Foreseeing in this movement a threatened danger to this entire branch of business, the large hydraulic operators and ditch owners throughout the more central mining counties, resolved, after the example set them by the farmers, to adopt a plan of co-operation for their mutual aid and security, to which end an alliance, styled the Hydraulic Miners' Association, was, in September last, formed in this city, the preliminary steps looking to such an organization having been taken some time before. The first and most efficient parties in bringing about this union of forces were the large companies, who, though not yet sued and abundantly able to take care of themselves should they be assailed, generously undertook the defense of their weaker brethren who had already been attacked, and who, with their limited means, might not have been able to cope successfully with the powerful combination arrayed against them.

This association is composed wholly of companies and persons owning or interested in the various branches of gold mining in California, or in water-ditches, tail-slides and other properties auxiliary or appurtenant to some department of this business. Already its memberships comprise all the more important companies in the State, the actual value of the property represented thereby amounting, at a fair estimate, to not less than twenty-five or thirty millions of dollars, which sum, it is highly probable, will in the end be increased to the extent of ten or fifteen millions more. The main purpose of this association will be to defend all suits brought against any of its members wherein any question of general interest or principle of common application is involved, they employing counsel and defraying all the costs attending such litigation to its issue in the tribunals of final resort, should not a satisfactory result be sooner reached. Among secondary objects will be the cultivation of friendly relations between the members, and the general advancement of this branch of mining; to which end a commodious office to serve for the transaction of business and as a place of common resort, will be maintained at a convenient locality in the city of San Francisco, it being the intention of the founders to make this a permanent and actively useful institution.

### The Legal Questions and Equities of the Case.

As regards the merits as well as the questions of law involved, there is, of course, something to be said on both sides of this controversy. It certainly seems a great hardship that so much of these lands, which the present owners have bought from the Government and afterwards improved, should be rendered worthless or even have their value temporarily impaired, through the causes complained of. The injury already done is considerable, and if the flow of these tailings is suffered to go on without diversion or abatement, large additional portions of these valuable bottoms must hereafter be invaded and, for a time at least, be rendered unfit for cultivation; and the fact that this destructive process is liable to be at any time greatly accelerated by one of those winter floods that periodically occur in these mountain creeks and rivers, is one that should not be lost sight of. It is a fundamental principle of law, say these farmers, that every man shall be required to so use his property as not to cause injury or annoyance to his neighbor, and that for every intentional injury done the law provides a remedy. The injury in this instance being palpable and unquestioned, these good people are now anxious to see the remedial clause of this legal maxim practically tested. To this sort of argument

### The Miners Reply:

We too have bought our lands from the General Government, paying double prices therefor under the implied assurance that we should be permitted to go on and utilize them in the manner we had been accustomed to do; our occupation and subsequent purchase thereof having long ante-dated that of the farmers, while our improvements have cost a hundredfold more than theirs. We entered upon these lands with the consent and approval of the Government nearly thirty years ago, and then and there commenced this business of gold mining, building it up and establishing it by such rules and regulations as our hard necessities suggested and our protection required; which local rules, through general adoption and long use, came at last to be recognized everywhere as law, the courts being governed by them, while Congress and the State Legislature declared that they should have the full force and authority of statutory enactments. Among these local rules, so received and engrafted upon our general code of laws, was one providing that the hydraulic miners might introduce foreign water upon their claims for the purpose of washing, and there discharge the same, allowing it to flow thence into the adjacent rivers and canyons, regardless as to what might become of it afterward. Many years after these local regulations had, through prescription, so gained universal recognition and the force of

law, and in some instances even after they had received the sanction of the highest authorities, legislative and judicial, these farmers, although there was then still plenty of public land elsewhere upon which to settle, came and planted themselves right in the path of this outflowing sediment, being at the time well advised as to the existence of these usages, and the danger to which they were thus exposing themselves. They acted with their eyes open; acted with a full knowledge of the rights of the miners, the decisions of the courts, and the declarations of the Government, as well as of the manner in which this sand, gravel and sediment had already begun to lodge along these several outlets, and was likely thereafter to accumulate to a damaging extent, and that having so acted, with a knowledge of all these facts, they should not now complain, much less appeal to the tribunals of the country for relief against a trouble that they heedlessly brought upon themselves. Moreover, it is contended by the miners that this vexatious and hurtful material might easily have been converted from an agent of annoyance and harm into one of fertility and wealth, had these thriftless husbandmen adopted timely means for distributing it over their lands, instead of suffering it to accumulate in undue quantities along the margins of the streams. These tailings, by the time they have reached the lower valleys, where the most of these alluvial lands are situated, consist of a mere silt, or at most a finely comminuted sand, all the large stones, gravel and coarser sand being left behind the boulders in the mining pits, and the balance of this stuff in the beds and along the banks of the canyons and streams above. The water, when it arrives in the vicinity of these bottom lands, being charged with this fine sediment and warmed by the sun, is in a condition highly favorable for use both as an irrigator and fertilizer of the soil, to which purposes it might in all cases be applied with great advantage.

### Disastrous Effects of Closing the Mines.

The foregoing, while they cover the leading points, do not by any means embrace all the arguments employed by the miners in defense of their cause. It is urged, for example, that to stop this branch of gold mining, which is now turning out some twelve to fifteen million dollars per year, would, at this juncture, be likely to greatly embarrass the General Government, and possibly inflict serious injury upon our credit abroad; the great want of the Federal Treasury, and, indeed, of the entire financial world, being just now a fuller supply of this class of the precious metals; again, the destruction of this business would fall with crushing effect upon many other industries and callings in the State, to say nothing of the ruin that must thereby be entailed upon that large and enterprising class of citizens who, relying upon the rulings of the courts and the pledged faith of the nation, have invested so many millions in these hydraulic mines, ditches, reservoirs and other works subsidiary thereto. In this entire class of improvements there have been expended, first and last, not less than fifty millions of dollars in this State, and this not including expenditures made on account of enterprises carried out and ended, or those dead and profitless works, of which we have had so many in our day. Upon what is known as the San Juan divide, being the high ridge lying between the South and the Middle forks of the Yuba, there has been expended on and about what may be considered live enterprises, purchases and improvements all included, fully twenty million dollars, all of which with the stoppage of hydraulic washing would be extinguished at a blow. To arrest this industry, even in that one locality, would be to throw thousands of well-paid laborers out of employment, dry up vast and costly ditches and reservoirs, blot out of existence populous and thrifty towns, as if swept by fire, and in short, restore this entire district to its original solitude and desolation, no other style of mining being here largely prosecuted, and the other natural resources of the country being of limited extent.

This divide has been estimated by the U. S. Commissioner of Statistics to contain 1,820,000,000 cubic yards of auriferous gravel, which, at the lowest calculation, will yield, under hydraulic treatment, 30 cents per cubic yard, making the value of the gold here contained \$546,000,000—a sum which can only be extracted by the hydraulic method of washing, and which it is not to be supposed either our Government or our people will consent shall be lost to commerce and the world because of the comparatively trifling damage that would, by the process of its extraction, be inflicted upon the farming lands below. And this is but one of the many localities, almost equally important, that might be instance in California. Such, then, are some of the arguments upon which the hydraulic miners will rely to defeat the suits instituted against them, and to justify themselves in continuing and extending still further this class of operations.

### Legal Foes but Personal Friends.

It is proper to observe that notwithstanding their clashing views and interests, very little ill feeling has been manifested by the parties to this contest, which has thus far been carried on in a conciliatory, and we might almost say, friendly spirit. Each is aware that the other possesses rights in the premises that are entitled to consideration and respect, both being alike anxious for an early adjustment of their difficulties through legislative or other peaceful instrumentalities if possible and through the intervention of the courts if necessary. No intemperate charges have been made nor acrimoni-



ous spirit indulged in, nor can it be said that either party has, during the progress of this contest, shown a disposition to prejudice the claims or otherwise secure any undue advantage over its rival. So good an understanding has indeed been maintained between these two classes, that several of the larger mine owners are even now assisting the farmers of Linda township, Yuba county, in the construction of an extensive and costly levee, whereby many thousand acres of bottom land along the lower Yuba will be protected from threatened overflow, the voluntary contributions of these considerate and large hearted men in aid of this work amounting to some fifteen or twenty thousand dollars. Outside this legal fight friendly relations and the most cordial good will are, and no doubt will continue to be, cherished between the contestants, who, it is to be hoped, will yet be able to meet upon some common ground and through their joint influence and efforts procure such legislation as will admit of their differences being settled and disposed of without the intervention of the courts.

To put an entire stop to this branch of mining is out of the question. In the discussion of this matter, that much may safely be assumed. To hold the hydraulic miners answerable to the extent that each contributes towards the damage done, even if just, would hardly be practicable. If attempted, this plan would lead to such an amount of litigation and strife as would necessitate its early abandonment. This question must be settled, not by recourse to temporary shifts and expedients, but upon a broad and permanent basis, and in a manner that will take it out of the province of endless and costly contention, the welfare of the Government and the community at large being consulted as well as that of the parties more immediately interested.

#### A Feasible Way Out of these Difficulties.

Now, fortunately, a solution of this problem, in accordance with the views above expressed, is by the best authorities deemed altogether feasible. Situate along the main arteries of our river system are vast tracts of tule swamps, upon which this debris from the hydraulic mines can readily be conducted, and in the reclamation and improvement of which it would be of incalculable value. Large portions of these marshes, even at low tide, are covered with water, and cannot therefore be drained by means of ditching, nor can the water be wholly excluded from them by levees, owing to the loose and porous nature of the soil. To effectually protect them from overflow and seepage they will have to be so filled in as to raise the entire surface above high tide level. The mass of this soil being made up of tule roots, covered with a layer of decomposed vegetable matter there will have to be added to it some material suited to give it body and substance before it can be successfully cultivated. The only means by which these several ends can be accomplished will be by running upon these swamps this muddy water from the mines, and there retaining it until it has deposited the bulk of its impacting and fertilizing freight. When recovered in this manner these will be much the most valuable lands in the State, selling for prices that would greatly exceed the cost of their reclamation. At the present time, when we are threatened with one of those disastrous drouths which at irregular intervals may be expected to occur in California, cutting short the cereal crops, drying up the grass and decimating our flocks and herds, the great value of these tule lands becomes strikingly apparent. Improved in the manner indicated, these now worthless swamps would afford millions of acres of luxuriant, self-renewing pasturage, through the aid of which this immense destruction of property in seasons of drouth might be almost wholly averted. While so much would in this manner be saved, two of our most important and perplexing industrial problems would, through the adoption of the policy here recommended, find a satisfactory solution: a receptacle being provided for the hydraulic sediment, and the vast expanse of tule swamps, now the breeders of mosquitoes and malaria, would be converted into the garden lands of the world. Let, then, the farmers and the miners, instead of wasting their time and money in a strife that can in no event be determined for years, unite their strength and procure such legislation to be taken as will inaugurate this reclamationary work with the least possible delay. If the State Legislature is not competent to deal with the subject in all its aspects, then let their action be supplemented by such congressional or departmental measures as its effectual treatment may call for.

**OIL FROM WOOD.**—In Sweden the manufacture of illuminating oil from wood has become a large and successful industry. The roots and stumps of trees are employed for the purpose. The wood is subjected to dry distillation, with exclusion of air, and a variety of products are formed which are of value in the arts. Among these may be mentioned turpentine, creosote, tar, acetic acid, charcoal, oil of tar and oil of wood. The wood oil cannot be burned in an ordinary lamp, but a camphine lamp can easily be adapted for the purpose. It is not explosive and is remarkably cheap. The pine tree is the best adapted for distillation, and there are 15 establishments in operation in Sweden, three of which produce 15,000 liters (887 gallons) of oil annually.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## DEWEY & CO. American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

**PATENTS** obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

#### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

#### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

#### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

#### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

#### DEWEY & CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

## Beware of Dry Seasons!

Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of semi-tropical fruits and all vegetable productions.

#### THE BEST ALFALFA LAND IN CALIFORNIA.

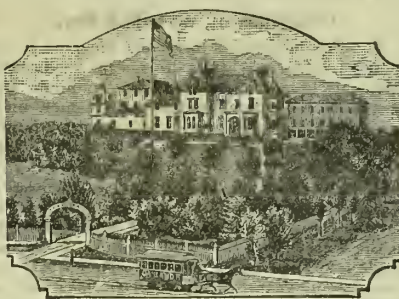
Also, irrigated land for rent in quantities to suit, free of charge this season, adjoining the Colony, three miles from Fresno.

Call or send for Maps, Circulars, etc.

**CENTRAL CALIFORNIA COLONY,**  
306 Pine Street. San Francisco.

M. THRO. KEARNEY, Manager.

#### CALIFORNIA



#### MILITARY ACADEMY.

For circulars, address

Rev. DAVID MCCLURE, Principal,  
OAKLAND, CAL.

#### CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association.

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, OCT. 19, 1876, - 268,716 00

#### MUTUAL PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Oct. 1, '76.	\$5,181,591.00	\$114,445.57
Less Amount Canceled.	300,644.00	6,297.50

Amount in force, Oct. 1, '76.	\$4,880,947.00	\$108,148.07
Losses paid.	\$7,251.00	

#### CASH PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Oct. 1, '76.	\$2,585,914.19	\$51,606.96
Less Canceled and Expired.	976,908.00	19,538.16

Amount in force, Oct. 1, '76.	\$1,609,006.19	\$32,068.80
Losses paid.	\$10,153.71	

#### OFFICERS.

J. D. BLANCHARD	PRESIDENT
I. G. GARDNER	VICE-PRESIDENT
G. P. KELLOGG	TREASURER
A. W. THOMPSON	ATTORNEY
FRED. K. RULE	SECRETARY

#### TRUSTEES.

J. D. Blanchard	San Francisco
G. P. Kellogg	Salinas
I. G. Gardner	San Francisco
Chas. Laird	Salinas
Uriah Wood	San Benito
A. B. Nally	Santa Rosa
A. W. Thompson	San Francisco
A. D. Logan	Colma
I. C. Steele	San Mateo
G. W. Colby	Butte County
A. Wolf	Stockton
C. J. Cressey	Oakland
J. C. Merryfield	Dixon
E. W. Steele	San Luis Obispo
C. S. Abbott	Monterey
Dr. T. Flint	Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPARREIL TYPE, FORMERLY USED ON THIS PAPER, FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,

224 Sansome Street, San Francisco.



#### LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

**ANGELL'S** CHARCOAL DENTAL SOAP for Whitening and Preserving the Teeth. J. W. ANGELL, Prop., San Francisco.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES. Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

#### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale various ages at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

#### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

#### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahma, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

J. M. KERLINGER, Ellis, San Joaquin Co. Brown Leghorns a specialty.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

#### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Grangers' Bank of California,

42 California Street,

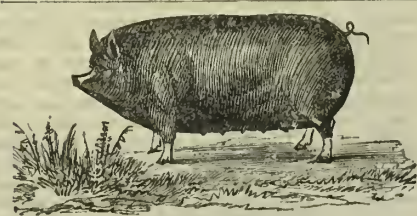
SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

#### OFFICERS:

PRESIDENT	GILBERT W. COLBY.
MANAGING DIRECTOR	C. J. CRESSEY.
CASHIER	ALBERT MONTEPELLIER.
SECRETARY	F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,  
NAPA, CAL.

## SELECT AND HEAVY FLEECE MERINO SHEEP.

During the winter I will be in San Francisco with some Merino Rams and Ewes that are sold, and if correspondents in California and Texas send their orders with remittance, we can deliver at same time.

JOHN S. GOE,  
Brownsville, Fayette Co., Pa.

#### BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are all from Pigs I imported from Kentucky.

PETER SAXE, Importer.  
Commercial Hotel, San Francisco.



### California Pisciculture.

The past year has shown quite an increase in the catch of some of the varieties of fish of California. The increase in salmon has been most marked, and shows already that by artificial hatching the supply of this fish can be almost indefinitely increased. Observations during the past year have proven that this fish is to be found in California every month in the year, which is not the case elsewhere. The Fish Commissioners of this State have, so far as the means at their disposal would admit, acted with energy and good judgment.

The law making a close season between August 1st and November 1st, has been well enforced and with the result that further prosecution for violations will probably not be necessary in the future. In the carrying out of the programme of the law, the Commissioners have been materially aided by the railroad and transportation companies, who forbade their agents and employees to transport salmon out of season.

#### Successful Propagation of Shad

The closed season for shad will expire in December, 1877. At that time it is believed by the Fish Commissioners that the natural increase of the fish will be so great as to prevent their extinction on this coast. As experiments have shown that young shad cannot be kept in safety for a longer time than seven days, Prof. Baird, of the United States Fish Commission, will make no attempts to send them from the Atlantic coast to Oregon. He intends, if possible, to send a full earload of young shad—about 3,000,000—during the coming season, which will be placed in the Sacramento river. With this additional number it is thought the entire Pacific coast, from San Diego northward, will be amply stocked, as from the young shad heretofore placed in the Sacramento river, adult fish have been taken at various points, from Wilmington to the Columbia river. Although the taking of shad is at present not lawful, yet numbers have been caught in nets set for other fish at various points in this State. The latest instance known to the Fish Commissioners was the taking of two adult shad in Sonoma creek last week. These fish were almost ready to spawn, and their ripe condition so early in the season shows that they can be taken here about the same time as in Alabama and Florida. During the past year the Fish Commissioners of California have placed 125,000 young shad in good condition into the Sacramento river near Tehama.

#### Stocking the Rivers With Salmon.

During the past year the Fish Commissioners have had hatched out and placed in the Upper Sacramento, Pitt and McCloud rivers 2,500,000 young salmon, care having been taken to distribute them in the smaller tributary streams, so as to protect these young fish from trout and other enemies. The Commissioners expect to hatch out and put into the Sacramento and other interior rivers a similar number next year, and will continue to do so annually as long as the Legislature of California will make suitable appropriations for the purpose. From investigations made by them, the Commissioners are satisfied that the artificial hatching and introduction of the above number of young salmon yearly into the Sacramento river, in addition to the increase from natural sources, will be ample to keep up and even increase the supply of salmon beyond the consumption of our people. They believe that the business of canning salmon for export, as now practiced on the Columbia river, can, in such case, be made profitable in California. The value of salmon canned the past year on the Columbia river is estimated at about \$4,000,000, the supply being inadequate to the demand. The article of canned salmon is finding increased sale wherever introduced, and there seems practically to be almost no limit to the demands in the future. The proprietors of the canneries have already made contracts in advance for nearly 200,000 cases of the next season's catch. The limit of the supply of salmon in the Columbia river is said to have been reached, and unless artificial hatching is engaged in, that river will become as unproductive as was the case in California rivers a few years since. Some of the parties engaged in canning salmon on the Columbia river are in favor of the State of Oregon and the United States taking some joint action in preserving and restocking that stream. They state they will assist in defraying the expense attending artificial hatching of salmon, and that a sum of \$5,000 to \$10,000 expended yearly would be ample to keep up the present supply of fish in that river. The Fish Commissioners of this State report that the 200,000 young salmon placed in the Truckee and Little Truckee rivers, Donner lake and Prosser creek have done well, the young fish having lately been seen in those waters in great numbers. Should these fish survive the perils of poison from saw dust and almost impassable dams on the Truckee river, they will find their way to Pyramid lake, and thence annually return to stock the waters from whence they came. The water of Pyramid lake is said to be somewhat salt and abounds with suitable food for salmon. During the past year the Fish Commissioners have made arrangements to exchange salmon eggs for desirable fish, natives of Japan and Hawaii. To the latter they sent 30,000 eggs, a portion of which are reported to have hatched out and doing well. From Hon-

olulu a quantity of young fish were shipped to this port, but from lack of care died while on the voyage. These fish—the arya—are said to attain the weight of 15 pounds, resembling the salmon in looks, but tasting more like a shad, without, however, that fish's abundance of small bones. The arrangements for an exchange with Japan were made so late in the year that salmon eggs could not be sent this season. The Commissioners sent, however, by the steamer which sailed on the 3d inst., 30,000 white-fish eggs, a portion of a supply just received from Michigan. They will also send some Eastern trout eggs when received, and some eggs of the Sacramento river trout, in March next. In return the Commissioners expect to receive some mullet and carp, both being of fine eating quality. Other varieties of fish are also promised from Japan.

#### Importation of White-Fish Eggs.

The Commissioners have just received a shipment of 300,000 white-fish eggs in good order, from Michigan. One-half this number were sent to New Zealand by the last steamer, under arrangements made by Prof. Baird, United States Fish Commissioner. Another lot of 300,000 white-fish eggs is expected to arrive here in a few days, to be divided as above. Those retained by the Commissioners are to be hatched out at Berkeley, and afterwards to be distributed in the waters of Tahoe and Donner lakes, and Eagle lake, in Lassen county. The white fish placed some years since in Tulare lake are reported to have done well, large quantities of the fish having been seen during the past year. Of those placed in Clear lake very little is known, as very few only have been seen. As the waters of this lake are very deep, the Commissioners think the probabilities are that the fish are not likely to be taken there without systematic fishing, as is practiced in Lake Michigan, etc., which so far has not been tried in California waters.

#### Experiments with Eastern Trout.

The Commissioners expect to receive, about the 10th instant, 200,000 Eastern trout eggs, which are to be hatched out and placed in the public waters of this State. When hatched out notice will be given to the public through the press, so that parties who may desire to stock waters can make application and procure the young fish from the hatching house at Berkeley. The Eastern trout eggs heretofore received have been hatched out and placed in mountain streams, among others the South Yuba, North fork of the American and Prosser creek, also in Calaveras creek and other streams in Alameda, Napa and Yolo counties. These fish have grown and thrived well, a large number having spawned, thus insuring a continuous supply.

#### Dolly Varden Trout.

The Commissioners the past year made arrangements to secure a supply of the Dolly Varden trout eggs, under the direction of Myron Green, of the United States Fish Commission. McCloud river men were sent to the headwaters of that stream, but failed to obtain any eggs, the fish spawning in September and October, instead of February, as is the case with the Sacramento trout. This difference in spawning time, however, assures the prevention of hybrids, no other trout being then ripe with milt or eggs. Efforts will be made the next season to procure a supply of eggs, with the view of distributing in other waters in the State which are supplied by melting snows, the only places where the fish will thrive. These fish were supposed to be only native to the McCloud river, but it is now known that they are to be found in almost all the snow-fed rivers of the Alaskan coast emptying near Behring straits. The name of this fish in pisciculture is *Salmo Campbellii*.

#### California Trout.

With the view of restocking some of the streams that have been exhausted of their natural supply of fish, the Commissioners have made arrangements to procure a quantity of eggs of the ordinary trout of this State. An arrangement has been made with Myron Green, Lower Soda Springs, Siskiyou county, by which that gentleman will collect and artificially hatch out a large quantity of trout eggs. A portion of these will be purchased by the Commissioners in March. This trout, which is called *Salmo irideus*, is highly thought of in the Atlantic States, where they are considered a shyer and gamier fish than the native trout.

#### Graylings and Other Species.

This fish, said to be the most beautiful in American waters, will be propagated in California the coming season, the Commissioners having arranged to receive 50,000 eggs from Michigan. These, when hatched out, will be placed in some of the highest and coldest streams of the Sierras, and in time their produce will be used to stock all streams in the State which may be of suitable clearness and temperature. Of the other fish introduced into California by the Commissioners, the majority seem to have done well. The Schuykill catfish, which were placed in the slough near Sutterville, have largely increased, and have been well distributed throughout the State. The Mississippi catfish placed in the San Joaquin river have also done well, a number weighing from three to five pounds having been taken at various times. The black bass in Napa and Alameda creeks have largely increased in numbers, and from these creeks it is expected to stock other waters of the State.

In 1873, the Commissioners placed in San Antonio creek a number of tautog or blackfish, the only salt water variety that arrived then in good

order. These fish were strong and lively, but from the time they were placed in the creek have not been heard from. They should have increased and have been found in rocky waters. The Commissioners will this season make further attempts to introduce lobsters on this coast. With this view, Livingston Stone, United States Fish Commissioner, has been making a series of experiments to keep lobsters alive for a sufficient period of time to reach California. A full earload of lobsters and salt water fish will be brought to this State during the coming season.—*Bulletin*.

### Public Health.

In comparison with several of the years last past the death rate in this city is alarming, and it is feared that if the present dry weather continues, a still further proportionate increase may be expected. The epidemic of small-pox, which has prevailed for some months in San Francisco, has of course materially increased the death rate, and now for some time the equally, if not more, dangerous diphtheria is committing its ravages. This is by no means confined to the city, as it extends all over the coast, varying, however, in degree in different localities. This scourge is principally confined to the little folks and is not considered dangerous to grown persons. Throat affections of different kinds are prevalent, however, among grown people also.

Diphtheria has now become so dangerous to children that parents all over the coast are greatly alarmed and every remedy is tried. No specific has yet been found, however, and physicians disagree as to cause as well as to treatment. Although this is no uncommon circumstance, the treatment varies so greatly that the opinion prevails that the profession knows less about the disease than its importance warrants. To many diphtheria is more alarming than small-pox itself, usually considered the most disagreeable and dangerous of diseases. For it, however, vaccination furnishes a preventive; for diphtheria there seems to be none, and what is worse, the chances appear less favorable for recovery from the former than the latter.

In some families as many as four, five or six children have been taken away in the space of two weeks. Every precaution is taken by careful parents to prevent catching the disease, but it appears to be in the form of an epidemic and one which the physicians are unable to check. The old theory that it owes its cause to defective sewage seems exploded, as it appears in all localities, whether well sewered or not; and the interior parts of the State are by no means free from it. Of course the ravages are more apparent in the city, owing to the density of population.

It is hoped that after a few good rains the epidemic will cease, though no medical expert has publicly given any reason for the expectation. The ravages now being committed by diphtheria are such as to call to it the most searching and scientific attention of the medical profession, for unless some sovereign remedy is discovered and applied it will doubtless continue, periodically at least, to decimate the ranks of the children of this coast. The public naturally look to the physicians for aid, but in this case, sad to say, the profession seems deficient, and the societies throughout the country should give the disease the most unceasing attention in order to discover a remedy.

**THE INFLUENCE OF AGRICULTURAL PAPERS.**—A larger proportion of farmers fill our mad-houses than any other one class of persons in the land. We have before stated the reason of this to be the monotony of their employment, and want of mental stimulus. But this state of things is rapidly changing, by the influence of agricultural journals, which are establishing themselves in every section of the country. Their tendencies are of a healthful character in many ways. By telling the reason of things, they open up a new world of thought to the cultivator of the soil, which is pursued under the influence of a stimulus the most potent in all lands, that of profit. Just give the most ordinary farmer an inkling of how he may make one acre produce as much as an acre and a half did before, and he will dive into the subject with an avidity quite surprising. Then there is the pleasure of intelligent cultivation, which is not inferior in its effect on the whole man, to the satisfaction of increased profits, while it is far purer and more elevating.—*Hall's Journal of Health*.

**BERRIES.**—The *Paeer Herald* says: Of all the wonders of this wondrous country, we know of nothing so remarkably wonderful as the feat of picking fresh ripe blackberries, grown on vines in the open air, at an altitude of about 3,000 feet above sea level, on Christmas day. Yet such was really done this last Christmas by Charles H. Hicks, from the vines in his garden, near Yankee Jims. As proof of the fact Mr. Hicks sent us by mail, in a small box, last Monday, two sections of the vine, on each of which there were about a dozen berries in all stages of maturity; the leaves also were fresh and green. Among the lot some eight or ten of the berries were fully matured. In size they were large, in appearance fine, and in flavor would compare favorably with average summer berries.

### Bee Pasture.

R. Wilkin writes to the *Ventura Signal*, as follows: The valley lands in California produce mustard and other bloom that yield an inferior honey compared with that from the mountains; besides, cultivating the soil lessens the amount of honey produced, for a field of corn, wheat or barley produces no honey. Southern California, especially San Diego, San Bernardino, Los Angeles, Ventura and Santa Barbara counties, is especially adapted to bee culture on account of the dryness of the climate and the great abundance of white and button sage, and various other blooms on the mountains that yield the whitest and best of honey. The alfalfa abounds most everywhere, and yields large quantities of dark, pleasant tasting honey in the fore part of the season, much of which is consumed by the bees in producing young bees. In fall, after the good honey is collected, bees continue to collect from vinegar plant and other sources a dark, peppery-tasting honey that is quite objectionable. But by a judicious use of the extractor the dark honey can all be removed from the combs of the hive just as they are ready to collect the better honey, and when they are done collecting the fine honey cease extracting and let the bees fill their hives with the inferior article for their own winter use; thus the different qualities of honey may be kept separated to suit customers. Bees may be kept profitably even in the valleys where the population is most abundant, and as the valleys settle up to the foothills it makes it less lonely in the mountain canyons and if many bees are kept in one place it brings more company to attend them. Also one may retire from his bees to his village home during one-half of the year, having them visited frequently.

### General News Items.

It is reported that parties are in Washington from California whose object it is to institute a movement for the annexation of Lower California to the United States.

THE severity of the financial crisis in Russia is shown by the fact that the municipality of Odessa, one of the richest in Russia, is unable to pay the salaries of its officials.

THE Assistant Treasurer of the United States at Philadelphia has filed an answer to the Centennial Board of Finance, claiming for the Government payment in full of \$1,500,000 before stockholders are reimbursed.

OUR merchandise exports last year aggregated \$31,056,200, and our treasure exports \$49,757,800, making a total of \$80,814,000, which is the largest since the opening of the port, and the amount of treasure shipped is the heaviest in ten years.

GREENBACKS are actually worth more than silver coin in San Francisco at the present time. Monday gold coin was sold as low as six and one-eighth per cent. premium for greenbacks. Only once before since 1862 has this low premium been reached, which was in November, 1873. This makes legal tenders worth nearly 94 cents, or about one per cent. more than half dollars in the market.

ALBERT ADMITTED.—We read in the proceedings of the American Short Horn convention, which was held in December in Kentucky, the following item: "A communication was read from Mr. Coleman Younger, of California, asking that a certain bull, 'Albert,' whose pedigree was technically defective, be admitted to record in the American Herd Book. Mr. Allen was in favor of recording the bull, so as to legitimize his posterity. Mr. Glick called for the printing of the pedigree in the minutes. After a little discussion, a motion to admit the bull 'Albert' to record was carried."

THE DEBRIS QUESTION IN COURT.—There is in progress this week, in the District Court at Sacramento, a trial in which James H. Keyes brings suit against several mining companies for injury done to his land by deposition of mining debris. As we go to press, testimony is being taken on the side of the plaintiff. We shall refer to the matter more fully next week.

OUR GAIN IN POPULATION.—The records of the overland railway and the various steamship lines show that during the year 1876 there came to California 86,433 persons, and departed hence 50,983. This gives us an increase of population during the year of 36,450 souls.

The People's and Grangers' Immigrant Bureau, 40 California St.

This institution, according to reports published in the daily papers, has provided situations free of charge for more than 6,000 applicants, and furnished 7,000 persons in search of lands for settlement with letters of introduction to prominent citizens in the interior. The services of the bureau are entirely free to all, as it is supported by subscription. It is just what we need in California, and should be supported. Orders for help will be filled free of charge to either employer or employee. Send them in. Hundreds of immigrants are waiting for them.

To have the money needlessly spent every year would give substantial comfort to all. To have the money saved by buying SILVER TIPPED boots and shoes would buy each parent every year a pair of new shoes. Also try Wire Quilted Socks.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Jan. 10, 1877.

The drouth and the talk about it continue. While the trade in all articles usually sent to the interior is dull and slow, the effect of the season upon produce is becoming apparent. Nearly all kinds of Grain and Ground Feeds have expected quite a noticeable advance during the week. Wheat has held its own in spite of a slight decline in the cable quotations. Sales have been made at full prices, and to-day private dispatches report an improvement in the Liverpool market, which will strengthen the hands of holders, which are already firm.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday	11s	—	@11s 3d	11s	2d@11s 8d	7d
Friday	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d
Saturday	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d
Monday	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d
Tuesday	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d
Wednesday	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875	9s 8d	@10s 1d	10s	2d@10s 8d	8d	8d
1876	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d
1877	10s 11d	@11s 2d	11s	2d@11s 7d	7d	7d

## The Foreign Review.

LONDON, January 8th.—The *Mark Lane Express* says that sudden variations of temperature and continued hard frosts are being reported in Scotland, and mild weather and persistent rains throughout the midland and southern counties of England. Agricultural affairs have necessarily been brought to a standstill, the saturated condition of the land being unfavorable to cereals. The stock of English Wheat on offer in London and country markets has been worse than at any other time since the harvest, owing to the impossibility of threshing, the supply being extremely scanty. The provincial trade, however, experienced another rise of a shilling per quarter, but some farmers are unwilling to sell even at this advance. The imports into London have been light, chiefly of East Indian descriptions, and the trade ruled very firm at last week's prices. During the past three months the value of Wheat has been steadily tending upward, and has now reached a point where a pause may be expected, as millers, as a rule, are stocked. The publication of stocks at our ports shows considerable diminution compared with the same period last year. As imports will apparently be very moderate for the next month or more, the depletion of granary stocks will probably continue. Business in feeding Corn has been restricted, although, as a rule, values are notably unchanged, with very limited arrivals at ports of call until the end of the week. Floating cargoes have steadily maintained late prices, except Maize, which has given away slightly.

## Freights and Charters.

The freight market has been quite demoralized. Charters have been made for Wheat to Liverpool at £2, and some ships lie idle because they cannot charter even at that low rate. The *Commercial News* says: The situation has not changed during the week. Freight rates remain dull and nominal at £2 direct for wooden and £2 2s 6d for iron ships. There can hardly be said to be any demand, and it is difficult for ships to secure business at any figure. At the close we have 26,876 tons engaged Wheat tonnage, 9,427 tons miscellaneous and 35,070 tons disengaged, with a large fleet overdue. The latest charters reported are: Br ship North Wales, 1,150 tons, Wheat to Cork, U. K., £2 5s 6d. Ship Elwell, 1,461 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d; Continent, £2 7s 6d. Ship P. N. Blackard, 1,582 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d; Continent, £2 7s 6d. Br ship Grisedale, 1,222 tons, Wheat to Liverpool, private.

## Chicago Grain Market.

CHICAGO, January 7th.—Trading in all branches has been more brisk during the past week on 'change, and prices for wheat have reached the highest figures for more than a year. Speculative influences have been the principal agents in the rise. European war rumors have contributed to the bullish feeling, and receipts of Wheat have been remarkably small, considering the high prices and diminished movement which has characterized the entire fall's business. Sales of cash Wheat have been \$1.24 1/2 @ \$1.26 1/2, closing at \$1.25 1/2 bid. Corn has sold steadily at about 44 cents, and Oats at about 34 1/2 cents. Rye is 72 cents, barley 65 cents.

Provisions have been strong and higher throughout, to-day's prices being the best for the week. Pork brings \$18 and Lard \$11.50. Packing has been carried on very actively, and the country's vast supply of provisions is pretty extensively called for. Receipts of Wheat for the week: 165,000; Corn, 515,000; Oats, 155,000 bushels, against Wheat, 679,000; Corn, 126,000; Oats, 95,000, for the same week last year. Shipments—Wheat, 81,000; Corn, 320,000; Oats, 89,000 bushels, against last year's shipments, Wheat, 86,000; Corn, 206,000; Oats, 59,000.

Freights East, beside being higher, are, what troubles shippers still more, firm at the published prices, so that few contracts for grain to the East are taken, as was the case in the summer, below the market rate.

## New York Grain Market.

NEW YORK, January 7th.—The Grain trade of the week has been very dull. Wheat advanced a little, but fell back again on weak cables, the English market being unfavorably affected by receipts from California. Prices remain substantially as a week ago, for all cereals. The acreage of winter Wheat is five per cent. larger than that of last year. Apprehensions are entertained of a light California crop, owing to dry weather.

## Eastern Wool Markets.

BOSTON, January 6th.—Wool firm. There is scarcely anything doing in fine fleeces. The only sales of the week comprised 15,000 pounds Ohio XX and above, at 45c. Stocks are held firm, with no pressure to buy or sell. Sales of Michigan, New York and Western, have been 159,000 pounds at 40¢ 1/2. There is a firm feeling for desirable lots of Western Fall. California Wool is dull at 15¢ 24¢, and can only be forced off at low prices. Anything desirable commands full prices. Spring, 20¢ 35¢.

PHILADELPHIA, January 9th.—Wool active and firm. The supply is ample for all present wants. Colorado washed, 15¢ 20¢; Lamb's unwashed, 17¢ 18¢; Extra and Merino pulled, 33¢ 37¢; No 1 and super pulled, 33¢ 36¢; Texas fine and medium, 20¢ 25¢; coarse, 16¢ 19¢; California fine and medium, 18¢ 22¢; coarse, 17¢ 20¢.

NEW YORK, Jan. 7th.—In the Wool market there have transpired no features worthy of record, the demand from manufacturers being on a very limited scale, and there is no disposition manifested to enter into speculation. In Fall California a slight weakness is exhibited, due to the comparatively large stocks not only in this city, but also in the markets of Boston and Philadelphia; but all other descriptions are firm, and no anxiety is manifested as to the future of the market. The stock of Domestic shows a supply of 6,804,000 lbs, of which 758,000 lbs is California Spring, Oregon, Utah and Nevada, 973,000 lbs is California Fall, 30,000 lbs do pulled Texas and Georgia. The sales for the week are—25 bales free Fall California at 20¢; 20-

000 lbs slightly burry do, 15¢; 10,000 lbs Spring, 31¢; 5,000 lbs Western Texas, 25¢; 25,000 lbs No. 1 and above Ohio, 42¢ 1/2; 20,000 lbs unmerchantable do, 35¢; 10,000 lbs X and above Michigan, 39¢; 5,000 lbs medium unwashed Western, 30¢; and 505 lbs Utah, 25,000 lbs Western Texas, 1,000 lbs scoured do, 20,000 lbs Domestic Noils, 5,000 lbs washed Ohio combing, sud 2,000 lbs fine and medium State, on private terms.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Dec. 20.	WEEK Dec. 27.	WEEK Jan. 3.	WEEK Jan. 10.
Flour, quarter sacks.	73,080	23,508	27,612	56,257
Wheat, centals.	339,886	157,148	104,432	273,023
Barley, centals.	25,206	32,661	22,220	6,788
Beans, sacks.	4,002	3,449	1,383	1,084
Corn, centals.	7,895	5,533	5,072	4,936
Oats, centals.	9,960	3,738	3,119	3,687
Potatoes, sacks.	23,392	19,210	13,529	14,349
Onions, sacks.	1,252	1,743	1,200	802
Wool, bales.	342	107	98	124
Hops, bales.	420	65	46	32
Hay, bales.	1,621	970	1,195	724

**Bags**—There has come a further knock-down in Grain Bags. We quote jobbing rates for standard Wheat Bags at 8 1/2¢; and wholesale rates for cash may be lower. One of the features of the trade is the amount of Bags which may be thrown upon the market, owing to the embarrassments of dealers. The *Chronicle* notes one case of this kind as follows: "We regret to note the suspension of E. Detrick & Co., of Clay street, an old established firm in the Bag business. A meeting of creditors was appointed. The amount of liabilities is not stated, but it is understood that they are serious and will chiefly fall upon San Francisco, with a portion in New York. The embarrassments have originated through the decline in Bags and the difficulty of realizing or of obtaining accommodation."

An advance is noticeable in Wool Sacks. The stock of English Wool Sacks is small and local manufacturers have advanced their prices. Prices are now 50¢ 55¢, according to size.

**Barley**—The advance in Barley is considerable and holders are slow to sell even at the advance. We note sales during the week as follows: 1,000 sks Coast Feed, \$1.28; 4,000 do choice do, \$1.35; 1,000 do Brewing \$1.40—all gold; 400 sks fair Coast Feed, \$1.30, silver; 500 do good do, \$1.25, gold; 2,000 do Coast Chevalier, \$1.25, half silver; 800 do good Coast, \$1.25, gold; 500 do good Brewing, \$1.30, gold; 2,000 sks Coast Feed, \$1.27 1/2, silver; 1,000 sks do, \$1.25, silver; 400 sks Coast Chevalier, \$1.20, silver; 3,000 sks choice Feed, \$1.35, and 8,000 (a resale) to be delivered at Sacramento, at equal to \$1.35 here; 1,800 sks Coast Feed, \$1.30; 4,000 sks choice Feed, \$1.35, and \$1,000 sks choice Bay Brewing, \$1.40.

**Beans**—A slight advance in Bayo Beans is the only change which is made in our table of prices below.

**Corn**—Corn makes a step in advance and the market is firm. We note sales as follows: 500 sks large Yellow, \$1.25; 700 do do, \$1.30; 300 do small do \$1.35 per cwt, all silver; 700 sks small Yellow, \$1.30; 300 do, \$1.30; a small lot of small Yellow brought \$1.42 1/2, half silver.

**Dairy Produce**—There is yet no improvement in the price of Butter and the receipts are still very large. The top price is 32¢, with an occasional box of fancy brand at 35¢. This price it seems to us cannot rule long under present conditions. Cheese is unchanged.

**Eggs**—Eggs are weak at a reduction. The price is now quotable at 35¢ for fresh.

**Feed**—Ground Feeds are all advanced in price, as may be seen in our tables below. Sales of Hay have tended toward the higher figures. We note a few sales as follows: 47 tons choice Wheat at \$17; 37 tons good Wheat and Wild Oat, \$16.50; 40 do do, \$17. A small lot of Alfalfa brought \$14.50 @ 15.

**Fruit**—The Fruit market this week is without change. The display is scant.

**Hops**—We have sales of fine Hops reported at 19¢ 21¢, but the chief supplies are held at 22¢ 25¢. The receipts of Hops in this city during the last year were 14,579 bales; in 1875, 7,569 bales; an increase this year of 7,010 bales—Emmet Wells reviews the New York market for the week ending December 29th, as follows:

A good business has been doing for a holiday week. Prices remain about the same as last quoted, excepting on choice grades, 25¢ now being the extreme cash figure paid for anything in market. Shipping qualities continue quite scarce, yet buyers show no willingness to bid up in price, saying they can get all the choice Hops they want, back in the interior, by simply sending their orders for them, and at lower prices than asked here. The stock back in the country is unquestionably larger to-day than it has been, for the corresponding season, for many years past, and, without renewed orders from Germany, we think there is a poor show for getting rid of our surplus. England will continue to take a few of our choice Hops at present prices; but she will not order as freely from us as last year, while our price continues 10¢ 11¢ higher than then. It is reported that large quantities of American Hops are still being sent over to the London market from Germany, the German dealers finding little or no demand for them among their own brewers. It would be interesting to know the cause of the prejudice against the use of our Hops in Germany. We have never yet heard it explained. Quotations: New Yorks, good to choice, 20¢ 25¢; New Yorks, low to fair, 13¢ 18¢; Eastern, 18¢ 23¢; Wisconsin, 12¢ 17¢; Yearlings, 10¢ 15¢; Olds, all growths, 4¢ 8¢; Californians, 23¢ 25¢; Oregon, 23¢ 25¢.

**Oats**—Oats have experienced a sharp advance during the week. Rates are now quoted as high as \$2.45 per cwt for the best. We note sales as follows: 80 sks good, \$2.05; 75 do choice, \$2.27 1/2; 100 sks choice Coast Feed, \$2, silver; 150 sks heavy Milling, \$2.27 1/2, gold; 580 sks at \$2, gold; 350 choice Bay Feed at \$2.12 1/2, gold; 400 sks at \$2.10, gold.

**Onions**—Onions have undergone considerable fluctuation during the week and rule to-day below last week's prices; \$1 per cwt is the ruling price to-day for the best. The market is full of low grade stock, which is offered at very low figures.

**Potatoes**—Potatoes have improved. The best are now bringing \$1.00 @ 1.05, but many poor lots are in hand. The sales are chiefly of Petaluma, Humboldt and Cuffey Cove. River receipts have lessened and Half Moon Bay is mostly out for the season.

**Poultry and Game**—There are a few changes noted in our price list below. The tendency is toward improvement. Ducks have advanced; the supply of game Ducks and Quail is ample.

**Provisions**—The market for Fresh and Cured Meats

is quiet and without change. Transactions are light.

**Rye**—Sales of 200 sks choice at \$1.82 1/2.

**Vegetables**—Some Green Peas are still received.

We hear of sales at 8¢. Marrowfat Squash has fluctuated considerably, and closes at \$15 @ 20 per ton—an advance.

**Wheat**—Holders are firm. Transactions have been within rates formerly quoted. We note sales as follows: 1,800 cts choice Milling, \$2.20; 1,000 cts do, delivered at Vallejo, \$2.17 1/2; 500 sks choice, \$2.25; 940 sks choice Milling, \$2.25; 200 do fair do, \$2.10; 150 do do, \$2.15; 1,500 do Superfine and fair Milling, \$1.85 @ 2.10; 3,500 sks choice Milling, \$2.25; 10,000 cts choice Milling, \$2.20 per cwt; also 900 sks do do, from Livermore, \$2.20; 10,000 sks choice Milling, \$2.20; 200 do choice Sonora, for Cracked Wheat, \$2.27 1/2; 600 sks choice Milling, \$2.25; 800 do good Sonora, \$2.20 per cwt.

**Wool**—The trade in Wool is small and of little moment. We note sales of 20,000 bales fall at 17¢.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY, M., Jan. 10, 1877.

**BEANS.**  
Bayo, cts. 2.75 @ 3.00  
Butter, 1.50 @ 1.75  
Peas, 1.80 @ 2.00  
Peanuts, 8 @ 9  
Flour, 15 @ 16

**BROOM CORN.**  
Common, lb. 2 @ 2 1/2  
Choice, 3 @ 4

**COTTON.**  
Cotton, lb. 15 @ 18  
Sm'l White, 1.80 @ 2.00  
Lima, 2.75 @ 2.87 1/2

**DAIRY PRODUCE, ETC.**  
Butter, 30 @ 32 1/2  
Point Reyes, 32 1/2 @ 35  
Pickled Roll, 27 1/2 @ 30  
Pinkin, 25 @ 30  
Western Reserve, 16 @ 25  
New York, — @ —

**CHEESE.**  
Cheese, Cal. lb. 10 @ 15  
Old, — @ —  
Eastern, 12 1/2 @ 15  
N. Y. State, 19 @ 20

**CAL. FRESH DOZ.**  
Ducks, 40 @ —  
Oregon, 30 @ —  
Eastern, — @ —

**FEED.**  
Braun, ton 50 @ —  
Corn Meal, 30 @ 31 1/2  
Hay, — @ 12 1/2 @ 18 1/2  
Middlings, 32 1/2 @ —  
Oil Cake Meal, 37 1/2 @ —  
Straw, hale, 70 @ 75

**FLOUR.**  
Extra, hbl. 6.50 @ 7.25  
Superfine, 7.25 @ 8.00  
Graham, 5.50 @ 6.00

**FRESH MEAT.**  
Beef, 1st quality, 41 @ 61  
Second, 34 @ 44  
Third, 3 @ 34  
Mutton, 4 @ 44  
Pork, undressed, 8 @ 61  
Dressed, 6 @ 61  
Veal, 54 @ 61  
Milk Calves, 7 @ 81

**GRAIN, ETC.**  
Barley, feed, cts. 1.25 @ 1.40  
Brewing, 1.35 @ 1.45  
Chevalier, 1.25 @ 1.45  
Corn, White, 1.25 @ 1.30  
Yellow, 1.25 @ 1.30  
Oats, 20 @ 22 1/2  
Milling, 24 1/2 @ —  
Rye, 1.80 @ 1.90  
Wheat, shipping, 2.10 @ 2.25  
Milling, 2.20 @ 2.25

**HIDES.**  
Hides, dry, 20 @ 21  
Wet salted, 7 @ 8 1/2

**HONEY, ETC.**  
Beeswax, lb. 25 @ 27 1/2  
Honey in comb, 10 @ 12 1/2  
Strained, 6 @ 8

**HOPS.**  
New Crop, 20 @ 25  
Almonds, hbl 7 @ —  
Soft sh'l, 15 @ 17  
Brazil, 14 @ 16  
Cal. Walnuts, 8 @ 10

**NETS, JOBBING.**  
Almonds, hbl 7 @ —  
Soft sh'l, 15 @ 17  
Brazil, 14 @ 16  
Cal. Walnuts, 8 @ 10

**SEEDS.**  
Alfalfa, Chile, lb. 8 @ 13  
California, 16 @ 18  
Canary, 10 @ 12 1/2  
Clover, Red, 22 @ —  
White, 50 @ 55  
Cotton, 5 @ 6  
Flaxseed, 3 1/2 @ 4  
Hemp, 5 @ 7  
Italian Rye Grass, 25 @ 30  
Perennial, 20 @ 30  
Millet, 10 @ 12  
Mustard, White, 10 @ —  
Brown, 3 1/2 @ 4  
Rape, 3 @ 4  
Rye, Blue Grass, 30 @ —  
Sweet V. Grass, 75 @ —  
Orchard, 30 @ 35  
Red Top, 25 @ —  
Hungarian, 50 @ 12  
Mazquita, 20 @ 25  
Timothy, 10 @ 10 1/2

**TALLOW.**  
Crude, lb. 6 1/2 @ 6 3/4  
Refined, 8 @ 8 1/2

**WOOL, ETC.**  
Free, 12 @ 14  
Choice, 14 @ 16  
Northern, 17 @ 21  
Burry, 10 @ 16  
Oregon, Eastern, 20 @ —  
Valley, 25 @ —

## FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY, M., Jan. 10, 1877.

**FRUIT MARKET.**  
Oranges, Mex. 30 @ 35 1/2  
Tahiti, — @ —  
Cal., 10 @ 25 1/2  
Limes, 4 @ 8 @ 10  
Lemons, Cal., 10 @ 15 1/2  
Sicily, 9 @ 10  
Bananas, hbl, 00 @ 3 50  
Coconuts, 100, 5 @ 6 00  
Pineapples, doz 6 @ 8 00  
Apples, bx., 4 @ 1 25  
Crab, lb., 2 @ 3  
Figs, lb., 4 @ 5  
Pomegranates, 10 @ 15 1/2  
Cranberries, hbl 10 @ 15 1/2  
Pears, bx., 1 @ 2 50

**VEGETABLES.**  
Pitted, 12 @ 14  
Raisins, Cal. hbl 15 @ 2 50  
Malaga, 3 @ 4 @ 6  
Figs, Black, lb. 4 @ 6  
White, 10 @ —  
Prunes, 12 1/2 @ 17  
Citron, 28 @ 30  
Zante Currants, 8 @ 10

**ASPARAGUS.**  
Asparagus, lb., — @ —  
Beets, cts., 60 @ —  
Cabbage, 100 lbs 50 @ 60  
Carrots, 37 1/2 @ 40  
Celery, doz 1 00 @ —  
Cauliflower, 75 @ —  
Garlic, lb., 2 @ 2 1/2  
Squash, Marrow, — @ —  
fat, tn., 15 @ 20 00

**ARTICHOKES.**  
Artichokes, doz. — @ —  
Parsnips, doz. 1 @ 1 1/2  
Lettuce, doz. 10 @ —  
Turnips, cts. 60 @ 75  
Mushrooms, — @ —

## RETAIL GROCERIES, ETC.

WEDNESDAY, M., Jan. 10, 1877.

**Batter, California**  
Choice, lb. 40 @ 50  
Cheese, 18 @ 30  
Eastern, 25 @ 30  
Lard, Cal., 18 @ —  
Eastern, 20 @ 25  
Flour, ex. fam. hbl 7 @ 8 00  
Corn Meal, lb. 2 @ 3  
Sugar, wh. crshd 12 1/2 @ 13 1/2  
Light Brown, 8 @ 9 1/2  
Coffee, Green, 23 @ 35  
Tea, Fine Black, 50 @ 61  
Finest Japan, 55 @ 61  
Candles, Adm'te, 15 @ 25  
Soap, Cal., 7 @ 10  
Rice, 7 @ 10  
Yeast Pwdr. doz., 1 50 @ 2 00

**Bowen Bro. large**  
can, doz., 5 00 @ —  
Small, 2 50 @ —  
Bowen's Cream  
Tartar, lb. 75 @ —  
Can'd Oysters doz 00 @ 3 50  
Syrup, S. F. Gold'n 75 @ 1 00  
Dried Apples, lb. 12 @ 12  
Gr. Prunes, 12 1/2 @ 14  
Figs, Cal., 9 @ 10  
Peaches, 11 @ 15 1/2  
Oils, Kerosene, 40 @ 50  
Wines, Old Port, 3 50 @ 4 50  
French Claret, 1 00 @ 2 50  
Cal. do hot, 3 00 @ 4 50  
Whisky, O. K., 3 50 @ 4 00  
French Brandy, 4 00 @ 4 50

**LEGAL TENDERS IN S. F., 11 A. M., 94 @ 94 1/2. SILVER, 61 @ 63.**  
Gold in New York, 106 1/2.  
Gold Bars, 880 @ 890. SILVER Bars, 7 @ 10 1/2 cent. discount.

EXCHANGE ON NEW YORK, 50¢ 55¢ 100¢ cent. premium for gold; on London bankers, 49¢; Commercial, 49¢; Paris, five francs \$1 dollar; Mexican dollars, 93.  
LONDON Consols, 96 1/2; Bonds, 102 1/2.  
QUICKSILVER IN S. F., by the task, \$1 lb. 50¢.

**Gold, Legal Tenders, Exchange, Etc.**  
[Corrected Weekly by SUTRO & Co.]  
SAN FRANCISCO, JAN. 10, 3 P. M.

**LEGAL TENDERS IN S. F., 11 A. M., 94 @ 94 1/2. SILVER, 61 @ 63.**  
Gold in New York, 106 1/2.  
Gold Bars, 880 @ 890. SILVER Bars, 7 @ 10 1/2 cent. discount.

EXCHANGE ON NEW YORK, 50¢ 55¢ 100¢ cent. premium for gold; on London bankers, 49¢; Commercial, 49¢; Paris, five francs \$1 dollar; Mexican dollars, 93.  
LONDON Consols, 96 1/2; Bonds, 102 1/2.  
QUICKSILVER IN S. F., by the task, \$1 lb. 50¢.

## GENERAL MERCHANDISE.

(WHOLESALE.)

WEDNESDAY, M., Jan. 10, 1877.

**BAGS—Jobbing.**  
Eng Standard Wheat, 83 @ 9  
Neville & Co's  
Hand Sewed, 22x36, 83 @ 9  
24x36, 92 @ 10  
25x40, 10 @ 10 1/2  
Machine Swd, 22x36, 9 @ 10  
Flour Sacks, halves, 9 @ 11  
Quarters, 6 @ 7  
Eighths, 4 1/2 @ 5  
Hessian, 60 inch, 11 @ 12  
45 inch, 8 1/2 @ 9  
40 inch, 7 1/2 @ 8  
Wool Sacks, 3 1/2 lb., 50 @ —  
4 lb., 55 @ —  
Standard Gunnies, 11 1/2 @ 12  
Bean Bags, 7 @ 8

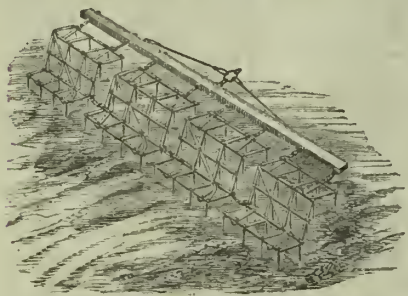
**CANNED GOODS.**  
Assorted Pie Fruits, 2 1/2 lb cans, 2 75 @ 3 00  
Table do, 3 75 @ 4 25  
Jams and Jellies, 4 25 @ —  
Pickles, hfl gal., 3 50 @ —  
Sardines, q box, 1 65 @ 1 90  
Hf Cans, 3 00 @ —

**COAL—Jobbing.**  
Australian, ton, 8 00



## Agricultural Articles.

## IRON SECTIONAL HARROW.



This Harrow was Awarded the First Premium at the California State Fair in 1875.

The undersigned, having purchased the patent right of this Harrow for California, are now manufacturing them in Roseville, Placer County, and would call the attention of Farmers to the superior merits of this Harrow over all others now in use.

As its name indicates, it is made in sections of about three feet in width, each section having four bars, in which the teeth are inserted, and by connecting the sections with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do all kinds of work, he should purchase six sections, which would be suitable for four horses; and would cut 18 feet in width; by disconnecting two sections he will have a two or three-horse Harrow, cutting about 13 feet. One section alone is complete in itself, and suitable for garden work, with one horse. The Harrows are made of the best quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superiority for these Harrows over all others in use on this Coast:

First—By the lightness of the draft, taking into consideration the amount of work it does.

Second—By working uneven or rolling ground just as well and as evenly as if it was entirely level.

Third—They are made of iron and steel, and therefore are not affected at all by sun or rain, or by heat and cold; they are always tight, and ready for use; they are also durable. A farmer purchasing one has a Harrow that will last a life time.

Fourth—The teeth being fastened with a nut and screw into the cross bars, should one break, another can be inserted in a moment. We are making three sizes, all being the same in width, but different in depth and weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

**BREWSTER & CO.,**

Roseville, Placer County.

Will be promptly attended to, and satisfaction guaranteed in all cases.

## CAUTION.

It has come to our notice that certain parties are now making this Harrow in this State, and that several of them have been sent here from the East. Now this is to caution all persons against making, selling or buying them, so made and offered for sale, as we shall enforce our rights in relation to the matter, and would call the attention of all persons infringing upon our patent, to the law in regard to it.

**BREWSTER & CO.**

Roseville, July 15th, 1876.

**MATTESON & WILLIAMSON'S**



Took the Premium over all at the great plowing Match in Stockton, in 1870.

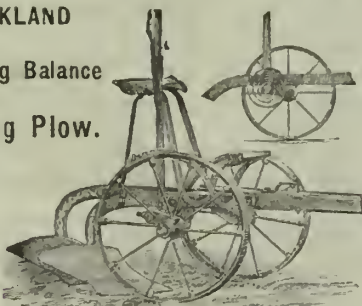
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over eradic knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
Stockton, Cal.

## OAKLAND

Spring Balance

Gang Plow.



Patented and manufactured by H. N. Dalton, at the Pacific Agricultural Implement Works, Pacheco, Cal. Established in 1858. Send for Circular and Price List.

H. K. CUMMINGS,  
1858.

H. H. RAISTON,  
1876

**HENRY K. CUMMINGS & CO.,**

WHOLESALE FRUIT AND PRODUCE COMMISSION HOUSE.  
ESTABLISHED 1858.

No. 424 Battery Street, southeast corner of Washington San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm Pumping, Railroad and Power

## WINDMILLS,

Pumps & Fixtures,



Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT)

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies.

LIVERMORE, ALAMEDA COUNTY, CAL.

## Nurserymen.

RARE AND VALUABLE

## PLANTS AND TREES.

STRAWBERRIES—Ever-bearing French Bush Straw berries, with and without runners; the best of all in flavor and taste. Plants without runners make fine borders. Prices: With runners, 1,000 plants, \$10; 100, \$1.50; 12, 25c. Without runners, 1,000 plants, \$20; 100, \$3; 12, 50c.

TREES—The real Paulownia Imperialis, 50c. Two dollars each for trees from two to nine feet high. Walnuts, paper shell, the best of all, one year old, 50c. each. Walnuts bearing three years from the seed. Four kinds of the finest French Chestnuts, just received from France, one and two years old, 50c. and 75c. Twelve thousand Plants and Trees just received from France, including many new varieties.

For sale by

J. GRELOCK, Los Angeles.

P. O. Box 233.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, ALMOND, QUINCE, OLIVE, FIG, GRAPEVINES, AND SMALL FRUITS.

EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER, ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

## FRUIT, EVERGREEN, NEW AND RARE TREES.

BRIGGS' RED MAY PEACH.

THE EARLIEST PEACH IN THE WORLD

CALIFORNIA FAN PALM,

(Prichardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

200,000

Australian Gum Trees For Sale,

AT

STRATTON'S GUM TREE FOREST NURSERY,

HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 200 in each box, in splendid condition for transplanting to their permanent location. Price, \$8 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,  
East Oakland, Alameda County, Cal.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES,

EVERGREENS.

SHRUBS AND GREENHOUSE PLANTS,

Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons, And Other Tropical Fruits.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and the public on the

Most Reasonable Terms.



SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON,

Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,

Orange, Lemon, Lime and Palm Trees,

Pot Plants, and Hardy Evergreen Shrubbery.

## PETALUMA NURSERY.

Established - - - - - 1860.

We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Ficus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.

## PEPPER'S NURSERIES

ESTABLISHED IN 1853.

The largest and most complete stock of Fruit Trees north of San Francisco Bay, also, a general assortment of Shade Trees, Evergreen Trees and Shrubs, Green House Plants, etc.

Encyclopaedia in variety. Prices low. Catalogues and list of prices furnished on application. Address, W. H. PEPPER, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb Catalogue GRATIS. Address, F. K. PHENIX, Bloomington Nursery, Ill.

SPANISH CHUFA

Address

SEED FOR SALE.

L. L. BEQUETTE,  
Downey City, Los Angeles County, Cal.

BLOOMINGTON NURSERY, F. K. PHENIX, Bloomington, Ill. Price list free. Four Catalogues, 25c.



My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refund the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. New Vegetables a specialty.

JAMES J. H. GREGORY,

Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIAN ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED, together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

ALEX. BUSWELL,

BOOK BINDER, PAPER RULER

AND BLANK BOOK MANUFACTURER,

521 Clay Street, S. F.

Blank Books Ruled, Printed, and Bound to Order.

DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a Produce

REFERENCE: Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

50 Visiting Cards, with your name finely printed, sent for 25c. We have 100 styles. Agents Wanted. 9 samples sent for stamp. A. H. Fuller & Co., Brockton, Mass.

The Leading Optical Depot of the Pacific Coast.

C. MULLER,

Wholesale and Retail Optician,



IMPORTER OF OPTICAL GOODS,

No. 135 Montgomery Street, near Bush,

SAN FRANCISCO.

Sportsmen, Tourists and Pleasure Seekers are invited to examine our celebrated Tourists' Glasses, which, for power and durability, are unequalled.

SPECTACLES—Their adaptation to the various conditions of sight has been my specialty for upwards of 30 years. Send for Muller's Pebble Spectacles. Directions and Price List Mailed Free. Orders by mail receive prompt attention. Goods forwarded per Wells, Fargo & Co., C. O. D. (subject to approval). Those contemplating making Holiday Presents, take notice.

C. MULLER, Optician,

135 Montgomery Street, San Francisco.

## Practical

## BOOKS

—AT—

## BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, suitable for

CIVIL ENGINEERS,

FARMERS,

MACHINISTS.

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

## LEVI STRAUSS &amp; CO.,

Patent Riveted

Clothing,

14 & 16 Battery St.,

San Francisco.



These goods are especially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873. USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## CAUTION.

To Farmers and all others who put Barbs upon Wire Fences, Making a Barbed Wire Fence, and to all Manufacturers and Dealers in Fence Barbs and Barbed Fence Wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent, Nos. 46,182, 67,117, 74,379, 84,002, 153,005, 157,124, 157,508, 164,181, 173,607; reissues, Nos. 7,136, 6,976, 6,902, 7,035, 7,095, 6,918, 6,914, and other patents. Copies of our claims can be obtained of our attorneys, Coburn and Thacher, Chicago, Ill., or of our counsel, Thos. H. Dodge, Worcester, Mass.

WASHBURN & MOEN MANUFACTG CO.,

Worcester, Mass.

I. L. ELLWOOD & CO.,

De Kalb, Ill.,

Sole owners and manufacturers, to whom orders for Barb Fence or for Loose Barbs should be addressed.

## WANTED AND FOR SALE.

I HAVE AT THE

Bull's Head Live & Let Live Stock Yards,

Cor. 9th, 10th and Howard Streets,

SAN FRANCISCO.

Two Thoroughbred Short-Horn Bulls, imported from Kentucky, and two years old; RED, and fine pedigrees. As I have quit importing I will sell one of the above at \$550 (has cost me over \$900) and take it in fresh Milch Cows or good hay, at the market price. A good chance to get a fine bull cheap.

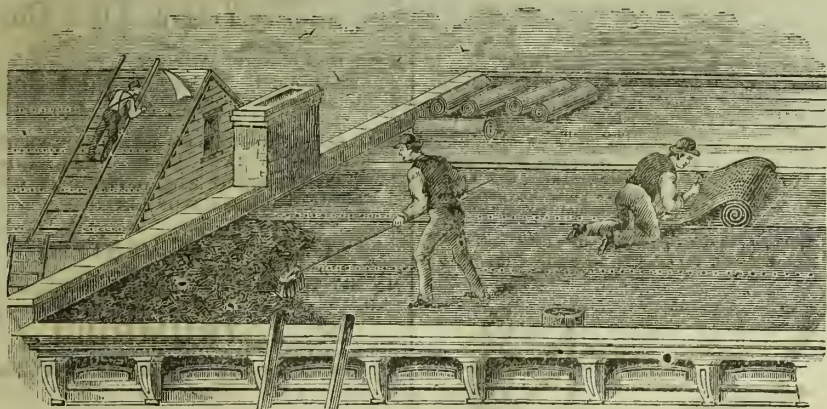
ROLLIN P. SAXE, Proprietor,

Bull's Head Live and Let Live Stock Yards



H. W. JOHNS' PATENT

**ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS,  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS**



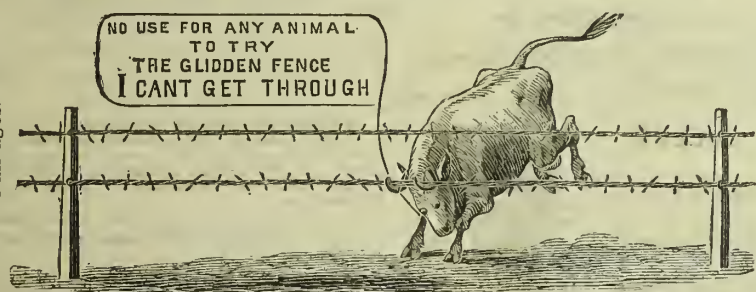
FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson &amp; Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNANIMOUSLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

In consequence of spurious imitations of

**LEA AND PERRINS' SAUCE,**

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

**HEALD'S**

**BUSINESS COLLEGE**  
No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.** Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.** In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

Dewey &amp; Co. { 224 Sanson St. } Patent Agt's.

**The Patron's Almanac for 1877.**

Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,  
Mechanicsville, Bucks Co., Pa.

**TULE LANDS.**

FOR SALE OR TO LEASE. ABUNDANCE OF PASTURE ON THEM. Address,

MERCER & McAFEE,  
426 Montgomery St., San Francisco.

**GRANGERS' BUSINESS ASSOCIATION**

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMON ADAMS, (SECRETARY).  
THOS. UPTON.  
I. C. STEELE.  
O. HUBBELL.

THOS. FLINT.  
G. P. KELLOGG.  
W. L. OVERHISER.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

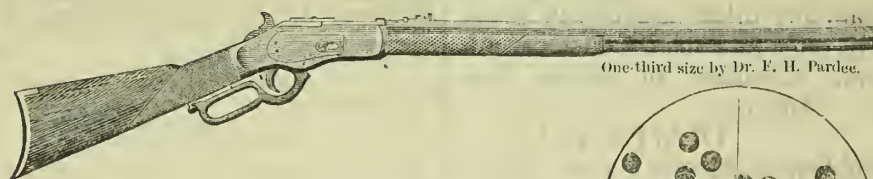
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

**Winchester Repeating Rifle.**

MODEL 1873.



One-third size by Dr. F. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch blued. Octagon barrel, plain, 24 inch blued. Octagon barrel, set, 24, 26, 28, 30 inch blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch blued. Octagon barrel, set, 24, 26, 28, 30 extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch beautifully finished C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 108 Battery Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

**PACIFIC OIL AND LEAD WORKS,**

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE &amp; CO., Agents.



INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 &amp; 826 Kearny Street, - San Francisco.

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

**SMITH & WESSON'S**

New Model. 38 Calibre. Central Fire. With Automatic Cartridge Ejector



NOW READY.  
For convenience, power and accuracy, it is unequalled. If your merchant does not keep them, order direct from the Agency, 79 Chambers St. New York, M. W. Robinson, Gen'l Agent.

**CALVERT'S CARBOLIC SHEEP WASH,**

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for California and Nevada.



## Mining and Scientific Press Patent Agency.

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. Circulars of advice, free.

Address,

DEWEY & CO.,  
Publishers MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, 224 Sansome Street, S. F.  
A. T. DEWEY, GEO. H. STRONG,  
W. B. EWER, JNO. L. BOONE.

### "Faith and Confidence."

Messrs. Dewey & Co., Patent Solicitors: *Gentlemen*—Yours of the 25th ult., containing my patent to Elevated R. R. duly received, and I hereby return my sincere thanks to the MINING AND SCIENTIFIC PRESS Patent Agency for your promptness and honesty in regard to our business connections. I have received a flood of circulars from Eastern firms, desiring to deal with me, but I have declined any communication with them and prefer as soon as circumstances will permit, to negotiate with and patronize a home institution; one in which I have faith and confidence.—Dewey & Co.

Again thanking you for your promptness in securing my patent, I remain, obediently yours,  
WM. H. HARRISON.

HAMILTON, NEV., May 25th, 1876.

To Messrs. Dewey & Co., Patent Agents:  
GENTLEMEN:—I write to acknowledge the receipt by express of the U. S. letters patent, on my invention for breech loading ordnance, and to tender you again my very sincere thanks for the careful attention you have bestowed upon my application since I first placed it in your hands, for the evident great interest you have manifested in it, and for the uniform patient and cheerful courtesy which has constantly marked your correspondence in reference to it. I have had some dealings with other agencies in the same line in times past, and I can assure you that my correspondence with yours has been more pleasant and satisfactory than with any others, and I shall always take great pleasure in recommending your agency to any and all my acquaintances without hesitation or reservation, as I should certainly prefer to entrust my own business in your hands should I have any to transact in the same line hereafter. Yours, etc.  
J. R. N. OWEN.

### A COMPLIMENT.

PLAINSBORO, MERCED CO., CAL., June 22d, 1874.  
DEWEY & CO., *Gentlemen*: I herewith tender my grateful acknowledgments for the energy, promptness and efficiency which you have displayed in procuring my patent.

Although you were entire strangers to me when I first communicated with you, I soon felt satisfied you were gentlemen of integrity, and shall always be happy to represent you as such. Very truly yours,  
H. W. RUCKER, M. D.

### Much Obligated, Etc.

PORTLAND, OREGON, June 25th, 1876.  
DEWEY & CO., Patent Solicitors, S. F.—*Gentlemen*: I am much obliged to you for courtesy shown me, and am well pleased with the manner in which you have done my business, and assure you, will cheerfully recommend you to my acquaintances needing such services. Hope to have a case again before long, of my own. I have been an inventor all my life, but let others reap the benefit, or had work stolen from me. Please have the extra copies of my patent, etc., mailed to me direct, and oblige. Yours truly,  
J. H. WOODRUM.

WOODLAND, CAL., Aug. 5th, 1876.  
MESSRS. DEWEY & CO., *Gentlemen*: Your letter containing the patent for my Centennial churn has come duly to hand, and you will please accept my many thanks for the prompt manner in which you attended to the business intrusted to your care, and I will take great pleasure in recommending you to any one having anything to attend to in your line. I am having a number of the churns put up, which will be ready for sale in a few weeks.  
Yours truly,  
JAMES ROOT.

SANTA CLARA, CAL., April 6th, 1875.  
MESSRS. DEWEY & CO.—*Gentlemen*: We have just received Patent No. 160,535, for J. T. Watkins & Co.'s Mammoth Road Grader, which was patented through your Agency. It is the nearest and best that we have ever received. We feel proud of it and thankful to you for the care and attention that you have given it, and when we have anything to do in that line of business, we will surely give you a call. Very respectfully,  
J. T. WATKINS & CO.

BETTER RETURNS, ETC.—One of the largest business firms in Sacramento writes us, October 30th, 1875, remitting the cash for advertising, and a new order with the following remarks: We are more than gratified with the result of our advertising in the PRESS. It has brought us better returns than any paper we have ever patronized.  
Yours truly,  
J. G. & Co.

PASO ROBLES, CAL., October 18th, 1875.  
DEWEY & CO.—*Gentlemen*: The letters patent for the Tire Upsetter have come to hand. For the prompt manner with which you have brought the matter to a successful issue, please accept my thanks. Yours respectfully,  
JOHN H. MERTZ.



### Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious, able, and well conducted journal.  
Because it is the largest and best agricultural weekly west of the Rocky Mountains.  
That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.  
That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.  
That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.  
That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.  
That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.  
Subscription, \$4 a year in advance.

DEWEY & CO., Publishers.

San Francisco, 1877.

### Our Poultry Department.

E. H. Cheney writes from Bodega, Sonoma county, as follows: "Your paper is worth its subscription price yearly to any farmer who keeps two dozen chickens, to get Mr. Eyre's opinion upon the value of the different breeds of fowls, the proper treatment for them, the diseases to which they are liable and the remedies. I became acquainted with Mr. Eyre through your columns, and I have no cause to regret it, for in my dealings with him I find everything as represented, and without any disparagement for others, I can recommend him as one in whom confidence will not be misplaced."

HARD ON THE PUBLISHERS.—Some of our subscribers when called upon by our agents insist that they have sent us notices through (perhaps) a neighbor, the postmaster, or a letter, and we have taken no notice of their orders, for which they feel hard towards us. Now, we never received such notices without responding to them. It would be suicidal to our interests to ignore them. The fact is that it too frequently happens that people misdirect their letters; too frequently forget to put the right (or any other) kind of stamps on their letters; they too often send a copy of the paper back, which may never reach our business office, or if it does reach us, may lack the name of the town and county in which the subscriber lives, in which case we cannot (if we have his name) tell what part of our list to find it, to cross it off or change it, without looking over some 10,000 names. Postmasters and their clerks make omissions and mistakes as well. When you have business with this office remember postal cards and letter stamps are cheap, and ask no one to do that which you can well do yourself.

PACIFIC RURAL PRESS.—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the Grangers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribe at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid.—Mountain Messenger, Dec. 16th.

Any person receiving this paper after giving an order to stop it, may know that such order has failed to reach us, or that the paper is continued inadvertently, and they are earnestly requested to send written notice direct to us. We aim to stop the paper promptly when it is ordered discontinued.

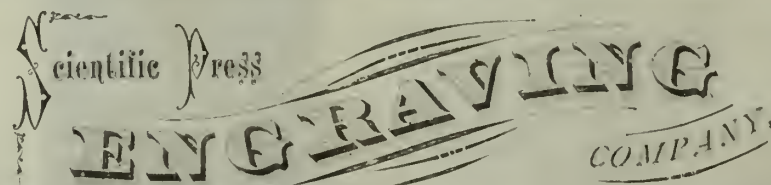
SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription.

SUTTER CREEK, February 26th, 1875.  
MESSRS. DEWEY & CO.—I have received my Letters Patent through your agency. And, for your promptness, accept my thanks. Yours,  
S. N. KNIGHT.

BOUND VOLUMES of the Pacific Rural Press, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lumbago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, S. F.



OFFICE OF THE  
Mining and Scientific Press, } 224 Sansome St., } San Francisco,  
CAL.  
MACHINERY, BUILDINGS, PORTRAITS, LANDSCAPES, TRADE-MARKS, LABELS, SEALS, MONOGRAMS, etc.  
DESIGNED AND ENGRAVED  
IN THE HIGHEST STYLE OF THE ART.  
E. SCHULTZE,  
MANAGER.  
DEWEY & CO.,  
Publishers and Patent Agents.

## A Book For All That Have a Garden.

FRAGRANT CULTURE,  
OR THE  
CULTURE of the STRAWBERRY,  
A Practical Treatise on the  
Culture, Propagation, Management and  
Marketing of Strawberries.

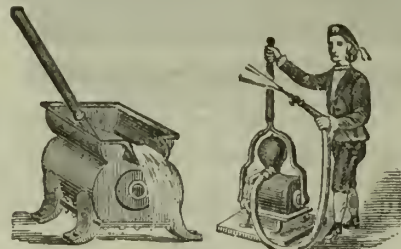
ILLUSTRATED with PHOTOGRAPHS representing the average size of best varieties, especially adapted to the family garden; by FELIX GILLET, Nevada City, Cal.

PRICE OF TREATISE.—Illustrated with two photographs, 50 cts.; with five photographs, 75 cts.; with eight photographs, \$1.00; with 12 photographs, \$1.25. Twelve different varieties represented, including Princess Dagmar, The Lady, Col. Cheney, Exhibition, Gov. Booth, Jucunda, Cockcomb, etc. It is the best and most complete, practical, interesting treatise on strawberry culture ever published in the United States. Will be sent by mail, prepaid, at the above prices after receipt of money.

For sale, at moderate prices, plants of 45 different varieties of the nicest and largest sorts of Strawberries (English, French, American and Californian). Ever bearing Raspberry (three crops a year). Clons for grafting of French Chestnut, (Marron de Lyon and Marron Combale). Best varieties of Pear, Cherry, etc.

Send for full descriptive and price list.

FELIX GILLET, Nevada City, Cal.



## THE SLUTHOUR PUMP

HAS NO EQUAL FOR

## IRRIGATION.

Send Your Orders to

J. M. KEELER & CO., Agents,

330 Sansome Street, - - San Francisco.

## M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas,  
Buff, White and Partridge Cochins,  
Spangled, Golden and Silver Polish,  
Spangled, Golden and Silver Hamburgs,  
Pure White-faced Black Spanish,  
White and Brown Leghorns,  
Silver Grey Dorkings,  
Houdans, Silkies, Black-Red Games,  
Bronze Turkeys, Rouen and Aylesbury Ducks,  
All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

## THOROUGHbred FOWLS, BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL Eggs Shipped to  
OF FOWLS Any part of the  
GUARANTEED Coast to Hatch After Arrival.

Price List for 1877 now Ready. Address,  
M. EYRE, Napa, Cal.

(Please inclose stamp.)  
Also, Thoroughbred Southdown Sheep.

30 NEW YEAR CARDS, Seven Styles, with name, 20 cents; 25 Fancy Cards, 15 styles, with name, 10 cents; 30 Masonic or Odd-Fellow's Cards, with name, 20 cents; postpaid. J. B. HUSTED, Nassau, Renss. Co., N. Y.

ALL SHOULD HAVE IT. The first RURAL PRESS is worth the subscription for a year. Every farmer should have it. Southern Californian, March 23d.

## Seedsman.

SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New  
Sweet Corn.

Early Canada  
Early Dutton  
Yellow Flint Corn.

Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar  
Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST

Prices Unusually Low.

Trade Price List on application.  
"My Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.



ARE PLANTED BY A MILLION PEOPLE IN AMERICA. SEE Vick's Catalogue. 300 Illustrations, or 1 two-centa Vick's Floral Guide, Quarterly, 25 cents a year. Vick's Flower and Vegetable Garden, 50 cents; with elegant cloth covers, \$1.00. All my publications are printed in English and German. Address, JAMES VICK, Rochester, N. Y.

\$ ONE DOLLAR. \$

Spooner's Gardening Guide for 1877, And Spooner's special collection, 30 varieties choice Flower Seeds, or 25 varieties selected Vegetable Seeds, mailed to any address on receipt of \$1.00; or the guide free to applicants.

WM. H. SPOONER, Boston, Mass.

SEEDS. SEEDS. SEEDS.

Field, Flower and Garden Seeds, Etc., For 1877, will be mailed free to all applicants. WILLIAM RENNIE, - - - - - TORONTO, CANADA.

THIS CUT shows the form of the Sugar Trough Gourd. They hold from three to ten gallons each. Twenty-five cents pays for a package of the seed, and one of Pansy, Double Zinnia and Striped Petunia. Price list of seeds free. Address, WALDO F. BROWN, Oxford, O.

OAKLAND POULTRY YARDS,  
Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.  
NO INFANT FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.





Volume XIII.]

SAN FRANCISCO, SATURDAY, JANUARY 20, 1877.

[Number 3.]

### Hints on Landscape Gardening.

The thought of tasteful adornment is one which should be in the mind of every rural reader. It is one of the chief agents in the construction of beautiful homes, and beautiful homes are conducive to beautiful lives. We have in this State some of the most beautiful rural homes in the country, and we have other homes which a very small expenditure for tasteful adornment will make beautiful. We desire to draw the attention of our readers to this subject, and for this purpose we have made engravings to illustrate an article written for the *PRESS* by Chas. A. Reed, of Santa Barbara. Of course the plans which Mr. Reed proposes are subject to many modifications to meet the tastes or needs of those who desire to profit by his hints. Indeed, if the plans but lead our readers to think, study and plan for themselves, their mission will be accomplished. Mr. Reed writes as follows:

The great object of landscape gardening is to develop the beautiful and picturesque in the grounds to be laid out, by the pleasing arrangement of trees, surfaces, buildings and walks, in which the harmony of form and color may be displayed in the most attractive manner. We attain this object by first removing or concealing such things in the natural scenery as may be offensive or disagreeable to the eye, and then by the introduction of tasteful forms, groups and colors.

The beauties of landscape gardening may be somewhat expressed in a very small plot of ground, where there is only room enough for a few trees and shrubs, and a little grass plot.

Downing, in speaking of this subject, remarks that, "If landscape gardening in its proper sense cannot be applied to the embellishment of the smallest cottage residence in the country, its principles may be studied with advantage, even by him who has only three trees to plant for ornament, and we hope no one will think his grounds too small to feel willing to add something to the general amount of beauty in the country."

The ornamentation of residence grounds should be in keeping with the general character of the country around them. If the region be hilly, abounding in cliffs, ravines, brooks, etc., the grounds should partake of the same character; if flat or rolling the same general features should be preserved. By this means we are enabled to increase the general beauty of a given piece of ground, while it will still be in keeping with the surrounding country.

In a broken region, for instance, we plant pines, firs, birch, etc., while on the prairies the drooping forms of the elm, willow and the bushy cottonwood are more appropriate, and in neither case is nature violated; yet while a careful interspersing of firs and evergreens in prairie land, or willows and cottonwoods among the hills, in suggestive places, is admissible and even beautiful, it is far from being in conformity with the principles of good taste or elegance to throw the whole display into discord by planting a grove of willows on a rocky cliff, or a forest of fir trees in our prairie gardens; an absurdity too often to be seen and too little deplored.

It is by the proper distribution of trees and other ornaments that we decorate our grounds, and when the principles of landscape gardening are better understood by the people, and the art more appreciated, we shall have more tasteful and natural displays; for it must be borne in mind that nature is our guide and our model, and it is our province to embellish and not to distort in our imitations. One who has not studied the laws of harmony in any department of aesthetics is pretty sure to run a principle too far, not only in the natural decoration, but in the artificial, such as rustic work, vases, statuary, etc.

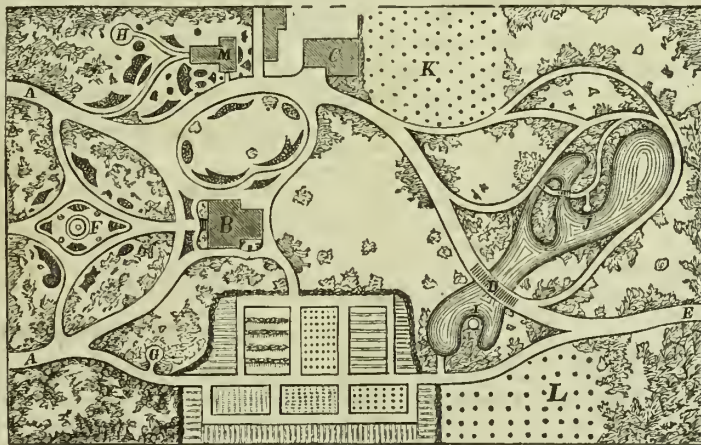
Ornaments of the same character should never be repeated in a country residence, for variety is one of the chief principles of landscape gardening. Neither should we place statuary of wild animals too near the dwelling, or, in fact, have them at all, for they impress us with feelings of disgust rather than pleasure. Ornaments of any kind should not be indiscriminately scat-

tered throughout the grounds, but placed in such localities as overlook the finest views, in some quiet nook or cosy retreat where one may dream away many happy hours in the balmy atmosphere of spring time; thus giving a reason for their positions. In using ornaments, the idea is not to detract from, but to add to the general effect of the landscape. It is well, also, if such ornament express utility, as one soon tires of ornament alone; for extravagance in this cannot but detract from the general beauty of the scene. The world is growing more and more practical every day, and to satisfy this growing quality, utility should be combined with beauty.

"If" says Downing, "the proprietors of our country villas in their improvements are likely to run into any one error more than another,

attractive view in nature that does not contain more or less of both; but a lawn with its flowers and small groups of trees, and the crystal waters of a little lake more directly expresses the former, while a mountain gorge with evergreens and murmuring brooks represents the latter.

We may, however, to a certain extent, produce the picturesque effect on comparatively a flat or rolling surface, providing this character is already suggested by nature, by planting trees and shrubs closer and more in masses, making therein pleasant openings. The walks, too, should wind among the trees in such a manner that while traversing them one would suddenly come upon these little openings or upon groups of flowers, a cozy retreat, an inviting nook or a pool of shimmering water, thus creating an agreeable surprise.



LANDSCAPE GARDENING—PLAN FOR TEN ACRES.

we fear it will be that of too great a desire for display, too many vases, temples and seats, and too little purity and simplicity of general effect."

There are two methods of producing the landscape in ornamental grounds—the beautiful and the picturesque. In the former we would introduce broad stretches of lawn, with gentle

undulations studded with small groves of trees of the ornamental varieties, such as the maple, elm, red bud, Irish and weeping juniper, with single specimens here and there, and the spire-like poplar showing its tapering top occasionally from a grove of the more drooping trees. Walks encircling the lawns, skirting the groves and winding around the little lakes and ponds, where the weeping willow may be planted with good effect. Here, too, we may have our rustic seats, temples, and other ornaments; while about the dwelling, along the walks and skirting the lawns we would have the flowers arranged in pleasing groups, and in rich harmonies of color. In this display we recognize the expression of beauty.

In the picturesque we find the rocky cliffs vined with ivy and honeysuckle, and crested with hemlocks, firs and other evergreens, cascades and babbling brooks, with larch, birch, walnut and other deciduous trees along their banks and extending over the hillsides, merging into the oaks and hickories, with open glades and vistas here and there bordered with some of the more ornamental varieties, with clusters of the wild plum roofed over by the creeping grapevines, forming a natural arbor or pavilion. Here, too, we find the timid rabbits and the summer song birds.

We may say that this combination of scenery is also beautiful, for we can scarcely select an

The general lines, also, should be somewhat angular, because the picturesque in nature is composed, in a great measure, of angles; having a care, however, that the effect is not marred by overdoing; and the trees should be so arranged along the walks as not to make it appear that one is going out of the way, and also to protect the points of walks, lest one should disfigure

the grounds by cutting across lots, and in all cases it should be borne in mind that walks about the dwelling must be made for convenience, and therefore require no more curves or angles than is necessary for effect. Whatever may be the character of the grounds, it is the province of the gardener to embellish and improve what he finds, introducing enough of opposite features to avoid monotony.

In planting about the dwelling, single specimens should be placed nearest to it, increasing the size and density of the groves as they near the boundary lines. By this means we have air and sunshine, which should never be ignored; it also gives a finer view of the dwelling, the highway and the surrounding country.

The accompanying plans will, to a certain extent, illustrate some of the ideas suggested in this article.

Design No 1 is of a simple and convenient form, and will somewhat carry out the principles of the more beautiful displays; though enough of the opposite character is introduced to avoid too much sameness in the general effect. It is intended for a lot of about three acres, which is supposed to have a gradual slope in all directions from the dwelling. The surrounding country being open, the trees are so arranged as to give the most pleasing views from the dwelling, and other parts of the grounds.

The main foot approach, A, winds by easy

curves through a small grove of trees, and over a lawn to the dwelling, B.

The summer house, C, is situated in a thick grove of trees, looking out upon the highway, the distant country and the golden sunset.

The carriage drive, D, circles up to the dwelling and thence to the stable yard, E.

The kitchen garden, F, is surrounded by an arborvitae hedge, and is convenient to both stable and dwelling.

The orchard, G, is bordered on the boundary by a thick belt of evergreens, as a protection against the cold winds.

On the way to, and near the dwelling, flower beds are in considerable profusion.

Design No. 2 was drawn for a lot of about 10 acres, and will somewhat carry out the principles of the more picturesque displays on a slightly rolling surface.

There is a street or highway at either end of the grounds, thus giving an entrance at each.

The carriage approach, A, circles up to the dwelling, B, through a thick grove of trees; thence through a profusion of flowers to the stable, C, and over the rustic bridge, D, to the rear entrance, E.

The fountain, F, is situated in the center of a little grass plot, surrounded by the main foot approach to the dwelling, with flower beds on either side.

G H I and J are summer houses of a rustic character; the one at H, overlooks the greenhouse, grapery and the croquet ground.

The general surface is comparatively level, but there is a gradual slope in every direction down to the edge of a little lake, in which there is a tiny island covered with a thick growth of nut-bearing trees, where the children and the squirrels may ramble about in the golden autumn and gather nuts for their winters store.

At the right of the dwelling lies the vegetable garden, concealed by an arborvitae hedge, and the walk at the lower end leading to the lake is for the supply of water.

K and L are the two orchards, and the poultry house, M, stands just in front of the stable. Rustic work is freely distributed throughout the grounds, though mostly in the region of the lake.

Although this design is to represent the more picturesque displays, there is enough of the opposite feature introduced to avoid sameness and monotony of general effect.

**THE WOOL PRODUCT.**—The following note on the production of wool in the United States during the last year, and the stocks now in hand, is from the annual circular of James Lynch of New York city. "The clip of the United States is really not so large as it was last year, although it seems greater in pounds gross. The falling off in different States east of the Mississippi is from five to 20 per cent. from last year, while west of the Mississippi the increase, as will be noticed, is enormous. It is now clear that the United States produces clothing wool of rather inferior staple in great abundance, while the growth of long and strong wools, especially of the finer kinds, has fallen off heavily, and is not sufficient for the demands of American manufacturers, nor is it likely to be for years to come. Farmers in States where such wools can be grown find it more profitable to pay attention to products other than wool; hence it is that foreign wools of superior quality and staple must be imported, whatever the tariff may be, or the best classes of goods cannot be made in the United States. Imports of carpet wools have kept up in quantity, while of clothing they have fallen heavily behind. The stocks of domestic on hand, in the principal markets, are about the same in pounds as they were last year, but are considerable below in fact, the great weight of the wool, at present, being composed of unwashed and wasty kinds that will not yield more than 30 to 40 per cent. of clean wool."

**DRAFT HORSES FOR UTAH AND CALIFORNIA.**—The *Prairie Farmer* says: Dr. B. R. Westfall, of Macomb, Ill., will leave this State for Utah and California in January, with a car-load of imported and high bred Norman horses, a part of which are already engaged, the balance for a market. He will stop first at Ogden and then at Sacramento.



## CORRESPONDENCE.

### The State Agricultural Society.

EDITORS PRESS:—You say that "on the 25th of the present month the annual meeting of the State Agricultural Society will be held in Sacramento," and "by reason of resignation and regular vacancy, there will be need to elect a quorum of new members to the State Board of Agriculture. Thus there will be an opportunity to put the State society into the hands of a new set of managers, and, being in the majority they will have the direction of its policy. This being the case, the *Record-Union* urges upon any who have not approved the way in which the society has been managed, to step forward and put their beliefs into tangible shape at the election."

You further state: "This is fair. It certainly is not right to find fault with a popular institution and then make no effort to improve it when the opportunity offers."

I admit there is an opportunity to make an effort, but what signifies making an effort under the present constitution and by-laws of the society, which admits all annual members to vote for the election of officers, as well as life members and delegates from county societies. This being the case, the people of Sacramento can elect to office whoever suits them or their interests, let the person live in San Diego or Sacramento, for the simple reason that they (under the present mode) have the power to do it. And why?

1st. Because a great portion of the life members reside in or near Sacramento, and can attend the election without incurring expense. 2d. Because the wire-workers of Sacramento can call in a sufficient number of the citizens, and by paying their annual fees they become voters without any extra expense, and can carry the election (as they did last year) for whoever they choose. On the other hand, the few life members that reside in the more remote parts of the State, in attending the annual meeting would be obliged to incur quite an expense; so would also the delegates from county societies; therefore, under the present manner of conducting the election of officers, the people are obliged to submit, although you say: "It seems to us that the present is the time to remodel the society, and it will soon appear whether the farmers of the State care enough about it to make the effort." I am a farmer and from the above showing if you will point out any mode or devise any means whereby a change can be made you will greatly oblige many farmers. Under the present mode of election a farmer any distance from Sacramento would be very silly to incur an expense of from \$10 to \$60 (according to distance or location in the State) and then have all his efforts blasted. Under such circumstances farmers had better stay at home and save their money, and the sooner the State Agricultural Society is changed in name to a race course, the better it will be for farmers.

FARMER.

[We cannot but think that a determined effort on the part of the farmers would be productive of good, even if they were outvoted. It would go to show more clearly that the race track does not fitly represent the agriculture of the State, and possibly the remedy could then be had through the Legislature. We acknowledge that we do not at present see how the desirable end is to be accomplished, but we cannot doubt that there will be wisdom in a multitude of counsels on the subject. What have other readers to say in this connection?—

EDS. PRESS.]

### Redwood Stumps.

EDITORS PRESS:—Riding through a redwood forest the other day, I saw a farmer engaged in burning stumps. This carried my mind back to my boyhood, when I remember spending many days, in the Western country, trying to rid the fields of immense black-walnut stumps. Generally two or three years were necessary before these troublesome roots could be disposed of by "cremation." Since then I have often wished for the money those walnut stumps might command at the present day—even for the privilege of digging them up and taking them away. The more knotty and curled the better they would be. Our richest furniture is ornamented with parts of just such stumps as once were considered worthless, but are now bought up for a valuable consideration.

Californians need not be told of the uses and worth of redwood. It is one of the most durable of woods. After 20 years' use it seems just as fresh and free from decay as when first cut. When well selected and made into furniture it is not only ornamental but durable. Oil and varnish bring out the grain, and there is a tenacity of fiber and beauty of color in certain kinds that make it equal at least to the Spanish cedar. Some trees are beautifully curled and

dotted, resembling the bird's-eye maple in structure. All the trees near the roots are of this structure, and this brings me back to the stumps.

In the redwoods are thousands of monstrous stumps cumbering as rich and productive a soil as can be found in California. A soil, too, in a climate seldom subject to drouth, or too much rain, where nearly all kinds of plants would grow that are found north of Mexico. The trees have been cut into posts, railroad ties, boards and other lumber, at a distance of five or six feet from the ground, and what shall be done with these stumps?

However beautiful furniture of redwood may be, however handsome the veneering and durable the article, it is evident that in California it will not become fashionable or popular. This is the home of the redwood and it is too common here to be esteemed as an article of furniture or inside finish of houses.

But as an article of export its inherent qualities will commend it anywhere; and there is no reason why it may not become valuable in other parts of the world. The area of the redwood is limited to a small district in California. It is found nowhere else in the world, and its scarcity must in time make it a rarity. There are two species—the coast redwood (*Sequoia sempervirens*) and the Sierra redwood (*S. gigantea*) or famous big tree of Calaveras and Mariposa. The former occupies a narrow belt along the coast, scarcely passing south of the Bay of Monterey, and not crossing the Oregon line to the north. The *gigantea* is limited to a very few groves, which are apparently doomed to an early extinction—unless its seeds, which are being planted all over the world, should find favorable conditions for its growth as a cultivated plant.

It is the coast redwood which forms such a rich dowry to California. And this is the tree whose stumps are suggestive of an industry that some genius will develop into dollars and cents some of these days.

C. L. A.

Santa Cruz, Cal., Jan. 9th, 1877.

### Berryessa, Napa County.

EDITORS PRESS:—In the last number of the PRESS we read of a "Barbecue at Berryessa." The name looked familiar, but not having heard of a barbecue in our valley, we read the article and understood there was another Berryessa besides our own beautiful vale. Mention has been made of it in the PRESS from time to time before, but we scarcely know the location. The one of which I write is the Berryessa valley of Napa county, indeed a beautiful and fertile valley, some 16 miles long by from two to five wide. It boasts one village, Monticello, containing one hotel, two stores of general merchandise, two blacksmith shops, one barber shop, etc., with several very nice residences and quite a number of families, also a school-house. The land here is fertile, the comfortable farm houses and spacious out-buildings, in which autumn after autumn are stored the wealth of golden grains, prove the farmer's success and prosperity.

The unusually fine weather and glorious moonlit nights favored the merry-makers during the holidays. If sometimes this same beautiful weather, and bright, but extremely frosty nights, caused a feeling of uneasiness to the farmer, hope still cheered him on, for scarcely in the experience of the "oldest inhabitant" had a winter passed away without a long, refreshing rain during or near holiday week.

The long-continued dry weather, up to the present time, has discouraged not a few. The roads are deeply covered with dust, the grass is fading under the pressure of incessant frosty nights and drouth. The parched earth is longing for the still hoped-for rains. Anxious questions disturb the minds of those dependent on agricultural pursuits.

MALLIE STAFFORD.

Monticello, Napa county, Cal.

The scene of the barbecue was Berryessa, in Santa Clara county, a few miles from San Jose.—EDS. PRESS.

### A New Flower—"Gilia Parrya."

EDITORS PRESS:—I came up here among the clouds the last 7th of October, bringing a wagon-load of plants, books and the precious microscope, but as yet have been too sick for much scientific work. I became thoroughly tired out with botanizing in southern California; such a contrast to the High Sierra. I am slowly recovering by means of physical exercise, principally, the while quite abashed at the thought of whether it is possible for me to write up "Botanical Excursions" in that glorious land for your readers next spring. The field is so large, the flora so splendid and the citizens are so generous!

#### Contest Over the New Flower.

Besides making a large collection of the known flora of the South, Dr. Parry and I picked up, it appears, several plants new to science; the Doctor a dozen and I half as many. Among the latter a beautiful little *Gilia* from the Mohave river, with large pink and white blossoms, very desirable for cultivation. Upon its discovery I studied it and found it different from any species yet published, so sent the specimens to Dr. Gray, with the request that he would name it *Gilia Parrya*, to honor the noble

wife of Dr. Parry, whose many years of botanical service entitle her to recognition.

A month or so after, Dr. Palmer, an indefatigable collector of that region, also picked up the plant and forwarded with his collection. When Dr. Gray came to examine the accumulations of the season, he described the new plant and named it *Gilia Palmeri*. As soon as I learned the fact, I stoutly protested, arguing at length my priority of discovery, also my determination, citing Dr. Parry for witness, whereupon Dr. Gray has just revoked his former action and now the beautiful little gem is named for all time *Gilia Parrya*, "dedicated to Mrs. Dr. Parry," Dr. Gray adds, "whose services to botany well merit this recognition."

J. G. LEMMON.

Sierra Valley, Cal., Jan. 1st, 1877.

### Tehama County.

EDITORS PRESS:—The northern part of this county, west of the Sacramento river, is fast filling up with settlers. Much of the land on these plains was considered worthless except for grazing. Numerous bands of sheep covered the country, and by continuous close feeding, the land was denuded of almost everything but the coarsest weeds. The wild oat, which it is said was once so rank here, had disappeared. The advent of the small farmer is fast changing this state of things. Nearly every quarter section of government land has been taken up, and homes are being founded on every hand. The soil, which is mostly of a reddish color and composed of a mixture of clay, gravel, and sand, has been tried and proved and found to yield good crops of grain. The grape, fig, peach, almond and apricot succeed well. In experimenting the past season I grew several hundred grape-vines from cuttings, without irrigation and with very poor preparation of the ground or after culture. The young grain certainly looks better and greener on these lands now than on the adobe soils in many places. A few inches below the surface of the ground is a tenacious red clay more or less free from gravel and very retentive of moisture. And herein, I think, lies the secret of the verdure now seen; also of the numerous springs which abound on the surface. These latter, in ordinary seasons, yield a good supply of water, but are now drying out and we are resorting to deep wells for permanent full supplies. Hogs and poultry, especially turkeys, are raised in great numbers and found to be profitable. We had more or less rain on the fourth and fifth of September, and on the 16th, 17th, 25th, 26th and 27th of October; a slight sprinkle a few days afterwards, but none since then.

T. N.

### Note on Mexican Agriculture.

EDITORS PRESS:—Agriculture is rather neglected here, and the ideas of rancheros in Mexico pretty primitive. We have an abundance of land and all sorts of climates within 200 miles. We grow barley and wheat, as well as cotton and cane. Coffee growing is at present the principal project, and several plantations have been started, giving a most incredible result. Cotton does well here, but through ignorance two-thirds of the crops are lost. Cane and indigo and a multitude of other plants grow with little work, but are not cultivated on account of indolence or ignorance. Lands are cheap, and are sold at the rate of \$12 to \$15 per acre; that is, such as have irrigation. Without irrigation they are worth from \$3 to \$5. Buying a ranch with pastures good and bad, it is worth from 50 cents to \$1. Men with small capital say \$1,000 would do exceedingly well, as rents are also very cheap. The lands here are healthy, excepting a few near the coast.

E. GROTHASS.

Colima, Mexico, Dec. 14th, 1876.

## THE APIARY.

### Bee-Eating Birds.

J. P. Spaulding writes to the *Prairie Farmer* about bees and bee or king birds eating bees. He says: I killed several of those birds this summer and found none but drones in them. I failed to find any crop as he speaks of, but the bees were in the gizzard or stomach. Mr. Barnard makes some inquiry about the cat bird, saying he was not certain whether they ate bees or were catching moths. I know they are after the moths about my hives. There is a pair that nest near my apiary each year, and I would not have them disturbed for a great amount. I have watched them a great many hours and they will sit by the side of the hives and watch for moths, and if a bee comes around to see what they are there for, they will pick at them gently to drive them away. If they see a moth they go among the bees fearlessly and snap him up.

There is another bee catcher that I would like to know more about; namely, the spindle, or what is called the dragon fly. They were very numerous this summer and I saw them catch a great many bees, but could not tell whether they were working bees or drones. They will capture a bee and fly away so quick I can never tell what kind of a bee they have got. My son, 19 years old, says he saw one catch and eat a worker bee this summer.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Treatment for Roup, Etc.

MR. EYRE:—Our fowls heretofore have been a losing game, but I see a ray of light and hope, more especially since I visited and have communicated with you. Capt. Hallett comes in with his *RURAL PRESS* whenever there is an article from M. Eyre, Jr., Napa. I give him all the information derived from your letters and proof-sheets, and promise him the benefits of your pamphlet, when it comes. We have purchased 15 lbs. of sulphate of iron, 15 lbs. of alum and one pound of sulphuric acid. So you see we are prepared to do battle with that terrible disease, the liver complaint. But do you mean to say the sulphate of iron should be given constantly every morning?

[Answer.—Yes.]

Liver disease is our greatest trouble. Cold in the head, or snuffles, or a kind of catarrh, which would end in roup I can manage very well. My experience teaches me that salt and water is good. I use about one teaspoonful of salt to a half cup of water. I clean the head by pressing the nostrils just in front of the eye. The mucus will come out in the slit in the roof of the month. If necessary I run a quill from the roof of the month out through the eye. Have the point of the quill smooth; strip off the feathers except some on the end, dip it in the salt and water and draw it through. I take a small glass syringe and syringe out through the roof of the month, eyes and nostrils with salt and water. In ordinary cases one or two operations will cure. We used to lose fowls with the above disease, but after trying many different things, think salt and water as good or better than anything else.

MRS. P. MOFFATT.

Woodbridge, Cal.

[This is a valuable remedy, if as effectual as Mrs. M. claims. Ed.]

### Plymouth Rocks.

Mr. M. Eyre Sir:—I enclose an article on Plymouth Rock hens, cut from the *Toledo Blade*. Would like your opinion on the merits of the fowls. Are they better layers than White Leghorns or any other breeds? Do you keep Plymouth Rock fowls? MRS. H. CLAY.

The article referred to is as follows: "In a late number of the *Blade*, and under the head of 'Chats with Readers,' I notice that Jno. W., Aberdeen, Miss., asks: Which are the best breed of poultry, with a view to eggs? The *Blade* says: 'There is a very great difference of opinion on this point; we should like to hear from some of our readers.' My 'opinion' is that the Plymouth Rocks lay more eggs in a year, lay earlier, are hardier, are easier to raise, come to maturity earlier, are better for the table, set better, are better mothers, break up easier, lay sooner after being broken up, and breed truer than any other fowl I know of, or, at least, it has more good qualities and fewer faults than any other, and I have kept different varieties of fowls. The Plymouth Rocks resemble the Dominique in color, but are more than twice as large, are broad breasted, thick set birds, and come to maturity much sooner.

"Of all other breeds, we think Plymouth Rocks the fowls for the farmer. They combine more in themselves than any variety we know of, are so hardy and healthy that they seem proof against the diseases that annually carry off so many fine birds. They can be depended on for eggs all the year round, are not high-flyers, and are excellent foragers, when given their liberty.

"My Plymouth Rocks are very heavy, have been brought to a high degree of excellence, and are as good as can be found elsewhere. If you will be kind enough to forward my address to your correspondents who are asking for good breeds of poultry, I will answer any questions and give them any information they desire, should they address me.

D. P.

I should say that "D. P.'s" anxiety to advertise the fowls he had to sell is rather too apparent. They do not lay as many eggs as the Leghorns; they are no more hardy than the Brahma; they do not breed truer to feather; they do not, in fact, breed as true as many other kinds; their principle recommendation is that they mature more rapidly than the Brahma. Many claim that they are fully equal to the Brahma, except in weight, and some prefer them as mothers. I keep Plymouth Rock fowls this year for the first time.

CURIOUS GEOLOGICAL FORMATION.—Down the Ohio river, at Martin's ferry, was discovered a few days ago, says the *American Manufacturer*, a very curious geological formation about 35 feet under ground. A well was being dug, about one-quarter of a mile back from the river, and at the depth mentioned, under the overlying sand, the workmen found an oval of soft sandstone, in which was embedded a closely-packed mass of hickory-nuts and twigs. Some of the nuts were broken open on the half-shell, while a few were complete even to the outer pods, which were opened at the radial point. There are also some impressions in the stone or hard clay which closely resemble small corrugated mollusks. Readers may form their own conjectures as to the time required for the overlying sand and the earth of the river bank to accumulate.



## SHEEP AND WOOL.

## Sheep-Raising in Oregon.

Mr. W. T. Newby, of Yamhill county, Oregon, in response to a letter of the Commissioner of Agriculture, gives the following statistics regarding sheep husbandry in his State. The State census of 1875 gave the number of sheep at 539,600, which evidently included lambs. The aggregate wool product was 1,863,002 pounds.

The breeds represented range all the way from the poorest to the very best of the highly improved varieties. Thoroughbred Merinos are of Spanish, French, American and Australian origin, but Mr. Newby thinks that none except the Spanish are thoroughbred, the others being really but grades of that stock. All varieties of the Merino are well adapted to the circumstances of Oregon. Spanish rams range from 16 to 30 pounds per head of unwashed wool; but a ram that does not shear over 20 or 25 pounds is not considered of much value. Spanish ewes range from 10 to 18 pounds. This breed is suited to large flocks, and are supposed to be healthier and more cheaply fed than any other. They are not so good mutton sheep as the other varieties, yet they are fair in this respect, and will average from 45 to 55 pounds per carcass when dressed. But as wool producers Mr. Newby thinks the Spanish Merinos have no equal. They are short, well formed, of excellent condition, and longer lived than other varieties. With fair treatment they also carry their wool longer, seldom losing a lock of wool from one shearing time to another; they sometimes carry their fleeces two or three years without shearing.

French Merinos are becoming unpopular and disappearing from the flocks. They are too flat and "legged," and of feeble constitution. Their fleeces are uneven, some parts being fine and others coarse. At three years of age the wool becomes harsh and dry, the lubricating oil being saturated with yellow gum of the consistency of bee-bread. They are less desirable for cross-breeding and shorter lived than the Spanish.

The American Merino is a good sheep, with a moderately fine form, yielding good medium wool, at the rate of five to ten pounds per fleece.

The Australian Merino has decreased in numbers in the last seven or eight years. It is of good form though small, and yields from four to six pounds per fleece of very fine, even wool. It is well adapted to running in large flocks; but the lambs are tender and need care when dropped.

Cotswolds were imported over 20 years ago, and were very popular for 10 or 15 years; but when the native grasses became short, and flocks had increased from 50 to 1,000 head, these sheep became less profitable and are going out of use. They are still of value in small flocks, where mutton is in good demand at high prices, and where food is abundant and of good quality.

The Leicesters were imported about 1860, by Mr. McKinley, a Scotch gentleman, who had previously been in the service of the Hudson Bay Company. Another variety called the New Oxford is but little known, but is spoken of as superior for the production of combing-wool.

Fifteen years ago the Southdowns were very common; but their light fleeces have rendered them unpopular, and they are falling into neglect. A slight cross of Southdown blood on other varieties is beneficial, improving the form, action and hardness of the resultant breed. They were imported from England by the Hudson Bay Company about 25 years ago.

In 1843 the Hudson Bay Company had a large flock of Spanish and Mexican sheep, of very small frames, shearing from one-half to one and a half pounds per head, and dressing but 25 to 35 pounds per carcass. A flock of 50 common sheep was brought across the plains from Missouri, by Mr. E. M. Adams, in 1847, and about the same time a flock of 75 was brought by a Mr. Shaw. These were the only sheep at that time in Oregon, including, as it then did, Washington Territory. The crossing of these flocks constituted what are termed the common breed of the country, which average from three to six pounds per fleece, and dress about 50 pounds per carcass. These sheep, if not too deeply crossed with Leicester or Cotswold, produce wool a little below medium, and excellent mutton. They do well in large flocks.

Mr. Newby estimates the average cost per annum of keeping sheep in Oregon at not over 50 cents per head, though there is a wide range of difference. East of the Cascade mountains, where the great mass of the sheep are kept, many flocks get through the winter on the abundant and nutritious bunch-grass; but this is in localities where the snow-fall is light. A shepherd is there employed for every 1,000 head, at a salary of about \$300 per annum. Sometimes hay, to the extent of 40 tons per 1,000 head, is provided, at the cost of \$5 per ton; but frequently not over half the hay is used.

In the Willamette valley flocks range from 25 to 300 head, some reaching as high as 2,000 or 3,000. The cost here varies from about nothing to 75 cents per head. Even in the latter case, the fertilizing value of the droppings exceeds the cost of the maintenance.

The wool product shown by the State census of 1875, divided by the number of sheep, gives an average product of 3.45 pounds per head; but as lambs unshorn were largely counted among the animals, the average is too low. It

should probably be five pounds per head. The annual increase from droppings of lambs is about 90 per cent.

The number of acres necessary to pasture 100 sheep varies in different localities and with different kinds of sheep, Cotswolds and Leicesters requiring more than Merinos. The Merinos might be kept on one acre per head; the others would require one and a half acres. For fleeces ranging from thoroughbred to one-fourth Merino, Mr. Newby received, in 1874, from 25 to 30 cents per pound; in 1875, 25 cents per pound, averaging the whole. His neighbors got from 21 to 23 cents per pound. These prices are for unwashed wool. No wool is washed in Oregon.

Sheep here, are generally healthy, but some prevalent forms of chronic distemper are noted. The scab results from bad management. The malady is easily cured by dipping in a decoction of tobacco mixed with blue vitriol and lime. No other chronic complaint is of sufficient importance to provoke attention; but Mr. Newby describes a new malady, which has become quite prevalent in some localities, for which he finds neither name nor description in works on sheep husbandry. The premonitory symptoms are a dry cough, with swelling lips. The swelling continues for two or three weeks, and, if fatal, enlarges the lips two or three inches, turning them perfectly black and producing a very offensive odor, with a very repulsive appearance. A putrid state of the whole carcass necessitates great determination to complete a post-mortem examination. A free administration of tar is recommended. The appetite does not fail to the last. For lack of a more definitely known cause, Mr. Newby suggests that the disease may result from extreme short pasture on fallow lands, the animals absorbing a large amount of dust.

Mr. Newby concludes that sheep-raising has proved profitable. A man with 150 acres can raise from 200 to 500 bushels per annum more of wheat if he keeps sheep than without them. Add this to the wool and product, and he thinks there is a very substantial element of profit in the business. Sheep-raising is a far better policy than the summer-fallowing of partially worn-out lands. The grain farmers are finding this out, and are importing Cotswolds and other mutton sheep. Wool production is rapidly increasing in Oregon, which promises soon to take the front rank in the business.

## THE STOCK YARD.

## Horns—The r Indications.

The veterinary editor of the *Prairie Farmer* writes the following chapter on horns: Much may be learned from the set and form of the horns of cattle and sheep, as indicative of character. Small, short, slouching horns on a two or three-year-old ox gives a grave and contented aspect to the countenance. Long, slouching horns, as on the long horn cattle, seem to oppress the head with a constant weight. Horns springing outward from the sides of the head, then rising up and bending backwards, never fail to impress that their bearer is quick tempered, ready to use them offensively, and are set so as to toss up any object with ease; such horns may be seen on the Jersey bull. Horns curving laterally and horizontally forward give a finished appearance to the top of the head when viewed in front; such are generally met with in Short Horn cattle. Long horns rising outward, forward, and having points outward, impart a majestic air to the head of the ox. Horns rising outward, and then approaching behind the head, give an idea of malformation. Horns springing outwards, and then coming straight forward in the points seem dangerous. Horns springing outwards and approaching forward with the points a little elevated and separated, seen sideways seem heavy; but seen in front ornament the head. A horn thick at the root for its length looks clumsy, and more so when blunted at the point; and both are associated with dull feeders. When springing outwards much, and then turning downwards, they are ungraceful. A good horn, however set, is small where it emerges from the head, and tapers gradually to a fine point. A white horn looks better than a dark colored, and a tip of brown or black, according to the breed, gives a neat finish, though most Short Horns have entirely white, and being short and curving inwards, serve more for ornament than defence. Cattle with spreading horns are better feeders than those with them contracted suddenly in front.

Horns indicate the age of cattle. At three years old the horn is uniformly smooth from the root to the tip. Every year after three it has a notch on it, so, counting the notches, and adding three, the age of the animal is ascertained. Tricks are practiced by fraudulent dealers in filling down the oldest notches, to make the animal appear younger, and the unsophisticated are thereby deceived; but a slight inspection of the horn will easily detect the fraud. The period of calving, whether late or early, affects the notches of the horn, which may give an older or younger appearance to the animal than its true age. As with cattle, the horns of sheep indicate the age of the animal.

The horns are very sensitive organs, no part of the body indicating the presence of internal disease more quickly than they do. In pushing directly forward in a fight, horns will bear a great force; yet a single stroke upon them with a cudgel is severely felt by the animal; and a single stroke may even cause the horn to

slip off the flint, which, being a vascular bone, is full of blood vessels, and bleeds freely. Such an injury may cause inflammation of the brain or lock-jaw. When the horns feel death-like cold, inflammation in the body is indicated; when hot, fever. The horns are not liable to disease; only illiterate people, quacks, and cow-leeches imagine that they are subject to an ailment, by them termed "hollow horn."

## FLORICULTURE.

## Mosaiculture.

A French correspondent gives an Eastern paper the following very interesting notes of a novelty in floriculture:

Everywhere throughout France may be seen a kind of comparatively recent garden decoration, called mosaiculture. The word is new and known only by specialists and amateurs. It might, however, be universally adopted, because it tells at once its meaning, expressing as it does an artistic disposition of plants, leaves and flowers, of such shades as will form masses, beds, wreaths—in fact, all sorts of designs, which are truly vegetable mosaics. I have seen the most charming specimens, and I will bring here a few of them to mind.

In Lyons, the place where art, closely allied with industry, creates tissues which are the admiration of the world, horticulture stands in high honor; and possibly the delicate taste for it enters far more than we think into the inspiration of the workingman-artist. Public and private gardens are numerous, rich and well kept. The Parc de la Tete d'Or, for instance, with its magnificent shade trees, its vast lawns, its elegant greenhouses, showing not only a natural love for flowers, but also profound notions of the horticultural art and science. In this noble park have I found the best compositions of vegetable mosaic. Long and wide beds (platebandes) and immense massed groups present a great variety of brilliant and select effects. The divers varieties of *Alternanthera* and *Teilanthera*; of the various *Coleus*, of *Achyranthes*, of *Amaranthus melancholicus* *ruber*, etc.; the *Mesembryanthemum tricolor*, the *Sedum carneum*, the fine *Centaurea candidissima*, the *Gnaphalium lanatum*, the golden-leaved *Matricaria*, etc., are planted so as to form initials or words, or to represent richly shaded elegant ribbons, or complicated arabesque figures, or pretty designs of *marqueterie*, etc.

Dijon, the capital of Burgundy, also aspires to a high degree of floriculture. In the ornamental part of its botanical garden I saw also very successful mosaic. There I have seen and afterward also found in Paris—but what don't you find in Paris of anything fine that has been produced anywhere in the world?—a happy use in mosaic compositions and in borders of *Alyssum maritimum* *fol. variegatis*, a charming plant, compact, low, almost a creeper, resembling somewhat *Sedum carneum*, but apparently more robust and vigorous.

Paris has wiped out the traces of vandalism and has got a new set of jewels in her gardens. She still, and more than ever, is the capital of the kingdom of flora, just the same as she is the capital of France and of civilization. Her Parc Monceaux is the richest floral gem in the world. The plan in both its ensemble and its details is admirable, and it is excellently kept up. From the mosaic composition in it I quote:

"A mass of *Pelargonium zonale* with white spotted leaves, mixed with *Perilla Nankinensis*, with *Lobelia Erinus*—charming effect.

"An oval formed of ribbons of *Coleus* of well contrasted shades, bordered with an edge of *Lobelia Erinus*, Crystal Palace.

"A mass of *Pel. zonale folis sanguineis* mixed with *Centaurea candidissima*, edged all round with *Lobelia Erinus* and *Alternanthera*.

"A mass very much shaped like a cupola (bombe) dominated over by a strong growing *Agave atrovirens*, round which there is a beautiful mosaic of *Alternanthera*, *Sedum carneum* and other low growers."

A good many isolated specimen shrubs on lawns are set in a setting of plants of one single color, and that a brilliant one, of either leaf or flower; or of a mosaic. These settings look like flowery nests put in the grass.

On the sides of a large lawn there rises a heavy mass of *Acer negundo*, with spotted leaves, rounded by a double border of *Pelargonium zonale*, with flowers of a brilliant red and salmon. The effect of it was both powerful and charming.

But I would not be able to finish were I to enumerate all that is seductive in this admirable park, half mundane, half mysterious; one of the glories of Paris and yet hardly known to the multitude.

"Havre calls me, and there, too, I find mosaics in full bloom. Havre has superb gardens, notably the one before the City Hall, which is truly a little paradise of a garden.

On a bank, leaning against a deep mass of high shrubs, I saw perhaps the most successful of mosaic compositions; oblong borders of diverse kinds of *Alternanthera* and *Teilanthera* in large festoons. On a white center, letters of a yard length, formed by *Mesembryanthemum tricolor* and *Alternanthera paronychoides*, edged with *Matricaria aurea*, compose the words—City of Havre. The execution is admirable and the effect of it is striking.

I would further instance: a round group, representing the national colors; another large design composed in this way: center-piece, *Impatiens purpurea spectabilis*; border, first

dwarf dahlia, white flower, round which second border *Amaranthus mel. ruber*, etc. But I must limit myself, my object being to draw my fellow-horticulturists in America to this interesting subject of Europe, whilst in turn I shall borrow some points from their studies, their works and their experience.

## Flowering of the Eucharis Amazonica.

Charles J. Haettel, of San Jose, writes to the *Gardeners' Monthly* as follows: After many trials I have at last succeeded in flowering the *Eucharis Amazonica*. Last winter was very hard out here on all kinds of plants that needed more heat than was afforded by nature.

From the middle of January we could make no fire on account of the water rising to within six inches of the surface of the ground, so it dried off the *Eucharis* entirely, and they were standing from January until April in a cold moist temperature, many nights as low as 40°. In April I took pans one foot in diameter, well drained them, and planted six bulbs in each pan, using soil composed of one part peat, two parts loam, with a little well decomposed manure and some leaf mold added. They were then placed in a close frame, having a strong bottom heat, maintaining a high temperature, where they soon commenced to grow. I gave them plenty of water, both at the root and on the foliage, and gradually a little air, until the beginning of August, when they were taken to a cooler place and kept more dry until early in September; they were then again placed in heat, and well supplied with water at the root and on the leaves. The first flowers opened the last days of September, which were most beautiful, being large and pure white, and deliciously fragrant.

## USEFUL INFORMATION.

## The Manufacture of Woolen Hats.

But few of our readers are acquainted with the processes involved in the manufacture of woolen hats. The *Philadelphia Trade Journal* is enabled to furnish the following details through the courtesy of two prominent Reading firms. The processes are as follows: The wool is first thoroughly cleansed by immersion in hot water; it is then wrung out and placed in a drying room to dry, after which it is passed through a picking machine, making 900 revolutions per minute. The wool being thus prepared, is next fed into a carding machine, which turns out 20 dozen double bodies per day. Each body is cut in two, each half forming an entire hat. These half bodies are next passed through a felting process, by the aid of steam, which renders them more compact and of a denser fiber. They are then placed in a hoghead and boiled for two or three hours, and are then tied up in linen rags and passed through the fulling and sizing machine, then soaked in cold water to remove the vitriol, which would otherwise turn gray; from thence they are blocked and returned to the soak for one night for the same purpose, after which they are placed in the coloring tank, then reblocked, as the coloring process brings them to their original shape. They are then placed in the drying-room to be made ready for stiffening, which is done by the aid of glue and Irish moss. (One of the firms now uses shellac.) They are then put into another drying-room, from whence they are taken, ironed, trimmed and packed in pasteboard boxes, one dozen of a given size in each box; these boxes are in turn placed in wooden ones, one dozen in a box, making a total of one gross in each.

## The Rates of Postage.

Postal cards, one cent each, go without further charge to all parts of the United States and Canada; with an additional one-cent stamp they go to all parts of Europe.

All letters, to all parts of the United States and Canada, 3 cents per half ounce.

Local or "drop" letters, that is, for the city or town where deposited, 2 cents if delivered by carriers, and 1 cent where there is no carrier system.

Newspapers, daily, semi-weekly, tri-weekly and weeklies, regularly issued and sent to regular subscribers, 2 cents per pound, payable at the office of publication; newspapers and magazines published less frequently than once a week, 3 cents per pound.

Transient newspapers, magazines, pamphlets and handbills, 1 cent for each two ounces or fraction thereof. Single copies of the *Presses* weighing less than two ounces, the postage upon irregular numbers is 1 cent each. All other miscellaneous matter, including unsolicited circulars, books, book manuscripts, proof-sheets, photographs, etc., and also seeds, cuttings, bulbs and roots, and merchandise not exceeding four pounds in weight, 1 cent for each ounce or fraction thereof.

The following are the postal rates with Europe. The rates for letters are for the half ounce or fraction thereof, and those for newspapers for four ounces or fraction thereof.

To Great Britain and Ireland, letters 5 cents; newspapers 2 cents; France, letters 5 cents; newspapers 2 cents; Spain, letters 5 cents, newspapers 2 cents; all parts of Germany, including Austria, letters 5 cents, newspapers 2 cents; Denmark, letters 5 cents, newspapers 2 cents; Switzerland, letters 5 cents, newspapers 2 cents; Italy, letters 5 cents, newspapers 2 cents; Russia, letters 5 cents, newspapers 2 cents; Norway, letters 5 cents, newspapers 2 cents; Sweden, letters 5 cents, newspapers 2 cents; Turkey, European and Asiatic, letters 5 cents, newspapers 2 cents; Egypt, letters 5 cents, newspapers 2 cents.

For Asiatic countries, the half ounce limit for letters, and the four ounces for newspapers, still holding good, the rates are:

To Australia, letters, via San Francisco (except to New South Wales) 5 cents, via Southampton 15 cents, via Brindisi 21 cents, newspapers via San Francisco 2 cents, via Southampton 4 cents, via Brindisi 8 cents; China, letters, via San Francisco 10 cents, via Southampton 27 cents, via Brindisi 33 cents, newspapers 2 cents; India, letters, by the respective routes; British India, letters, via Southampton 21 cents, via Brindisi 27 cents, newspapers 4 and 8 cents respectively; Japan, letters, via San Francisco 12 cents, via Southampton 27 cents, via Brindisi 33 cents, newspapers via San Francisco 2 cents, via Southampton 4 cents, via Brindisi 8 cents.



## PATRONS OF HUSBANDRY.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Worthy Lecturer's Visits.

**EDITORS PRESS:**—According to programme of appointments published in your valuable paper for the month of January, 1877, the Worthy Master of the State Grange, Bro. J. V. Webster, gave me a start for the new year, by taking me in his own conveyance to fulfill the appointment at Haywards, Jan. 3d. We found the Grange at Haywards already in session and being entertained by Worthy Master Bro. Wilcox of Santa Clara Grange till we could arrive. As there was to be an installation of officers, then a harvest feast and then a lecture, our Worthy State Master at once proceeded to install the officers, with the assistance of a most efficient Assistant Steward, in his usual happy manner and most satisfactorily to all present. The harvest feast (and a most bountiful one it was) was participated in by all present, with such a joyous and social cheer as Grangers know how to appreciate. All these exercises took place at the Grange hall in full regalia and in closed form. At 1 P. M., the entire Grange adjourned to the Masonic hall, a much larger building, where a public lecture had been announced to be given by the State Lecturer. The meeting was a large one and great interest was manifested by all present. After the address of the State Lecturer, Bro. Webster was called on and for nearly one hour longer entertained the large and most attentive audience with a clear recital of doings at the Centennial in matters in which the good of the Order demanded ventilation. Thus ended our meeting at Haywards, and after many personal greetings and congratulations Bro. Webster left me to return home and I filled my next appointment at Ellis on the following day.

#### Arriving at Ellis

About 8 o'clock that night, I found that Worthy Master Needham had provided for me a comfortable place at one of the Ellis hotels, with a promise to call upon me the next morning and convey me to their Grange hall, about one mile and a half distant. According to promise I was met by Bro. Needham and taken to the Grange meeting, and there introduced to all the Grangers present personally, and after sufficient time to have a short personal acquaintance, the meeting was called to order in open form by Bro. Needham presiding, and the State Lecturer introduced. It was a large turnout, with visiting members from surrounding Granges, showing a live interest in the Grange work. There is no lukewarmness here, but all are fully alive to the situation and as fully expecting new work to be laid out for them by the State Lecturer. Bro. Needham and the Grange at Ellis deserve great praise for their unanimity of feeling and action and for their live Grange interest.

The Lecturer was congratulated on every side for the new and practical matter given them, with a renewed assurance that they would profit by it, and that the Grange head centers at San Francisco, the Business Association, the Bank and the Insurance Company, should have their material support and some plan of co-operation entered upon. After the meeting I was beset on all sides by brothers to go home with them and share of their hospitality, but only being able to accept one invitation at a time, and having already shared the good will and offices of the Worthy Master, Bro. Needham, I went home with Bro. Kirlinger, some three miles distant from the Grange hall, and with him and his truly Grange wife, spent a most pleasant and profitable night. I was taken the next morning to the railroad station at Bantas, where Bro. Needham awaited me and accompanied me to

#### Stockton,

Where we arrived on Friday about 2 P. M., and was met at the depot by the Worthy Master and Master elect of Stockton Grange, Bros. Phelps and Gratton, who at once accompanied me to the Yosemite house, where they had been spoken for me the best house afforded. We at once entered into Grange work by an interchange of views on the work already done, and to be done, and, to more thoroughly post me on their situation at Stockton, I was taken to their Grange Union store, and there introduced to Bros. Wolf, Burge and others, and made acquainted in detail with the rise, progress and success of this co-operative institution, which has, for the capital employed, so completely astonished everybody acquainted with it, that it and the Grange warehouse, under the same organization has accomplished so much, and that, too, against a most indefatigable opposition, threatening their immediate destruc-

tion. Instead of the destruction of the Grangers' Union in Stockton, all who opposed them have had to take down or change their signs; again confirming the principle of co-operation, that it is the bundle of sticks that when tied together cannot be broken while the single stick or firm is snapped asunder like tinder before the co-operative wheel of progress and material reform.

On Saturday, the 6th inst., the following day, as per announcement in their city papers, the Stockton Grange installation of officers for 1877 was to commence in their Grange hall at 11 A. M., harvest feast at 12 M., and an address from the State Lecturer at 2 P. M. All open to the public, and, notwithstanding a most exciting election for supervisor in the Stockton district was to take place on the same day, the Grangers turned out almost to a man, with visiting Grangers from some five or six surrounding Granges, making a most interesting time, both as to numbers and real Grange interest. The work of installation was conducted by District Deputies, Bros. Wolf and Overhiser, who are most eminently versed and qualified for the work, and in their efficient way made the ceremony pleasant to all present. The harvest feast was in every sense of the word a success, such a success as Grangers alone know how to make. In this particular and in the retiring speech of the Worthy Master, Bro. Phelps, and the speech of the installed Master, Bro. Gratton, was found no small part of the interest.

The lecture being announced at 2 P. M., and after all had well partaken of the feast, it was my pleasure for one and a half hours to address a most intelligent and attentive body of Grangers and citizens on the principles and objects of the Grange movement. I was heard with enthusiastic approval, as manifested by their cheering responses, and after the lecture speeches were made by Bros. Overhiser, Wolf, and many others, citing affirmative matters not touched upon by the Lecturer. In a word, the meeting at Stockton was a grand success, and I hope as much good and great benefit received by all present as was appropriated by the Lecturer.

It being Saturday, I was taken possession of by Bro. Overhiser and, in company with his good Granger wife, waited behind a good pair of roadsters to his well appointed and most efficiently conducted Grange farm, some four miles distant from Stockton, where, in company with Bro. and Sister Hancock, of Sacramento Grange, we were a happy company till the Monday following. Bro. Overhiser's farm ought to be visited by every Granger in the State interested in Short Horns. Here is a whole dairy of pure blooded Durhams—bred and selected especially for their milking qualities as well as their beefing qualities, which with his young stock of one and two-year-old calves of the same pure blood, is a sight to gladden the eyes of any Granger, especially those interested in stock. Here is the place for farmers wishing to get an animal bred especially for milk and beef to come and make choice without fear of being disappointed, for nowhere in my visits as State Lecturer, as yet, have I met with such perfection as I found here in seeing Durham cattle so well adapted to the dairy as well as to the beef market. To see alone is to fully appreciate.

Bro. Overhiser is not confined to horned stock only, but has quite a variety in his thoroughbred and graded sheep, and his pure blooded Berkshire hogs. I wish every Granger in California could become as greatly interested in good farming as is Bro. Overhiser, if not in pure blood, in whatever their select kind of farming may be.

Adjoining Bro. Overhiser is Bro. Gratton, the newly installed Master of Stockton Grange, also a large farmer and as devotedly pursuing a specialty of pure bloods as Bro. Overhiser, but not in Short Horns so much as thoroughbred horses, the strain being Black Hawks and Hambletonians; but here description fails me. I can only say that his two-year-old Hambletonian stallion is the very picture of the old Hambletonian, and for qualities of perfection in everything that constitutes the perfection of that noble animal, the horse, this stallion need only to be seen to be so called. Bnt, Mr. Editor, I must away again to the work of the Lecturer, and will promise to give you more next week.

B. PILKINGTON, S. L.

Roseville, Cal., Jan. 13th.

**CO-OPERATIVE ASSOCIATION.**—We learn that a good prospect of success attends the Farmers' Co-operative Association of Western Nevada and North-eastern California. At a meeting of the stockholders, representing a majority of the stock subscribed, held December 16th, 1876, at the hall of Alfalfa Grange, No. 1, Patrons of Husbandry, in Reno, Washoe county, Nevada, the following named members of the Order were duly elected Trustees of the Association, to wit: John Cahlan and Fred Hines, of Honey Lake valley; G. W. Mapes, of Sierra valley; George Alt, T. W. Norcross, J. C. Smith and A. A. Longley, of Truckee valley. On Monday, December 18th, 1876, they met at the court house, in Reno, took the oath of office and filed articles of incorporation in the clerk's office of Washoe county. The Board proceeded to elect officers of the Association, with the following result: T. W. Norcross, President; J. C. Smith, Vice-President; A. J. Hatch, Secretary; and A. A. Longley, Treasurer. By-laws were framed and the machinery for business will be set in order at once.

### From the Granges.

#### Sonora Grange.

**EDITORS PRESS:**—Sonora Grange is steadily advancing in numbers and popularity. Our last meeting was enlivened by the "harvest feast," and truly it was a feast for body and mind. It takes the Granger sisters to spread a bountiful supply of good things, spiced by soul-stirring music. The remark of one of the invited guests, editor of the *Union Democrat*, is worth preserving to show what the effect was upon observers. On being asked what he thought of the proceedings, he remarked: "Why, this is away up—this is high up." Sure enough, this Granger movement when properly conducted is away high up. Has that declaration no more meaning than merely an expression of words? Just think for a moment of the farmer's condition—socially and educationally—before the advent of the Granger movement, and see what it has accomplished in a few short years. "Away up," yes; and upward it shall go until its beneficent influence will be felt at every rural fireside, and in councils educated and legislative. Its mission is to elevate and educate. To strengthen the weak, to cheer the weary, to help the struggling, smoothing life's rugged road, and lovingly, fraternally following the loved ones to their last earthly resting place. Yea, and much more for the elevation of the husbandman, is the introduction of the heaven-born Granger movement.

JOHN TAYLOR.

Mt. Pleasant, December 31st, 1876.

#### Ferndale Grange.

**EDITORS PRESS:**—Ferndale Grange is in a flourishing condition. They have a few dead branches which they intend to cut off on the first of the new year, for they are getting tired of paying State Grange dues on non-contributing members. The Grangers' Business Association is in a healthy condition. I believe it has been paying considerable over running expenses. The directors are cutting down the expenses with a view of reducing the per cent. charged, so that as times get harder goods at the Grange store will come down in price. The steamer *Continental* continues to make regular trips between Port Kenyon and San Francisco. There is now in the steamer's warehouse nearly 2,000 tons of freight. The weather is extra fine and the farmers are improving it. E. C. DAMON.

Ferndale, Cal., Dec. 18th.

### The Higher Degrees.

We have a letter this week from a good brother in Stockton, inquiring the meaning of a clause in Bro. Wright's late letter, in which he alludes to the higher degrees, and the action of the National Grange on this subject at its last session. We learn, by inquiry of Bro. Wright, that, in referring to these degrees, he had in view especially the fact that some looked upon these higher degrees as tending to produce something like an aristocracy in the Grange, when nothing was further from the intentions of the founders of our Order, nor further from the wishes and feelings of those who compose the National Grange. He assures us that since a few petitions have been received by the National Grange, some asking to have the higher degrees open to all members and others asking to have them abolished, a decided majority of that body favor the opening of the higher degrees to all members in good standing. Indeed, one of the four amendments to the constitution adopted by the National Grange is intended to meet this very want.

The main question is, how can this object be best reached in a practicable, acceptable way. A majority of the members of the National Grange have always, so far, opposed doing away entirely with the fifth, sixth and seventh degrees, because they think this would destroy the symmetry of our Grange work, which has already proved so admirable in uniting and harmonizing our farming interests in self defence. The principle of action so far has been to let well enough alone.

So far as our Worthy Past Lecturer is concerned, he assures us that he heartily hopes the day is not far distant when the instructive lessons of all the higher degrees may be within the reach of all worthy members, as is the case in similar organizations.

**ANOTHER NEW GRANGE.**—District Deputies Meyers, of Colusa county, and Sullivan, of Modoc county, organized a new Grange at Cedarville, Modoc county, January 8th, 1877, with a full list of charter members (30). The Grange is known as the Cedarville Grange, No. 269, William Dodson, Master, and Luther C. Bachelor, Secretary.

**ON THE WING.**—J. W. Webb, Worthy Master of the Lompoc Grange, and president of the New Vineland temperance colony, in Santa Barbara county, has started on a lecturing tour through Kern and Tulare counties, explaining the principles and objects of the proposed colony. We shall no doubt see notes of travel from his ever ready pen, from time to time.

### Notes from the W. Secretary's Report.

From the quarterly report of Bro. Adams, W. Sec'y, we learn the following facts concerning the transactions in his office:

Number of Granges reported for the quarter ending September 30th, 1876.....	137
Representing a membership of.....	8,094
Number of demits granted during the quarter.....	23
Number of members expelled.....	180
Number of members withdrawn.....	75
Number of members died.....	27
Number of initiations (males).....	30
Number of initiations (females).....	34
Number of Granges in the State of Nevada reported for the quarter ending September 30th, 1876.....	1
Representing a membership of.....	62
Number of Granges in Arizona Territory.....	2
Representing a membership of.....	56

#### Consolidations and Surrenders.

Pajaro Grange consolidated with Watsonville, Suisun Grange consolidated with Rockville Grange, Lakeside consolidated with Lassen Grange. The Los Angeles and Atlanta Granges have surrendered their charters.

#### New Granges Organized.

The Raisina Grange, No. 267, Fresno county. Barnard Marks as W. M., and Miss Nannie Booth, Sec'y.

The Phoenix Grange, No. 2, located at Phoenix, Maricopa county, Arizona Territory. John T. Alsop, M.; and Samuel C. Hunt, Sec'y.

Eagleville Grange, No. 268, located at Eagleville, Modoc county. John W. Brown, M.; Robert Minto, Sec'y.

#### Pomona Granges Organized.

Colusa County Pomona Grange, organized October 25th. H. A. Logan, M.; Peter Peterson, Sec'y.

San Diego Pomona Grange, organized December 12th. J. M. Wood, M.; C. C. Watson, Sec'y.

#### Cash.

The total receipts for the quarter ending Dec. 31st, 1876, were \$1,251.66; disbursements, \$1,179.85; balance on hand, \$72.81.

#### Pomo Grange.

**EDITORS PRESS:**—The following preamble and resolutions were adopted by Pomo Grange, No. 216, at a regular meeting held January 6th, 1877:

WHEREAS, Brother John Mewhinney has retired from the chair as Worthy Master of this Grange, having filled the same with honor to himself and profit to the Order, and this Grange in particular, and with uniform courtesy to all.

Resolved, That we tender him the sincere and hearty thanks of this Grange for the prompt and uniformly courteous manner in which he has performed the duty of Worthy Master, from its organization (for the past two years), till the present time.

Resolved, That we still expect the benefit of his experience, aid and advice in the future conduct and welfare of this Grange and the principles of the Order at large. And though he has retired from the chief post of labor in this Grange, his duties as a Patron are not ended; and we feel confident that he will always be found at the front wherever duty may call.

Resolved, That a copy of this preamble and resolutions be placed on the records of this Grange; and a copy be sent to the *RURAL PRESS* for publication.

Pomo Grange still survives, although it has been a hard struggle for the past three months; however, the prospects are more encouraging, now that the farmers are through seeding and have more time to attend Grange.

The officers elect for the ensuing year were duly installed by Past Master Mewhinney on Saturday, January 6th, and with the exception of Secretary, we have a good set of officers.

A new feature is being established in our Grange, which we think will prove of interest as well as some amusement. It is a Grange paper, edited by three brothers of the Order, and will be read semi-monthly. It is devoted to the interests of the Grange.

E. V. JONES,

Sec'y Pomo Grange.

#### Pomona Grange in San Diego.

C. O. Tucker, Deputy, writes to the *Patron* from Ballena: On December 13th I had the pleasure of organizing, at Bernardo, San Diego county, a Pomona Grange. The following Granges were represented: Ballena, Bear Valley, Bernardo, Poway and San Luis Rey. Below is a list of officers elected:

J. M. Woods, of Poway Grange, M.; W. H. H. Dinwiddie, of Bear Valley Grange, O.; C. O. Tucker, of Ballena Grange, L.; Wm. Burroughs, of Poway Grange, S.; A. K. Cravath, of Poway Grange, A. S.; Jas. P. Jones, of Bernardo Grange, C.; Z. Sikes, of Bernardo Grange, T.; C. C. Watson, of Poway Grange, Sec'y; L. J. Crombie, of San Luis Rey Grange, G. K.; Mrs. C. O. Tucker, Ceres; Mrs. J. P. Jones, Pomona; Mrs. W. H. H. Dinwiddie, Flora; Mrs. Eva Cassady, L. A. S.

The utmost unanimity prevailed among the delegates present, consequently the affair passed off very pleasantly. At present I believe there is a better feeling existing among the Granges in this county than at any prior time since their organization.

C. O. TUCKER, Deputy.

**CHANGE OF OFFICERS IN ROSEVILLE GRANGE.**—Bro. John McClung having declined the position of Master, which he had been elected to, Nicholas Mertens was elected Master and Robert Ward, Secretary.



## Election of Officers.

ANTELOPE GRANGE, No. 100, COLUSA Co.—Election, Dec. 23d: H. A. Logan, M.; John D. S. Taylor, O.; Wm. Rosenberger, Sec'y; John Sites, S.; Wm. Maxy, A. S.; M. H. Shearen, C.; Laura E. Sites, T.; Lida M. Peterson, Sec'y; P. Peterson, G. K.; M. H. Shearen, Ceres; Sister Clark, Pomona; Sister Logan, Flora; Miss Rebecca Logan, L. A. S.

BISHOP CREEK GRANGE.—L. A. James, M.; W. G. McCroskey, O.; A. J. Dell, L.; John Mills, S.; Homer G. Plumley, A. S.; M. H. White, C.; Mrs. Mary A. Clark, T.; George Collins, Sec'y; Gilbert C. Gracie, G. K.; Mrs. Abigail Cromwell, Ceres; Mrs. E. McCroskey, Pomona; Mrs. Virginia E. Custer, Flora; Mrs. M. H. White, L. A. S.

CLOVERDALE GRANGE, No. 63.—C. H. Cooley, (re-elected), M.; J. G. Heald, O.; C. P. Moore, L.; M. V. Stockwell, S.; William McMullen, A. S.; Mrs. E. N. Cooley, C.; D. M. Wambold, T.; Mrs. H. P. Tucker, Sec'y; W. M. Howell, G. K.; R. H. Heald, Ceres; Mrs. E. Moore, Pomona; Mrs. M. F. Sink, Flora; Mrs. Helen Wambold, L. A. S. Trustees, C. P. Moon, A. F. Tucker, J. G. Heald.

DANVILLE GRANGE, No. 85.—D. N. Sherburner, M.; S. L. More, O.; M. W. Hall, S.; John Stern, L.; Louis Wood, A. S.; S. F. Ramage, C.; R. O. Baldwin, T.; C. E. Howard, Sec'y; W. Z. Stone, G. K.; Miss Olive Stern, Ceres; Miss Almira Sydnor, Flora; Miss Libby Wood, Pomona.

ELK VALLEY GRANGE, No. 255, DEL NORTE Co.—Election, Dec. 30th: J. R. Nickel, M.; J. K. Valentine, O.; David Griffin, L.; John Young, S.; Geo. Walton, A. S.; G. W. Emery, C.; Mrs. G. W. Emery, Sec'y; Alexander Gordon, T.; Oliver Charter, G. K.; Mrs. Walton, Ceres; Mrs. Young, Pomona; Mrs. Fairchild, Flora; Mrs. Nickel, L. A. S.; E. W. Smith, Joseph Bertsch and Joel Fairchild, Executive Committee.

FAIRVIEW GRANGE, No. 39, LOS ANGELES Co.—Election, Dec. 9th: David Evey, M.; B. F. E. Kellogg, O.; Edward Evey, L.; Wm. Hill, S.; Geo. Greely, A. S.; Amos Wright, C.; J. W. Clark, T.; J. M. Quinn, Sec'y; R. D. Curtis, G. K.; Mrs. Mary J. Curtis, Ceres; Mrs. Mary O. Kellogg, Pomona; Mrs. R. A. Evey, Flora; Miss Laura Evey, L. A. S.

GRASS VALLEY GRANGE, No. 256.—Election, Dec. 9th: S. L. Lewis, M.; Wm. Stevens, O.; Chas. Barker, L.; J. W. Stewart, S.; Chas. H. Smith, A. S.; Cyrus R. Hill, C.; Thos. Paine, T.; Alex. Henderson, Sec'y; Samuel Alderman, G. K.; Susan S. Perran, Ceres; Emma Le Duc, Pomona; Kate McGuire, Flora; J. B. Stevens, L. A. S.

GUENOC GRANGE, No. 20, LAKE Co.—Election, Dec. 28th: J. W. Connelly, M.; A. H. Cheeney, O.; W. C. Greenfield, S.; J. P. Brandt, A. S.; Mrs. Cheeney, C.; A. A. Ritchie, T.; W. Whittington, Sec'y; T. C. Pyle, G. K.; Mrs. Connelly, Ceres; Mrs. Murphy, Pomona; Mrs. Ritchie, Flora; Miss Hamilton, L. A. S.; A. A. Ritchie, A. H. Cheeney, J. M. Hamilton, Trustees.

INDIAN VALLEY GRANGE, No. 259, PLUMAS COUNTY.—G. W. Boyden, M.; A. J. Ford, O.; E. W. Taylor, L.; J. A. Hickerson, S.; D. Hedrick, A. S.; J. T. Taylor, C.; R. Thompson, T.; R. A. Thompson, Sec'y; J. C. Sargent, G. K.; Miss Mary M. Thompson, Ceres; Mrs. Lydia Lee, Pomona; Miss Rachel S. Blood, Flora; Miss Mary Ford, L. A. S.

LASSEN GRANGE, No. 253.—John Cahlan, M.; J. Jensen, O.; J. M. Stewart, L.; F. Hins, S.; J. N. Jones, A. S.; E. Winchester, C.; T. N. Long, T.; C. W. Moore, Sec'y; G. Pullen, G. K.; Miss Nellie Johnston, Ceres; Ada Myers, Pomona; Emma Hurlburt, Flora; Belle Johnston, L. A. S.

MAGNOLIA GRANGE, No. 261.—E. M. Denton, M.; Dan. Bilderback, O.; I. N. Ritchie, L.; C. C. Ragdsdale, S.; Wm. Cunningham, A. S.; J. R. Nickerson, C.; James Gautier, T.; P. A. Womack, Sec'y; Wm. Sweet, G. K.; Miss E. Skinner, Ceres; Mrs. Higgins, Pomona; Miss Flora Denton, Flora; Miss Joey Denton, L. A. S.

NORTH STAR GRANGE, No. 254.—J. L. Lake, M.; J. D. Bailey, O.; J. G. Anthony, L.; R. J. Brown, S.; Ensign Rexford, A. S.; J. L. Becksted, T.; F. C. Bailey, Sec'y; Sister C. Brown, C.; J. D. Kirkham, G. K.; Mrs. C. E. Anthony, Ceres; Miss McKay, Flora; Mrs. A. Rexford, Pomona; Mrs. S. J. Hanes, L. A. S.

PARADISE VALLEY GRANGE, No. 5, STATE OF NEVADA.—Election, Dec. 2d: C. A. Nichols, M.; W. A. Sperry, O.; J. Blase, L.; D. A. Bradshaw, S.; W. H. Holt, A. S.; Mrs. H. M. Burge, C.; R. Burge, T.; Mrs. S. A. Nichols, Sec'y; C. Choate, G. K.; Mrs. Emily Sperry, Ceres; Mrs. C. Choate, Pomona; Mrs. E. J. Riley, Flora; Miss F. A. Pierce, L. A. S.

PLACERVILLE GRANGE, No. 242.—W. Wiltse, M.; J. P. Allen, O.; A. S. Cook, L.; W. Lewis, S.; Peter Vignat, A. S.; Jacob Lyon, T.; F. M. Dickerhoff, Sec'y; Frank Logan, C.; Mrs. Mary J. Cook, Ceres; Miss Mary Reynolds, Pomona; Miss Mary Hart, Flora; Miss Katie Allen, L. A. S.

RIVERDALE GRANGE, No. 251.—J. H. Thomas, M.; Thomas Thompson, O.; H. L. Benson, L.; C. E. Swift, S.; J. M. Swift, A. S.; A. F. Pomeroy, C.; L. Lewis, T.; Miss E. V. Thompson, Sec'y; W. Chamberlain, G. K.; Mrs. E. Combs, Ceres; Susie E. Benson, Pomona; Miss Ada Swift, Flora; Mrs. Sarah Thomas, L. A. S.

RISEING STAR GRANGE, No. 177.—Election, Dec. 2d: J. N. Canfield (re-elected), M.; A. C. Lawrence (re-elected), O.; H. R. Shaw (re-elected), L.; W. H. Thornburg (re-elected), S.; Daniel Vanclef (re-elected), A. S.; Lizzie Gardner, C.; W. W. Hager, T.; G. E. Hinckley (re-elected), Sec'y; N. B. Vanclef (re-elected), G. K.; O. S. Thornburg, Ceres; Delilah Canfield, Pomona; Rosa Lawrence, Flora; Lizzie Shaw, L. A. S.; Hannah Vanclef, Trustee for three years.

SAN BERNARDINO GRANGE, No. 61.—J. E. Pratt, M.; C. H. Mero, O.; K. Shelton, L.; Geo. King, S.; D. Wixum, A. S.; J. Cameron, C.; Mrs. Geo. Lord, T.; J. D. Osterhout, Sec'y; Mrs. E. P. Clyde, G. K.; Mrs. M. Carter, Ceres; Mrs. G. E. Bradford, Pomona; Miss E. Ballard, Flora; Mrs. D. Kathbun, L. S.

WASHINGTON GRANGE, No. 228.—S. W. Solars, M.; D. R. McIntire, O.; A. A. Van Saneth, L.; John Harris, S.; Wm. Hall, A. S.; M. L. Cook, C.; Charles Bamert, T.; W. B. Stamper, Sec'y; Nelson Dill, G. K.; Mrs. A. E. Blyther, Ceres; Mrs. Mary Parvin, Pomona; Miss Melissa Shelbourn, Flora; Miss Rosa Stamper, L. A. S. Trustee, Jacob Harris.

## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

FRUITS AND FLOWERS.—*Independent*, Jan. 13: Freshly plucked oranges, with stems and leaves attached, quite ripe and looking finely, have been laid on our table this week from the orchard of E. L. Beard, Esq., at Mission San Jose. Thanks for the present. They afford another instance in proof of the fact that our foothills are just as good for semi-tropical fruits as the environs of Los Angeles. In truth, there is quite a little frost in winter in the warm belt under our foothills as there is in the south of the State, where so many oranges are produced every year. Mr. Beard has also left with us branches of almond trees growing on his place that are now in full bloom. They were in bloom on the 4th of January, and are still in bloom.

DEEP BORING—IN VAIN.—Mr. Courtney bored an artesian well recently on H. Leitch's land, near Alviso, but after going down 672 feet and finding no good flow of water, Mr. Leitch got discouraged and gave up the enterprise, although water has usually been found in all that region.

## COLUSA.

PLOWING LAND.—*Sun*, Jan. 13: Some years ago—just which, we have forgotten—Maberry Davis, of Union township, had a piece of summer-fallow, upon which the mustard sprang up pretty thick in the spring, and, in order to kill the mustard, he commenced plowing it over again, but did not get over the whole field. It was all sown in the fall before the rains, and was followed by a very dry season. On the land plowed twice he cut 41 bushels to the acre, and left more on the ground than grew on the other—just across the furrow! Our attention was also called, years ago, to the experience of Isaac Howell, of Grand island, in sowing wheat across a piece of land he had cultivated in broom-corn the year before. While his winter plowing, right alongside, sown at the same time, did not send a single head out of the boot, the broom-corn land yielded 20 bushels. Twice plowing will make from five to ten bushels difference in a good season, and from 10 to 25 of a poor season. The second plowing can be done for \$1.25 per acre, and, as is usually the case, when the teams have nothing else to do, for a great deal less. The present season, where land has been well plowed and thoroughly pulverized, the wheat is looking much better than where it has been poorly put in. We noticed when J. P. Bainbridge was building a levee for Messrs. McConnell, Rowland & Randall, this fall, where the land had not been plowed he soon found dry earth, but on a piece of summer-fallow, that had been well done, he never did find dry ground, although he had to take out earth three feet deep. We are well satisfied that most all the land in this county, if given two deep plowings and allowed to fallow, will produce a fair crop of wheat the driest season we have yet had.

GRAND ISLAND.—*Antioch Ledger*, Jan. 6: Grand island is now securely leveed. Several hundred men were engaged in the work during the past summer, and completed the levee on Saturday last. By the floods of last winter, the loss in crops and stock on Grand island amounted to over half a million dollars, but levees have now been constructed of sufficient strength and dimensions to withstand both tides and freshets.

## EL DORADO.

THE SEASON.—*Republican*, Jan. 11: A number of almond trees in this vicinity are now in bloom, and if there is not a change in the weather soon we may expect to see all kinds of fruit trees in blossom.

## LOS ANGELES.

TREES FOR CHINA.—Los Angeles is sending her fruit trees to China, and at some time in the future the United States may import China oranges from southern California stocks. T. A. Garey, the well known Los Angeles orchardist, shipped 11 cases of orange and lemon trees for China by the last steamer. This shipment comprised 15 varieties of budded orange and lemon trees.

SANTA ANA.—*Express*, Jan. 13: Many of the farmers in the Santa Ana valley are dry-plow-

ing and seeding their ground, and should the season prove unfavorable a sufficient amount of hay and grain will be raised to supply all necessary demands. Speaking of Rose's vine in Santa Barbara county, which produced 812 pounds of squashes this year, the Santa Ana *News* says: "That vine would not be a decent shadow for the majority of vines in Gospel swamp. J. H. Moesser has a vine that produced this year 1,701 pounds of squashes, and more than a dozen vines that produced over 812 pounds."

## MENDOCINO.

THE SEASON.—EDITORS PRESS: Farmers of this locality are much in need of rain, as there has been none fallen since the 17th of November. The weather since has been cold, clear and frosty. The total number of frosts up to date is 52, with fog two mornings. Grain of all kinds is getting scarce, as also is flour, and the cry is, when will it rain? Weather prophets say we need not look for much more rain, but time proves all things, consequently we will have to wait and by so doing we may know exactly the result.—E. V. JONES, Pomo.

## NAPA.

PLOW FACTORY.—*Register*, Jan. 13: A short visit yesterday to the factory where Myers's Excelsior plows are manufactured, enables us to give a short description of a valuable industry that has been carried on for four weeks in our midst. The building used is that formerly occupied by the Napa plow company, situated near the old railroad bridge. Mr. Myers brings with him the experience of six years in manufacturing plows of all kinds, and besides, is competent to do all the wood-work about a plow, or any other agricultural implement. The making of gang plows will be the chief industry pursued, but single plows will also be manufactured, and next season the proprietor hopes to be able to turn out any agricultural implement whatever. At present he is engaged in filling a contract for 100 gang plows of the "Myers Excelsior" pattern, for Linforth, Kellogg & Co., of San Francisco. A small amount of machinery and an engine are in the building, but the greater part of the work is done by hand. Five men are all that are employed in the factory at present, but as soon as the season opens, a force of 15 or 20 men will be put on.

## PLACER.

GREEN BARLEY.—*Sacramento Valley Agriculturist*: The other day we were shown by W. J. O'Brien, of this city, a specimen of barley, from the ranch of his father-in-law, P. Bannon, near Auburn, Placer county, which was over four feet long, green and thrifty, and was only an average of a field of grain which is now growing on Mr. Bannon's farm. How is that for New Years? It does not look as if the land upon which it is growing is very thirsty. What would some of our Eastern, snow-bound farmers think to see such a luxuriant crop at this season of the year?

## SAN DIEGO.

STATISTICS.—*Union*, Jan. 16: Statistics of last year show the total production of wheat to be 56,000 cents, of which nearly 30,000 cents were exported; wool, 1,800,000 pounds, of which 1,400,000 were exported by sea; honey, 1,277,000 pounds, of which the shipments are as follows: Cases averaging 55 pounds, 11,135; strained and extracted honey, 151,131 pounds. There is yet considerable honey to go forward. The next steamer will take two car-loads. The other exports are: Beeswax, 7,450 pounds; whale oil, 145,000 gallons; salt, 100,000 pounds; dried fish, 193,000 pounds; hides, 162,670 pounds; tallow, 15,000 pounds; potatoes, 74,000 pounds. The importation of lumber and bee hive material was larger than in any preceding year. The general business of the year has been excellent. There were no failures in the city and county, and the delinquent tax-list is the smallest ever known.

## SAN JOAQUIN.

A FEASIBLE IRRIGATION PROJECT.—*Stockton Independent*, Jan. 10: Our farmers will generally admit that if a supply of water could be obtained at a reasonable cost to irrigate their land in seasons of drouth, its value would be greatly increased, and the benefits that might thus be secured could hardly be overestimated. Notwithstanding their readiness to make this admission, all seem to hesitate when it is proposed to take steps for securing the use of water to fertilize their land and render it permanently productive, for the reason that the general impression seems to prevail that the cost of diverting water from the natural channels upon the uplands would be too great to render it possible for the work to be done by the farmers themselves. There is reason to believe, however, that a considerable portion of this county could be irrigated from the Mokelumne river by an expenditure of money and labor not in excess of the capabilities of those parties who would be benefited. It is possible to divert the water of the Mokelumne from its channel at a point in the vicinity of Camanche and to bring it across the low divide between the Mokelumne and a depression, or dry creek, which in the rainy season becomes one of the tributaries of the Calaveras and through which the water could be conducted with comparatively little cost over a large area of territory. In the season of the year when irrigation can be made most profitable there is generally an abundance of water in the river, and it could be appropriated without infringing upon any acquired right to its use. This subject is worthy of the careful consideration of land owners in that portion of San Joaquin

county, as by concerted and intelligent efforts there is no doubt of their ability to guard against the disastrous effects of the drouths which may be expected to occur periodically in this State.

## SANTA CRUZ.

FARMERS' ASSOCIATION.—*Courier*, Jan. 12: The association met at the Court House on Saturday, Jan. 6th, 1877. President J. S. Mattison in the chair. Minutes of last meeting read and approved. Philip Frank was proposed and elected a member of the association. A large number of vegetable seeds from Washington were distributed. A large quantity of broom corn was received, and any who are desirous of obtaining some can do so by calling on the Secretary, R. Conant, providing they will agree to report the results. The next meeting will be held on the first Saturday in February, 1877.

## SISKIYOU.

SCOTT VALLEY.—EDITORS PRESS:—Under the head of "Large Talk in Agriculture," S. Whitmore, writing from San Diego under date of December 18th, 1876, takes pains to criticize your correspondent's notes of Scott valley, Siskiyou county, and I think made use of some pretty "large" talk himself, as I shall take the pains to prove. I am only a stranger here, but I call this valley home, and do not like to see it misrepresented by any one through the press. I have written to the assessor for the statistics and will soon be enabled to lay before the readers of your valuable paper facts that can't very well be disputed, I hope. Mr. S. says: "Now, I lived in Scott valley about nine years in different parts, and have been all over the valley from side to side and from end to end, etc."

And coru; I never saw ten acres of corn all the time I was there." I showed this to a neighbor this evening, who said: "Pshaw, that's nothing; there's an old blind squaw near here that was born and raised in the valley and never saw one acre of corn in her whole life." Does Mr. W. know the ranch owned by Larin Bills, on French creek, and known as the Bills ranch? Well, if he can see at all, and will come up here now he can see 40 acres on that one ranch that was in corn this season (1876). I am informed by a gentleman well posted in real estate in Scott valley, that your correspondent will be sustained by the facts. I shall take pleasure in showing Mr. W. that Scott valley is not now what it "useter was," and that we can afford to talk big, and sustain such large language with facts and figures. Possibly I have been the means of some "poor immigrants" coming to this county and finding homes here, and may be more will follow. We still have room for rich and poor. More anon.

R. D. NUNNALLY.

French Creek, Etna Mills, Cal.

[Let us have the facts.—Eds. PRESS.]

## SONOMA.

FINE HORSES.—*Petaluma Argus*, Jan. 12: In saying that there is no inland portion of the Pacific coast of the extent embraced within a radius of ten miles of Petaluma, in which there are so many fine horses as here, we assert a fact that is admitted by all who are conversant with the facts; and if we were to substitute the words United States for Pacific coast, we doubt whether the statement could be successfully refuted. A much greater number of horses that have become celebrated for their speed and other valuable qualities, have been bred here within the last two years than in any other locality west of the Mississippi, and more interest is felt in the matter than elsewhere in the western half of the country. We are glad that it is so, and that there is not only no abatement but a continually increasing interest among our farmers and stock-raisers. Petaluma is the horse-raising center of the Pacific States, and breeders from far and near are continually coming here to purchase good stock. The recent importation of Norman stallions, which has heretofore been mentioned in the *Argus*, and the fact that other importations are to be made from time to time, is a fact upon which our people, in whatever business they may be engaged, have good reason to congratulate themselves. It is the means of bringing many thousands of dollars to our locality, and confers large benefits upon all business interests. The exhibit of horses at our fairs for the last few years have been much the best that have been made at any district fair in the State, and it is safe to say that the exhibition this year will be one of the very best that has ever been made at any State, district or county fair in the United States. Horsemen everywhere are invited to come and see for themselves if what we say is not true.

CHARCOAL.—A great amount of charcoal has been manufactured in Green valley and vicinity within the last few years. The parties mostly engaged in the business are Italians. Quite a number are now at work in the heavy timber on the west side of the valley. They pay the owners of the land 50 cents per cord for the timber as it stands. Most of the coal is hauled to the railroad station near Forestville, and thence shipped to San Francisco.

## TULARE.

WHAT SOME SHEEP MEN ARE DOING.—*Delta*, Jan. 13: A number of our sheep men are turning their sheep into hogs, and this is how it is done: They purchase a number of lean swine to correspond with the number of sheep to be disposed of. The sheep are then slaughtered, their pelts dried, the fat tried out into tallow,





### Through the Lilacs.

Among the unfortunate victims who perished at the late Ashtabula disaster was Mr. Frederick W. Marvin, a young man about twenty-two years of age, a nephew of the senior editor of this paper. Mr. Marvin was a young man of much promise and the only child of a more than widowed mother, in feeble health and altogether dependent on him for support. He was among those who could not be identified. Some few years ago his mother, who is an occasional contributor for different publications, penned the following lines, which have never before been in print; but which have now a touching significance. She will never more watch for his coming "through the lilacs;" but she has the consolation of knowing that when he left her "to seek a name for good or ill," he returned in due time with unmistakable evidence "that all was right," and she saw "through the lilacs" that her boy was "pure." He will come no more to her, but she will go to him.

By a low window stands my easy chair.  
Many pleasant hours I have rested there,  
Watching, through the lilacs, up the little hill  
Where the road comes winding down, for my Will,  
With a mother's searching eye, reading well  
Whether tale of joy or woe he would tell.  
When he came with bound and with lips closed tight,  
I knew it had been better than—"all is right."  
When he came whistling, loitering by the way,  
It had been "just an ordinary day."  
But when he came with a slow, measured tread,  
Looking straight at my window, I would dread  
To hear the story of that day. I knew  
There had been chiding—by his conscience, too.

At length, not long ago,  
He reached his early manhood—it must be so  
With every other's boy—and went away  
To seek a name for good or ill. Some day,  
If he lives, he will come back. I shall see  
Him thro' the lilacs, coming, and shall be  
Perhaps wild or faint with a mother's joy,  
To welcome back my long-gone, darling boy.  
Ah, then, by what sign can I rightly tell  
If it hath been better than "all is well"—  
An ordinary day, or a sinful one?  
I know not now how I shall read my son,  
But I know there will be a way, true and sure,  
To see, thro' the lilacs, if my boy be pure.

### California.

O Golden Land, with skies so warm and tender,  
With fragrant breath of never-dying flowers,  
With solemn mountains robed in purple splendor,  
And built with rocky battlements and towers.

I love the beauty of thy quiet canyons,  
Sunlighted through the summer's dreamy hours,  
With orange bloom, and shining palm and hazyans,  
And the rich fruitage born of winter's showers.

In thy green aisles and through thy sounding arches,  
Float tenderest whispers of far tropic climes  
And dreams of Italy, with glowing masses  
Of sunset clouds, and deep blue skies and vines

On sunny slopes, lifting their purple clusters,  
All kissed to richest ripeness by the sun,  
And soft airs from the Adriatic waters,  
With every hour of thy fair delight, O come.

—Santa Barbara Press.

### East and West.—No. 10.

[Written for the RURAL PRESS by PHILMORE.]

The allusions made in last week's RURAL PRESS to the death of Vanderbilt and the probable building of the ship canal via Lake Nicaragua call to mind an experience which may be interesting at this time. February 1st, 1852, the writer sailed from New York for San Francisco on the steamer *Prometheus*, one of the new line of steamers via Nicaragua, owned by C. Vanderbilt.

The winter had been an unusually severe one, so much so that Long Island sound was almost impassable in consequence of the ice. When we came through from Stonington one might have walked beside the steamer for a great part of the way, and we could never have gotten through had it not been for the powerful machinery and enormous ice-breakers that were attached to the steamer's prow. Such was the winter of '51 and '52 in and about New York. It did not last thus many days, for in less than a week's time we were amongst the West India islands, and light clothing took the place of our thick woollens of the north. Our first view of Hayti was like a beautiful dream. We were just getting over our sea-sickness, and had given up our determined revenge upon the one that wrote "A Life on the Ocean Wave" when the beautiful vision burst upon us, filling all with delight and inspiring some with poetry that perhaps has never found utterance in words. It was early in the morning when we steamed past the northernmost point, that lingered in view all day, like the spell of a happy dream that is reluctantly broken. As the sun grew red in the west, tinting the fleecy clouds that hung in splendor over the Queen of the Antilles, the scene was changed, and Cape Tiburon loomed up before us in all its grandeur, upon

which we gazed intently until the veil of night shut out the scene and left us but the remembrance, and the frail planks upon which we stood. The path the next day was o'er the deep, with here and there an island, that distance reduced to a mere speck, without form or beauty. Still onward the good ship goes,

"With form before and fire behind,  
She rends the clinging sea  
That flies before the roaring wind,  
Beneath her hissing lee.

There is something exhilarating in the idea that you have a power beneath you. It does not matter whether it be a spirited horse, a locomotive or a great ship. You become brave as your confidence increases, until you forget danger and rush on to destruction and death.

A few more days brought us to San Juan del Norte, which was the terminus of our Atlantic voyage. From there we took small steamers up the river for Castillo rapids, where we changed again to the larger boats upon the lake. There was a great deal thought of comfort in those days, but it was then as now by those that had the least of it. The storm-hound traveler that, weak and cold and hungry, plods his weary way toward home, thinks of the blazing fire and well filled board that awaits him and is, perhaps, comforted in the thought; while the indolent and overfed turn from it entirely oblivious to the blessings they possess. So doubtless it was to the owners of the line upon which we traveled, but with all the anticipated happiness in store for those California-bound passengers, a great many would then have been willing to have exchanged their prospective comforts for those Mr. Vanderbilt then enjoyed. Some went so far as to say they thought he had more of the good things of this world than he was entitled to; while, of course, they on the contrary had less.

Those that came to California in early times need not be told of the discomforts, nor of the positive sufferings that attended a voyage hither at that time. Old Californians cannot but remember the fearful mortality that accompanied every steamship that entered this port in those early days. Hundreds were cast into the deep from a single vessel, and the survivors, more dead than alive when they arrived, were never after what they were before. The seeds of disease were sown that in the end claimed the victim. So it was in this instance. A thousand passengers sailed from New York well and strong, two hundred of whom never reached San Francisco. Some sickened and died on the isthmus and others at sea.

We arrived at San Juan del Sud but to be disappointed, as the steamship *North America* that was to take us on our way was nowhere in sight. A description of that place at that time might not be uninteresting, but this article will not admit of it. Suffice to say it was a perfect sink of filth and disease, both moral and physical, so that when our great steamer hove in sight we felt as though we were about to be snatched from the jaws of death, and go on our way rejoicing. And so we did, but our rejoicing was short lived, for within one week we were cast away and wrecked upon the coast of Mexico, to make our way to San Francisco as best we could. It were long to tell, but after suffering privations and hardships for many a weary week and month, we finally reached this haven of rest, but we found no rest. The first night was our grand reception. About 41,000 called upon us and manifested the strongest attachment, the marks of which were strikingly apparent. It was a stirring night, indeed, and will not soon be forgotten. We had seen a flea once before, a dead one; we purchased the privilege of a penny showman and saw the scaly rascal cemented to a plate of glass—all for one cent. Here we were admitted free to the whole grand menagerie.

A few days in San Francisco pretty nearly convinced us that the country was "played out," as the miners expressed it. All talked of the fall of '49 and the spring of '50, when "one ounce" (\$16) was the usual compensation for a day's work. When any diggings would not pay that it was considered time to migrate. Many a restless miner has left \$10 a day in search of something better. That that would have been glad to have received \$1 per day at home were here dissatisfied with ten times that, and that feeling is not entirely dead to-day.

REFINEMENT.—Refinement is not fastidiousness. It is not luxury. It is nothing of this kind. It is far removed from excess or waste. A person who is truly refined will not squander or needlessly consume anything. Refinement on the contrary is always allied to simplicity and a judicious and tasteful employment of the means of the good and happiness which it has at command. It seeks to divest itself of superfluities, and aspires continually to the utmost possible purity. Refinement leads to personal cleanliness and elegant neatness, good taste and simplicity in dress. All "loudness" or flashiness is repugnant to its spirit. In its home and surroundings the same chasteness and natural grace are maintained. The abode of genuine refinement and a mere pretender to it are very different. In the former you will find no excess, gaudiness or false glittering; but the latter abounds in it. In personal manner, refinement is most conspicuous. A man of refinement is always polite without effeminacy, and considerate without stiffness. Display and ceremony are identical without refinement like that of the heart, which impels its possessor to show on all occasions a regard for the feelings of others. No adherence to etiquette can compare with it for the spontaneous observance of true and gratifying politeness.

### Faithful Dora.

The blood-red ribbons of the storm-threatening sunset were fluttering in the west; the huge oak trees and pines of the forest were murmuring ominously, and the one chimney of the little farm-house on the edge of the woods sent up its blue column of smoke, like a cheery hand beckoning to the way-worn traveler, over the hill. And how bright and cozy the interior of the kitchen looked, as Dora Klein stood on the threshold, cold, hungry and inexpressibly weary. A little girl, blue-eyed and blonde-haired, scarcely yet 16, with shy aspect and a shrinking mien, she had walked all the way from the city, seeking vainly for work at the various habitations that she had passed, and now at nightfall she was nearly discouraged.

"A girl?" said Mrs. Myers, dubiously, as Dora Klein preferred her meek request. "I did talk of hiring a girl, but I don't know anything about you."

"Please try me," faltered Dora. "I am so tired, and I know not one in all this whole county, and indeed, indeed I will do my best to serve you."

Mrs. Myers turned to her husband, who sat by the fire, trotting a chubby two-year-old on his foot. "What shall I do, James?"

"She's a total stranger," said Mr. Myers.

"But she looks so weary and worn out," "Well, let her come in and stay all night—a bowl of bread and milk and one night's lodging won't break us."

So Dora Klein was admitted into the farmer's little family, and so neat and handy was she about the place, so light and agile in her movements, so quick to learn and steadfast to remember that good-natured little Mrs. Myers had engaged her before she had been in the house a week.

"You women are so impulsive," said the honest farmer, shaking his head. "Suppose she should turn out bad?" "How can she, James?" said Mrs. Myers, indignantly. "She has a face as innocent as baby's."

"My dear, I don't believe in physiognomy." "Nor I, altogether, but I do believe in Dora Klein."

And as the days and weeks went by, Mr. Myers was obliged to confess to himself that so far, at least, his wife's judgment, or rather instinct, had been correct. The last November leaves were fluttering down one clear, cold afternoon, when Mrs. Myers stood at the door, ready to join her husband and baby in the wagon, to attend a merry-making at the nearest village, some miles beyond, while Dora Klein was to remain at home to "keep house."

"Mind you feed the chickens at five o'clock, Dora, and don't forget the little calf in the pen; and if you have any extra time, you can just chop the heart and the apples for the Saturday mince pies, and—"

"Come, wife, come!" called out her husband from the wagon.

"And if the house should catch fire, or anything," added the prudent little modern edition of Martha, "troubled with many cares," "remember, Dora, that the money is in an old stocking under the old board, by the south window, and the silver in a japanned box close to it."

"Yes, m'm," said Dora, kissing her hand to the laughing baby; "I'll remember."

"Some people would say, my dear, that that wasn't a very smart proceeding of yours," said Mr. Myers as they drove away.

"What do you mean?" asked his wife. "To tell that girl just where our valuables are kept."

"James! What an idea! Why, I can trust Dora just as implicitly as I would trust myself." Mr. Myers whistled and drove on, and his wife was vexed with him for even thinking such a doubt of Dora Klein.

But as they were jogging slowly homeward in the November starlight, a neighbor hailed them, joyously, from the top of a load of barrels.

"I say, it's time you were home," said Nehemiah Hardbroke; "your gal's got company."

"What do you mean?" demanded Myers.

"Why, the doors and windows were all open as I came by the cross-roads, just where you can see 'cross the meadow to your back-door, and there was two or three men in the kitchen. I thought it was some of your folks till I see your wagon just now."

James Myers looked at his wife.

Mrs. Myers's white, anxious face returned the gaze.

"Dora is there," gasped the wife; "she would see that—that nothing happened."

"Dora is there," assented Mr. Myers, "that's the very reason I'm worried. Hold the baby firm, and I'll see what speed is left in old Dobbin."

How they rattled over the frosty road, Dobbin galloping as if trying the turf, and the old wood rushing past them like the scenic splendors of a panorama, while to the anxious hearts of wife and husband every moment seemed an age. The house was dark when they reached it. Mr. Myers flung the reins over the dashboard and sprang out.

"Dora! Dora Klein!" he called, but there was no answer save the faint echo of his own voice.

And when the lamp was lighted it shone on a scene of dismay and confusion; but the first corner at which the farmer glanced revealed to him that the loose boards beneath the south window had been torn away, and the treasure nook which had held the silver spoons and the

stocking full of hank notes—their little all—was empty.

"So much for your girl and her friends, Janie!" said Mr. Myers, in the bitterness of his first anger; and Mrs. Myers burst into tears, not so much, after all, at the loss of the money, although that was a serious enough matter, as to think that little Dora Klein, of whom she had unconsciously grown so fond, was unworthy of a kind thought.

That was one side of the little, every-day life story at the cottage; and now let us take a peep at the other. Her master and mistress had scarcely been gone an hour, and Dora was chopping away at the heart, singing some roundelay as she worked, when there was a creaking on the floor, and turning her head, she started to behold two tall, gruff-looking men in the room.

"Who are you?" demanded Dora, with feigned valor, "and what do you want?"

"Don't worry yourself, my lass," said the taller of the twain, gruffly, "and don't make any noise, if you don't want your neck twisted round like a chicken's."

While the other, busying himself in reconnoitering the cupboards and shelves, turned suddenly around with a volley of oaths.

"Nothing but tin and pewter," he snarled. "Where is the silver, girl?"

"We have no silver," said Dora, falteringly. "What should poor people like us do with silver?"

"The money, then? I know there is money; for I saw him come out of the bank, yesterday morning, with a walletful. Quick, we haven't any time to lose."

"It's—it's upstairs, sewed into the bottom of the feather bed, in the spare room," hesitated Dora. "But you won't hurt me?"

"What should we hurt you for?" scornfully demanded the ruffian. "Go up stairs, Jack, and see, while I stay here to keep this girl from raising the neighborhood."

"I shall not scream," said Dora, elevating her head a little contemptuously. "Who is there to hear me if I did? We are two miles from a house."

"And that's true enough," said the man called Jack. "Give us your knife, Casey, and we'll stir up the live geese feathers to some purpose. The gal won't trouble us."

But the heavy footsteps of the men had hardly sounded at the head of the stairs when Dora Klein's languid assumption of indifference vanished. Like a winged sprite she flew across the room, and noiselessly prying up the loose boards with a knife, she caught up the japanned box and the stocking, and, hiding them in her apron, jumped from the low window to avoid the noise of the rusty door-hinge, and struck into the wood at the back of the house.

No hare ever darted more swiftly through the tangled paths of the forest than did Dora Klein, until at last safe in the deepest recesses, where no one who was not nimble as a deer and sleuder as herself could follow. And then crouching down among the undergrowth, she watched and waited. As the night approached, and a friendly dusk crept over hill and dale, she ventured by degrees to approach the side of the woods, where the north star beamed overhead, assuring her of her whereabouts. And when at length the hoarse voices of the two men hurrying down a by-road struck momentary terror to her heart, the afterthought followed with blessed relief—the certainty that they were gone and she was safe.

Mr. Myers and Janie were sitting sadly by the fire that they had just re-kindled, neither of them with any heart to set about the preparation of the frugal evening meal, when the door creaked on its hinges and something glided in pale and silent.

The next moment the japanned silver-box and stocking lay in Mrs. Myers's lap, and Dora Klein was sobbing on her shoulder.

"Why, Dora," exclaimed the former, "What does all this mean?"

And Dora told her story incoherently and full of sobbing pauses; and when it was concluded Mrs. Myers threw her arms around the girl's neck and kissed her again and again.

"James, James," she cried, almost hysterically, "you will never mistrust Dora Klein again."

And James Myers, wiping a stray dewdrop or so from his eyes, confessed that little Dora Klein had been as true a heroine as Joan of Arc herself.—N. Y. World.

THE FATE OF BOOKS.—Out of 1,000 published books, 600 never pay the cost of printing, etc., 200 just pay expenses, 100 return a slight profit, and only 100 show a substantial gain. Of these 1,000 books, 650 are forgotten by the end of the year, and 150 more at the end of three years; only 50 survive seven years' publicity. Of the 50,000 publications put forth in the 17th century, hardly more than 50 have a great reputation and are reprinted. Of the 80,000 works published in the 18th century posterity has hardly preserved more than were rescued from oblivion in the 17th century. Men have been writing books these 3,000 years, and there are hardly more than 500 writers throughout the globe who have survived the outrages of time and forgetfulness.

"STUDENTS' REVIEW."—The students of the Stockton high school have issued a bright sheet, called the *Students' Review*. It will be published monthly, and will be devoted to the best interests of the schools and scholars of the city of Stockton. Its matter will be original and will be furnished by students of the public schools and graduates of the high school, exclusively. The *Review* has our best wishes.



## Entertaining Company.

Do not we sometimes grudge the trouble some friend puts us to or think our time ought to be better spent than in merely entertaining company? But only reminding you of the Christian duty involved, I would look a little farther into this matter of entertaining. I have two friends in my mind as I write. One of them when moving, early last fall, said, "Our new house has one advantage, there is no spare bed-room. Mother has always told me I could not afford to have a spare bed-room and I know it now to my cost, so I'm glad the new house is small." I had been to visit this acquaintance (I can hardly call her friend) once and did not wonder that she could not afford a spare room. Her husband was only moderately well off and they lived, I knew, quite simply, but you never would have thought so from the way I was entertained. The "best things" of every kind were brought out, extra and unnecessary dishes were provided at every meal, and all the usual routine of the house was, I felt instinctively, interrupted by my visit. As all this display tickled the young woman's pride, her spare room was often used; but care was taken to invite those that in some way would "do them credit." No wonder the tax was felt to be a heavy one.

The other friend was one who had the experience of eight or ten years of married life to guide her, and was also not at all well off; but in describing her new home, she said: "And the best of it is, I have a nice spare room." Perhaps she guessed what was passing in my mind, for she added, "You know I have always been fond of entertaining my friends, and I don't mean to give up the pleasure. I shall keep the rule I made when we were married, though."

"What was that?"  
 "Not to make any difference in my manner of living. You know I am kept by home duties from working in any of the societies or associations, so I like to do my share of the work by entertaining. It is not always my intimate friends that enjoy my spare room, but any tired lonely soul that I happen to hear of. But come and spend a few days with me next week and I will give you a practical illustration as to entertaining. Don't say you can't come. I promise you shall be as free to write or read as at home."

The invitation was very tempting and as one of the dear aunts came to visit the children I reached my friend's house about dusk one day the next week. She took me at once to her "spare room." It seemed a sitting room as well as bedroom, with its nice square table covered with an odd looking cloth, its lounge, hanging baskets, books and papers.

I stayed three days with my dear friend, and, as far as any feeling that I was interrupting her in her duties, I might be there still. In the morning she went about her house, for she was a notable housekeeper, while I, accustomed to teach my boy, gladly took care of her little girl's lessons. In the afternoon we worked and wrote and walked out. I have never spent three happier days. The afternoon of the last day she said, "Now do you understand my practical illustration about entertaining?"

"You mean you take your company in your home life? don't put your home life all on one side because you have company?"

"Yes, that's it. Now, just as a matter of curiosity, here is a list of last week's marketing and here of this week's. See how nearly the two weeks correspond. I have not made company of you, inasmuch as I have not baked extra cake or pies, but I've enjoyed you thoroughly."

Ah, that is the secret of entertaining your friends aright! Enjoy your company. If your means are ample and you can indulge in extra dishes, if that is pleasure to you, indulge yourself, but don't think because you ought not to spend money on such things, you must not have company. The best of us grow a little careless and a new face expected among us is a good thing. We brighten up our silver, arrange our pretty vases and books afresh, and do many a little thing that has been left from day to day "to be done to-morrow." But when your friends come, remember they come to see you, not the results of two or three days' hard work. Yet don't feel afraid to leave a friend alone. If your children, house or neighbors need you, attend to the duty and trust to a book, or paper to amuse your friend.—*Christian Weekly*.

**PRESERVING SPIKES OF PAMPAS-GRASS.**—Those who have made house ornaments of pampas-grass and found the spikes sifting out, will be pleased to read the following, which Mr. Henry Vilmarin, of Paris, communicates to the *London Gardener's Chronicle*:—"I have always found the best plan for preserving the spikes of pampas-grass in perfect condition to be the following: Cut the stems before the spikes are half out of the sheaths, store them in a dry place and leave them undisturbed till entirely dried, then remove the leaf which partly envelopes the spikes; the latter will appear perfectly bright, and with a silky gloss on them, only they are rather stiff; then submit them carefully to a goodly heat, either in a well-heated oven, or, better still, before a brisk fire, when each floret will expand, and give the spike the feather-like appearance so much appreciated. The spikes prepared by that process will not drop one of their glossy pistils, and will keep for any length of time if kept free from the tarnishing effects of dust."

## Young Folks' Column.

## Bed Time.

"Baby want to go to sleep?"  
 See the head shake—"No, no, no!"

"Baby want to play ho-peep?"  
 See the face all in a glow!  
 "Baby go behind the door?"  
 See how fast the small feet go!  
 "Baby want to play some more?"  
 See the head shake, tired, "no."

"Baby want to go to sleep?"  
 Nodding now an eager "yes."  
 See the baby quickly creep—  
 Into whose arms, do you guess?

M. B. H., in N. Y. Tribune, Jr.

## How Kitty was Saved.

There was no help for it. Daisy must be drowned—little, gentle, two-months-old Daisy, that was always so good and quiet, and yet so full of life and frolic! Little Katie's heart was quite broken thinking about it. But mamma, who knew best, had said so, and there was no help for it. Three cats took so much milk. And there were so many human mouths to feed. And milk at 10 cents a quart. Poor little Katie! She saw it was best, but it brought grief to her heart.

"If some one would only buy Daisy," she said, clinging to her mother's dress.

"People don't buy kitties," said her mother, stooping to kiss the little flushed, tearful face lifted to hers; but I wish some one would take her as a gift. You wouldn't mind giving Daisy away, would you, Katie? That would be better than drowning her."

"Yes, indeed; a hundred times better!" answered the child, her face lighting up.

That night a little tear-wet face pressed Katie's pillow. The child was offering up her evening prayer. "Dear Father," she said, "please send some one 'long who wants a kitty. It is so awful to have Daisy drowned, and it hurts so! Please, dear Father, be good to Daisy, and don't let her be drowned." And here the little voice grew choked, and great tears fell on the white pillowslip. Soon, however, she fell asleep; her prayer had quieted her.

"Good-bye, Daisy. O! I wish God had thought it best. But he didn't, and you must go." And Katie turned from her brother Reuben, who held Daisy in his strong arms.

"Don't cry, Katie," said the boy, pausing a moment, "I'll do it real quick; she won't suffer a minute. I'll tie a big stone to the bag, and it'll be all over in a jiffy."

Poor, blundering Reuben! He meant to comfort Katie, but his words only made her cry the harder.

Reuben walked along far from comfortable. There was the bag in his pocket and Daisy in his arms, looking up in his face confidently as though he were the best friend she had in the world. In a few minutes poor Daisy would be struggling in the water, and he should have to go back and face Katie and tell her it was all over.

"I declare I can't do it!" he exclaimed half aloud. "I'm going in here to Bill Watson's. Perhaps his folks would like a kitten. Any way, I'll see."

A little girl stood in the doorway.

"Hallo, Jenny! want a kitty? I've brought you a beauty—look!"

Jenny's pretty face flushed with delight.

"O, mother!" she exclaimed, running back into the room, "may I have this kitty? Reuben has brought it on purpose for me!"

Reuben had to tell his story—how they had two other cats at home, how there wasn't milk enough for them all, and how Katie had cried when mother said Daisy must be drowned.

"Don't say another word," interrupted Mrs. Watson. "Leave puss here. I'm right glad of her."

So Reuben put Daisy into Jenny's arms, and with a heart-felt "Thank you, ma'am, Katie will be so glad," he hurried home to tell his sister the good news.

O, how happy Katie was that evening! "God did hear me; didn't he, mamma?"

"Dear little Daisy! I think God must love kitties almost as much as he does little girls; don't you, mamma?"

"His tender mercies are over all his works," murmured Katie's mother to herself, then she turned to her little girl and said:

"God loves and cares for everything that he has made, dear child. I thank him that my Katie has a tender, loving heart toward his creatures; and I am glad, too, that Daisy has found so good a home."—*Dumb Animals*.

**THE BEST RULE.**—"The best rule," says a wise writer, "is to say all the good we can of every one, and refrain from saying evil, unless it becomes a clear matter of duty to warn. Slander is a sin much worse than theft. We should no more bite one with our words than with our teeth. An angry word is as bad as a blow often, and a satirical word is like a sting."

As a cross word begets a word that is cross, so will a kind one beget its own likeness. If people only knew the power they possess in being kind, how much good would they achieve for themselves, how much misery prevent to others.

## GOOD HEALTH.

## Wearing and Washing Flannels.

We read in *Hall's Journal of Health* that the very best thing that can be worn next the skin, in summer as well as winter, is common woolen flannel. One color has no advantage over another, except that white is more agreeable to the sight. Recent scientific experiments, carefully conducted, prove the truth of the popular sentiment, that woolen flannel is the best fabric to be worn next the skin, as it absorbs more moisture from the body than any other material, and by so doing, keeps the body more perfectly dry. Cotton absorbs the least, hence the perspiration remains more on the skin, and being damp, the heat of the body is rapidly carried off by evaporation and suddenly cools when exercise ceases, the ill effects of which no intelligent mind needs to be reminded of. Hence it is that the common observation of all nations leads them to give their sailors woolen flannel shirts for all seasons and for all latitudes, as the best equalizers of the heat of the body.

We believe it to be one of the most difficult things about the house to properly wash flannels so that they will neither shrink nor full up and become hard. Mrs. Beecher has a talk in the *Christian Union* about this, as follows:

Cut up what soap may be needed, and dissolve in a skillet of boiling water. Let it stand on the stove and simmer till every particle is dissolved. Never rub soap on the flannels or allow a bit to settle on them. Nothing "fulls" flannel so badly as rubbing soap on it or letting bits of it settle on the cloth. A place on which a bit of soap has lodged or been rubbed will have a different shade from the rest when dried, making the whole garment look spotted.

Take a small tub, not quite half full of scalding hot or boiling water. Into this pour enough of the dissolved soap to make a rich suds, pour to this some ammonia, prepared from "concentrated ammonia"—a tablespoonful and a half to 10 or 12 quarts of suds is a fair proportion. Stir this and the soap into the hot water till it is all thoroughly incorporated. Then put in the flannels. Two or three articles are quite enough to soak at one time. Press them well under the water, but turn them over in the water occasionally while they are soaking. Let them remain in the water till it is cool enough to put the hands in without discomfort. While washing keep a good quantity of water at boiling heat on the range for rinsing purposes and to keep the suds as hot as it can be used. Before one piece is washed and ready to be wrung out, fill a small tub half full of clear hot water. Into this stir a little more "blueing" than would be used for cotton or linen. Shake out each piece as soon as washed quickly, and throw at once into the hot rinsing water.

Rub the flannel as little as possible, but draw it repeatedly through the hands, squeezing rather than rubbing. Harsh rubbing thickens and injures the fabric. Never wring with a wringer, as the pressure mats the nap down so closely as to destroy all the soft fleecy look of good flannel. Wring with the hands as dry as possible, then rinse and wring out again; and when as dry as it can be made by hand, snap out, stretch and pull out into the true shape; dry in the open air, if possible. Bring in when not quite dry, roll up a short time, and iron while still a little damp, so that each part can be more readily brought into shape. Pressing when ironing is better for the flannel than rubbing. It does not make the fabric feel so hard and wiry.

Scarlet flannel is poisonous to some skins if used before washing, and as one is not always sure how one may be affected by it, it is safer to give it a seald in hot water with a little soap—not enough to make a strong suds. Let it stand and soak a few minutes, then wring out and treat like other flannels.

## Useful and Healthful Children.

A lady writes for the New York Tribune as follows: The great effort of many parents seems to be to so surround their children with bulwarks

against want and trouble that they may be in a measure secure from a large part of the ills that flesh is heir to. The father is unwilling that his children should struggle against overwhelming odds as he has done, should toil and economize and plan and fight as he has had to do, and he fancies that investments in real estate and a balance in bank will be the best inheritance he can leave them. So he denies himself indulgence in even necessary things that he may save and make for his family. The mother, remembering how irksome household tasks were to her in her girlhood, permits her daughters to lead lives of domestic ease and indolence, thinking that in so doing she makes the best manifestation in her power of maternal love. As a natural consequence of this view on the part of parents, we see growing up all around us young men and women perfectly useless for all the practical purposes of life, mere hot-house plants, that under glass and with proper conditions of moisture and temperature thrive luxuriantly, but so tender and helpless and unprovided against adversity, that one blast of the north wind freezes them to the core, withers all their activities and paralyzes all their faculties; or if they take heart of courage and battle against misfortune, they are so ignorant of the use of the weapons they must handle, that the fight goes against them.

## DOMESTIC ECONOMY.

## Brown Bread.

Mrs. Susan Everett, M. D., sends the following from a lady who attended one of her courses of lectures. The author states that 25 years ago she attended a course of lectures on hygiene, and the lessons she then learned have enabled her to keep in good health ever since. She sent this recipe with a loaf of delicious brown bread to Mrs. Everett, during her course of lectures at Perth Amboy, N. J. We regret that we are not permitted to give the lady's name:—"We make our own yeast from hops of our own raising. The vine makes a delightful shade for the south end of our back porch, and from that vine we gather, the last of August, hops enough for our own use during the year, and also for some of our friends. To three pints of water put a handful of hops, and boil them half an hour; put into the yeast pot or jar six tablespoonfuls of flour and one teaspoonful of salt; set your jar near the kettle, and dip the hop tea into the jar through a sieve or colander. When you have strained enough to wet all the flour, stir it well, and then strain upon it the rest of the hop water. The mixture should be about the consistency of batter for griddle cakes. When it is cool, not cold, stir in a gill of good yeast; set it in a warm place; do not cover it close. When fermented, put it in a cool place, and cover close. This is the yeast from which we set out 'white bread in the evening. The next morning we take a good handful of the dough; put it in a large yellow bowl, and add a teaspoonful of salt, a half cup of molasses, a pint of lukewarm water, and enough graham flour, making a dough softer than for white bread; set it to rise and bake. We do not knead this bread. This makes two loaves. Brown bread is not improved by sugar."

**SAGO CREAM SOUP.**—The following recipe appears in an English journal as one given at a popular "cooking school." An old fowl that is only fit for the stock pot makes delightful stock for this soup, and either it may be boiled till every particle of goodness is extracted, or if a less strong stock is wanted it may be boiled only till tender, and the meat afterwards used up in some of the made dishes where a white meat is required. Add to the stock while boiling some whole white pepper and a blade of mace. Strain and skim the stock; this last operation is best done with what is called kitchen paper, a most useful article, and of which a supply should be at the command of every cook. Lay the paper on the top of the stock, and draw it off; the fat on the top will adhere to it, and the process should be repeated till the paper comes off free from grease. For every two quarts of stock take three ounces of sago or of tapioca, wash it in hot water, and boil it in the stock for one hour. Break the yolks of two eggs in a basin, and add to them half a pint of cream or milk; pour into it gradually a little of the hot soup, then turn it all into the remainder of the soup and heat it up, taking care it does not boil. The stock for this soup may be made of rabbit, or of veal, or of a mixture of all three.

**A GENUINE VEGETARIAN DISH.**—The following, from the *English Mechanic*, has no admixture of animal food, and our country friends would do well to try it as no bad substitute, on a pinch, for a meat dish at dinner: "Take carrots, turnips, parsnips; slice very fine, and fry till quite brown, in oil. Then take cabbage, onions and potatoes; cut the cabbage as for pickling, cut the potatoes into four, and the onions into shreds. Strain the carrots, etc., from the oil, and put them in a saucepan with water. When the water boils put in sufficient celery seed and caramel (burnt sugar) to give an agreeable color and taste. Then add the cabbage, onions, potatoes, etc., and boil until quite tender. A leaf of sage or a sprig of thyme is an improvement. Only sufficient water must be used to prevent the vegetables burning. Serve with pepper and salt."

**BAKED BATTER PUDDING WITH FRUIT.**—Take a half-pound of flour; one pint of milk; the yolks of four and whites of two eggs, and half a teaspoonful of baking powder. Rub the powder till smooth, mixing it well with the flour, and as much milk as will make it a stiff batter; beat it till quite smooth, then add the remainder of the milk, and the eggs, well beaten. Put some apples, cut as for a pie, into a buttered dish; pour the batter over, and bake in a moderately hot oven. Damsons, currants, gooseberries or rhubarb may be used in the same way.

**BREAD-CRUMB OMELET.**—The following is from another English source, and is called a "vegetarian recipe," notwithstanding the eggs in it: one pint of bread-crums, a large handful of chopped parsley, with a large slice of onion minced fine, and a teaspoonful of dried marjoram. Beat up two eggs, add a teaspoonful of milk, some nutmeg, pepper and salt, and a piece of butter the size of an egg. Mix all together, and bake in a slow oven till of a light brown color. Turn it out of the dish and send to table immediately.

**BAKED IRISH POTATOES.**—Boil soft eight good-sized Irish potatoes; mash them, add two tablespoonfuls of butter and a pint of milk; salt to taste. Put into a dish and bake half an hour.





PUBLISHED BY

DEWEY & CO.

A. T. DEWEY. W. B. EWER. O. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS Patent Agency, Engraving and Printing establishment.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.

Per line.....25 .80 2.00 5.00

Half inch (1 square).....\$1.00 \$3.00 7.50 24.00

One inch.....2.00 5.00 14.00 40.00

Four weeks are rated a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, January 20, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—Hints on Landscape Gardening; The Wool Product; Draft Horses for Utah and California, 33. The Week; Rain-Drops; Agricultural Credit, 40. The Best Canning Industry; A Canadian Portable Saw-Mill; The Hops of the World, 41. Patents and Inventions, 44.

ILLUSTRATIONS.—Landscape Gardening—Plan for Ten Acres; Plan for Three Acres, 33. Canadian Portable Saw-Mill; Boiler and Engine, 41.

CORRESPONDENCE.—The State Agricultural Society; Redwood Stumps; Berryessa, Napa County; A New Flower—"Gilia Parrya," Tehama County; Note on Mexican Agriculture, 34. "Satan Came also Among Them," 44.

THE APIARY.—Bee-Eating Birds, 34.

POULTRY YARD.—Treatment for Roup, Etc.; Plymouth Rocks, 34.

PATRONS OF HUSBANDRY.—Worthy Lecturer's Visits; Co-Operative Association; From the Granges; The Higher Degrees; Another New Grange; On the Wing; Notes from the W. Secretary's Report; Pomona Grange; Pomona Grange in San Diego; Change of Officers in Roseville Grange, 36. Election of Officers, 37.

AGRICULTURAL NOTES from various counties in California, 37-44.

SHEEP AND WOOL.—Sheep-Raising in Oregon, 35.

THE STOCK YARD.—Horns—Their Indications, 35.

FLORICULTURE.—Mosaic Culture; Flowering of the Eucharis Amazonica, 35.

USEFUL INFORMATION.—The Manufacture of Woolen Hats; The Rates of Postage, 35.

HOME CIRCLE.—Through the Lilacs (Poetry); California (Poetry); East and West—No. 10; Reckoning; Faithful Dora; The Fate of Books; Entertaining Company; Preserving Spikes of Pampas-Grass, 38-39.

YOUNG FOLKS' COLUMN.—Bed Time (Poetry); How Kitty was Saved; The Best Rule, 39.

GOOD HEALTH.—Wearing and Washing Flannels; Useful and Healthful Children, 39.

DOMESTIC ECONOMY.—Brown Bread; Sago Cream Soup; A Genuine Vegetarian Dish; Baked Batter Pudding with Fruit; Bread-Crumb Omelet; Baked Irish Potatoes, 39.

QUERIES AND REPLIES.—Number of Plows; Diabrotica Duodecempunctata; Tree Selling by Colored Plates, 40.

GENERAL NEWS ITEMS on page 44 and other pages.

MISCELLANEOUS.—Curious Geological Formation, 34. Tree and Vine Planting; Weather Watching, 42. Magnetic Declination; Nitrogen and Electricity; Cleansing Old Iron Water Pipes at Elgin, 43. Rain Everywhere, 48.

## NEW ADVERTISEMENTS.

Chile Alfalfa Seed, R. J. Trumbull, S. F.; California Yeast Cakes, R. B. Scott, Sacramento, Cal.; Wanted, R. Wilkin, San Buenaventura, Cal.; Red Gamos, J. G. Amear, Ceres, Cal.; Saul's Catalogue, John Saul, Washington, D. C.; Swiss Motto Cards, J. B. Husted, Nassau, N. Y.; New Vineland Temperance Colony, Santa Barbara County, Cal.; Music Books, Oliver Ditson & Co., Boston, Mass.; Labor, Zeehandelaar & Co., S. F.; Fruit and Ornamental Trees, Thos. Meherin, S. F.; Trees and Plants, W. R. Strong & Co., Sacramento.

## The Week.

The rain has come. Coy came it like a maiden. Many times during the last few days has it essayed to approach, but adverse winds denied. But it came at last, full and free and wide reaching. The whole coast smiles beneath it. It is a wide smile, reaching from San Diego to Olympia. It is a high smile; for the quick telegraph marks its progress from the grin on the coast's chin to the smiles along the great valley's mouth and then laughing in the snows on High Sierra's nose, the merriment dies in the desert's eyes in Utah and Montana. It is a glorious down-pouring and the heart of the Western man uprises commensurate with the downfall. Almost like magic, confidence is restored, and tidings from the interior, which one short week ago were dark and foreboding, are now light and full of strength and cheer. Already note comes that counties expect greater crops than ever before. Already the vigilant merchants are clearing their counters for the trade which restored confidence in the country will produce. Already men have dropped the talk of subterfuges and remedies and stand in thankful contemplation of what God in nature grants an expectant people. It is a time of great rejoicing. Both men with aches and men with acres are happy, for the rain will bring both health and wealth. Let it continue!

## Rain-Drops.

Now that the rain recalls the time of growth and the outlook of the State is cleared by clouds, as for two months it has been clouded by sunshine, there are a few remarks pertinent to the new condition. Although it is early to count harvest results, and future events may hold the keys to many happenings, it is the present prospect that our fields will yield a greater weight of produce than ever before. The long season favorable for field work, before the drouth chained the plow, gave opportunity for greatly increasing the cultivated area of the State. From many counties it was reported that never since the beginning of our agricultural growth had work been so uninterrupted. From this fact, coupled with the greatly increased number of workers which our agriculture now can muster, it is plain to see that the rain now falls on wider fields than ever before. The growth of plant which was gained in these fields, although held in check by the lack of moisture, will now come forward rapidly. The general verdict was from the wheat-growing counties that the plant would well endure a longer period of drouth, so we infer that the rain comes in season to meet most needs.

This being the promise for another good crop year, it is well to know the way is well cleared for it. The report of the Produce Exchange, which we print in our Market Review, gives the amount of wheat remaining in this State, January 1st, 1877, as 3,640,700 cts. This shows that we had less than 800,000 cts. more than we had a year ago. This shows plainly that the surplus of last year's crop was not nearly as large as the estimates and that there will not be any amount carried over to interfere with the coming crop. On the other side of the water there is still the Eastern complication to restrict production in Southern Russia. The war still hangs on the skirts of diplomacy. Even if Russia should refrain from the conflict there is no certainty yet that the rebellious provinces will give up the conflict, and if they continue it through the spring there will be considerable numbers of Russian adventurers attracted over the border. These facts cannot but limit the business which will be done at Odessa for the English market.

A still graver trouble afflicts another of England's tributaries in the wheat supply. India, which has mounted suddenly into such great prominence in wheat production, bids fair this year to be in need of English charity. A cable dispatch from London, dated January 15th, gives the following painful facts: "The Indian office publishes a dispatch, dated January 12th, from Lord Carnarvon, acting Indian Secretary in the absence of Lord Salisbury, to Lord Lytton, Governor General of India. It requests that a weekly summary be henceforth sent by telegraph, giving the main facts in regard to the famine. Lord Carnarvon, summing up the information he has hitherto received, considers it alarming; that 840,000 persons are already employed on the relief works in Madras, and 250,000 in Bombay. The government estimates show that the famine in Bombay will gradually increase, reaching its maximum in April, when nearly a million persons will require relief, after which it will gradually decrease. In Madras the prospect is proportionately worse."

"The districts affected in Madras cover 80,000 square miles and contain a population of 18,000,000. In Bombay the famine stricken territory covers 54,000 square miles, and has a population of 8,000,000, 5,000,000 of which are in districts more immediately affected. The London Times's special from Calcutta gives a later summary of the situation in one of the Bombay districts. At Sholapore the crops have totally failed, and things are nearly as bad in two other districts. The crops have partially failed in six other districts. Already 287,000 persons are on the relief works in Madras. The famine prevails in 12 districts, and now nearly 1,000,000 persons are on the relief works. The cost to the State is estimated at over £2,000,000 sterling in Bombay and £4,000,000 in Madras."

Thus it appears that the best deeds of our grain fields will be needed this season, and it is for the general good of the world that these rains have not been longer denied.

There is one other point. Although there has been much steady and unusual cold weather prevalent because of the drouth, there has been nothing so severe for stock in exposed positions as the driving rains have been and will if they continue. The present rain has been doubly cold and piercing. There are many flocks and herds in different parts which have been on short allowance of feed, and consequently are considerably weakened; nor can they regain strength until the time is long enough for the fresh feed to start. Therefore it is a time for the most careful shelter which the farm can be made to afford. Just at this juncture, too, the young lambs are coming on, and it is a hard world they are coming into in many cases. Where they escape the hatchet stroke they will meet a worse fate unless some extra care is taken of them. One of our correspondents, writing just before the rains, says: "Our sheep are getting a larger percentage of twins. I see no other sign of hard times. I have seen two dry seasons and I thought we had a great many twins both years. It may have been because the sheep were poor and one lamb was enough." Probably it was more in the thought than in the sheep; but if the thought will lead to doubled

care during the present trying time it will not be altogether worthless.

In addition to good care it will be profitable to give all farm stock as generous feed as can be afforded for the time that remains before the pastures recover their richness. This will bring them upon their season's growth and production in good heart and strength, and the good feed will tell. This can be done at little expense, for the prospects of the season will cheapen supplies which have been of late rapidly advancing. Let the animals be used well for a few weeks now, because there is every prospect that there will be a wealth of material for them to work up during the season.

## Agricultural Credit.

We are glad that popular attention is being drawn to the claim of the agricultural industry of this State to the accommodation of the capitalist. The credit which is now accorded to the farmer by the majority of our institutions of loan and trust is one fraught with many hardships, and amounts really to the discouragement of the industry instead of the encouragement of it. It is true there is one institution which has been organized by farmers which is an exception to this rule, and which, so far as its means go, is doing a most commendable work for the encouragement of the farmer by placing funds within his reach on conditions which are honorable to accept. It is true also that the country banks, as a general thing, are willing and ready to place the accommodations of their institutions at the command of the farmer. These are the exceptions and they are to be honored for it.

What we protest against is the general policy which characterizes the majority of our moneyed institutions when matters of agricultural credit are brought before them. It is claimed that this feeling is giving way and that agricultural credit is coming to be recognized at its true value for stability and true promise. It is claimed that this disposition is springing up because of the instability and uncertainty of the enterprises which have in view the development of the treasure resources of the State. Stocks have been the pets of the capitalists and of the moneyed institutions, while crops have been remanded to the gentle mercies of the interior tradesmen. To show that this state of affairs is coming to be differently regarded, we quote from an article written by George R. Gibson, Esq., in a recent issue of the *Evening Post* of this city.

"I assume the tenable position that credit has, in modern times, come to be regarded as one of the most powerful forces in the production and accumulation of wealth. It means the employment by active and willing hands of that surplus of the world's capital which otherwise would lie idle, and any branch of industry which is deprived of its benefits is placed at a disadvantage as compared with those enjoying its privileges. Agricultural pursuits prove no exception to this rule, but are promoted or prostrated as credit is granted or denied. Farming differs from most industries by reason of the long period required in its operations, rendering long loans an imperative necessity. Bank discounts for 30, 60 or 90 days, unless they are repeatedly renewed, do not satisfy their wants, but the fluctuating nature of deposits and the sensitiveness of confidence compel the banks to make short loans."

"These commercial banks perform an invaluable service to society, but they are inadequate to meet the demands of the land owner. Collateral banks, of course, confine their operations to stocks, and the savings banks, though they possess extraordinarily large deposits, generally employ their money in the city, leaving the rural borrower uncared for. The millions on California street turn a deaf ear to the demand for money based upon the best collateral in the world—the solid earth itself. The commercial side of credit is fully developed, as is attested by the great expansion of the banking system within the last few years. But the agricultural side of our financial system has not grown in a manner corresponding to the wants and importance of the landed interest. These considerations lead us to the conclusion that what we want here is a system of agricultural credit resembling the best systems established on the continent of Europe. In 1763, Frederick the Great, of Prussia, established a land credit company as the best means of rescuing the landowners from the condition of misery and desolation into which they had been plunged by his devastating wars. At the present time there are 16 institutions of this kind in successful operation in Germany. Their issue of obligations, which bear four to five per cent. interest, amounts in the aggregate to \$150,000,000. That the land credit institutions are in accordance with the correct principle of public economy is attested by their long existence and success. Not one of them has failed."

From these premises Mr. Gibson argues that the establishment of an institution in San Francisco which should embody these ideas, would be a profitable enterprise to those who undertake it and to the development of the agriculture of the State. We also believe that such an agency of credit properly managed and guided by a true and wise policy would be for the advantage of the State. We are glad the subject is being discussed in the hearing of those who have heretofore had large eyes and free hands for the encouragement of almost every industry but that of the farm.

## QUERIES AND REPLIES.

### Number of Plows.

EDITORS PRESS:—I shall feel obliged if you can give me an idea of the number of plows made yearly in the United States, or an idea of the number in use. If you have any idea of the number of farms in a State, that would enable me to calculate the matter, within say 5,000. Are there 100,000 or 200,000 made yearly, less or more?—EDWARD THOMPSON.

We have no data for accurate answer. According to the fifth census of the United States, there were 5,525,503 men engaged in agricultural pursuits. This includes proprietors and farm laborers. We presume in most States the plows on the farm will at least average one to each man. If our querist can calculate satisfactorily from the number of farms, he certainly can from the number of hands capable of plow-holding. We are of the opinion that he may increase his estimate of the yearly consumption of plows several times. We think at least one-fifth of the plows in use must be replaced each year by new ones. We should be pleased to hear his final estimate.

### Diabrotica Duodecempunctata.

EDITORS PRESS:—I send you by mail this day a small box containing a number of insects and their work upon the leaves of my orange trees and on the roses. Will it trouble you to give the name of the insect, what I am to expect of it and what I shall do with it?—H. G. NEWTON, Pasadena, Los Angeles county, Cal.

The insect is that voracious plague of the florist, the *Diabrotica duodecempunctata*. It is a small, yellowish beetle, very like the yellow squash and cucumber bug in shape and color, but instead of stripes it has upon its wing covers 12 black spots, from which it takes its specific name. The insect is cousin to the cucumber beetle, to which we have compared it; that being *D. vittata*. These insects are both voracious leaf eaters. The one sent us by Dr. Newton was first discovered at the East at work on the dahlias. Since then it has feasted upon almost every flower growth, having a particular liking for roses. Its attacking the orange is new to us. Although the insect is such a pest, florists are unable, so far as our experience goes, to cope with it successfully, and some make no special effort but let it take its course. Various remedies have been tried upon it as upon the regular "rose beetle" (*Macrodactylus sub-spinosus*) but without victory. Hand-picking, knocking off on blankets or sheets placed under the bushes, drenching with whale oil, soap suds and dusting with lime and ashes; all these have had their advocates, and all have accomplished but a temporary relief. As with many other insects, it appears that the best way to keep them in check is to woo the assistance of the birds. We doubt not the prevalence of the insect at this time is due to the drouth which has prevailed. If any of our readers can tell us of successful contests with this insect we shall be glad to hear from them.

### Tree Selling by Colored Plates.

EDITORS PRESS:—Can you tell me anything about Green & Palmeter, or Green & Co., nurserymen, located in Oakland? An agent of theirs came to this section a few days ago and showed what he represented to be correct colored drawings of the fruit (apples, peaches, etc.) which he said would grow on the trees he proposed selling us. If it is a reliable firm, they will be benefited by your indorsement; if unreliable, they will be doing good service by exposing them.—J. HOBART, Nordhoff, Ventura county, Cal.

We believe there is or has been a firm of that name or names with headquarters at Oakland during the last year. We do not know anything of them except that they claimed to be connected with Eastern nurseries. There have been operations conducted also in Oakland under different firm names, which we are told are by the same parties. We cannot endorse them, for we know nothing about them. We can, however, say this very decidedly, and that is, that any reader who purchases trees from colored fruit plates from a party he knows nothing of, incurs a risk which we would not assume. Selling from plates has been the method of some of the greatest tree frauds which have been practiced upon Eastern farmers. We know of the operation of these traveling agents in New York and New Jersey, and we would sooner throw the money away than cumber our grounds with the worthless trees they have delivered. We cannot advise our readers to deal with these agents. There may be honest ones, but the chance for fraud is too great. It would be far safer to purchase of our established nurserymen or their agents, for then the purchaser has the warrant of a well-known firm and has some remedy in case of disappointment. These remarks are of general application. As for the firm named above, we know nothing of it, and if they are responsible they can assure us and our readers of the fact.

HOG CHOLERA IN ILLINOIS.—The great destruction caused by hog cholera is apparent from the following figures given by the secretary of the Berkshire Association. It seems that there is an association in Springfield which makes a business of buying up the dead hogs and trying them out for grease. The secretary writes: "On the 6th inst., 12,000 pounds of hogs were received here, and since 27,000 pounds—all having died of disease within a circuit of 18 to 20 miles. I give you these figures as an indication of the death rates at this time." And this is in a small part of Sangamon county only, with 100 other counties in the state to hear from, and 300 other counties in half a dozen other States.



### The Beef Canning Industry.

While our agricultural friends at the East are reaping the profit of learning how to sell fresh beef in the English markets, our neighbors are fast developing an industry in the way of canning, which bids fair to rival their salmon enterprise. The last issue of the *Willamette Farmer* gives some interesting facts concerning the business, from which it appears that the whole grazing region, which is tributary to the canning establishments, will have its capacities taxed to furnish material for the hungry canners. The *Farmer* says:

In conversation with Mr. W. S. Newbury, of Portland, who has lately visited the upper country, we learn that the canning of beef at Astoria has caused such a demand for beef cattle as to seriously affect the supply in the vicinity of the Dalles. If this result is perceptible already we may expect that a continuance of the beef canning business will call for all the fat cattle that the Columbia river region can supply. We do not see why the canning of beef should not prove as large a business as the canning of salmon, that is, if the article supplied answers the demands of commerce, and that seems probable, from the fact that the price has somewhat advanced since canning commenced early in the fall, and there is no reason to expect the demand to cease, but rather that it will increase, for all vessels that make long voyages need some fresh meat, and it will take an immense amount of the canned meat to supply the wants of commerce.

There are several reasons why this business can be carried on here to great advantage, and may result in making cattle as profitable to the stock men of eastern Oregon and Washington as sheep husbandry. First: We have the vast extent of bunch grass pasture lands to depend on for range, and it is evident that the beef fattened on those pastures is of a superior quality and calculated to satisfy a very exacting demand. Second: The climate is suitable to beef packing, especially at Astoria, where the weather never is warm, being tempered by the sea air. Again: The canneries having finished the season and disposed of the salmon catch in the month of August, are prepared to begin the beef canning in September and continue it until April, the season of the year when such work can be done to the best advantage and when the beef will be in best order. The canneries being already constructed and in profitable use, are so much capital available for the business of canning beef, which is no small item, as it enabled the gentleman who conceived the idea of canning meats to put the experiment to actual, and it appears to successful test.

The demand for beef cattle will prove a great encouragement to the stock men of all the interior and increase the settlement of the Upper Columbia country. Something was needed to lend a little more prosperity to those who are struggling to make a living in that part of Oregon and Washington, and also to encourage the settlement and cultivation of all the good agricultural lands there. We do not know that Dr. A. C. Kinney was the first man who ever conceived the idea of making Oregon beef available by canning it for foreign markets, but he seems to have been the first to put the idea into practical and successful operation. Another year the Messrs. Kinney will make some improvements in the beef business. It is thought that the meat will keep safer and also be more palatable if slightly corned before canning; they will also make a superior article of dried beef for shipment to Europe, using the hams for that purpose. They have been the leading operators in the canning of beef up to the present time, but other houses, including West & Co. and Badolet & Co., have engaged in it with success, and there is no reason to doubt that it can be continued on a large scale if cattle can be furnished at the rates they are able to pay. Canning mutton has also been experimented with successfully, but not so profitably, as it costs much more to take the meat off the bones of mutton than of beef, which makes the business less profitable and more tedious, but we see no reason why the canning of mutton should not be carried on to a great extent.

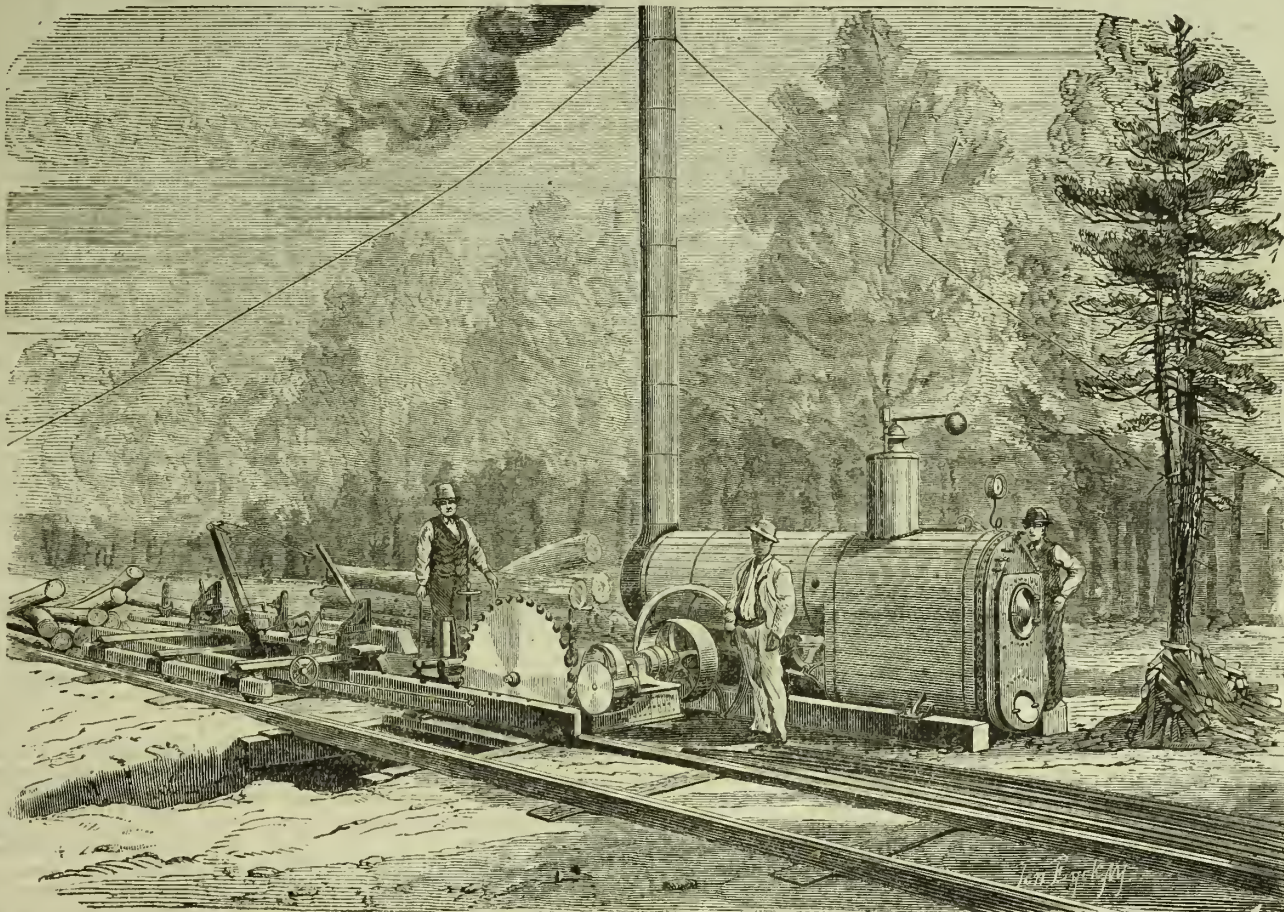
GREAT suffering in India, owing to crop failures.

### A Canadian Portable Saw-Mill.

We give on this page some illustrations which will be interesting to readers in our lumbering counties. There was on exhibition at the Centennial a machine commonly known as the Canada saw-mill, which attracted much favorable notice both on account of the simplicity of its construction and the speed and accuracy with which it accomplished its work. It was designed by the Waterous Engine Company, of Brantford, Ontario, Canada, expressly for use in the extensive lumber districts of the Dominion, to saw up the timber in the localities where it is felled, and thus to save the trouble and

pactly arranged in an iron frame, and can also be loaded and moved without being taken apart; so that, when resetting the mill, all that is necessary is to frame the foundation timbers previously used in the ground, set the mill on them, coupling the engine shaft and saw mandrel, lay the track, place the carriage on it, and the mill is then ready to start. The whole operation does not take more than from one to two days.

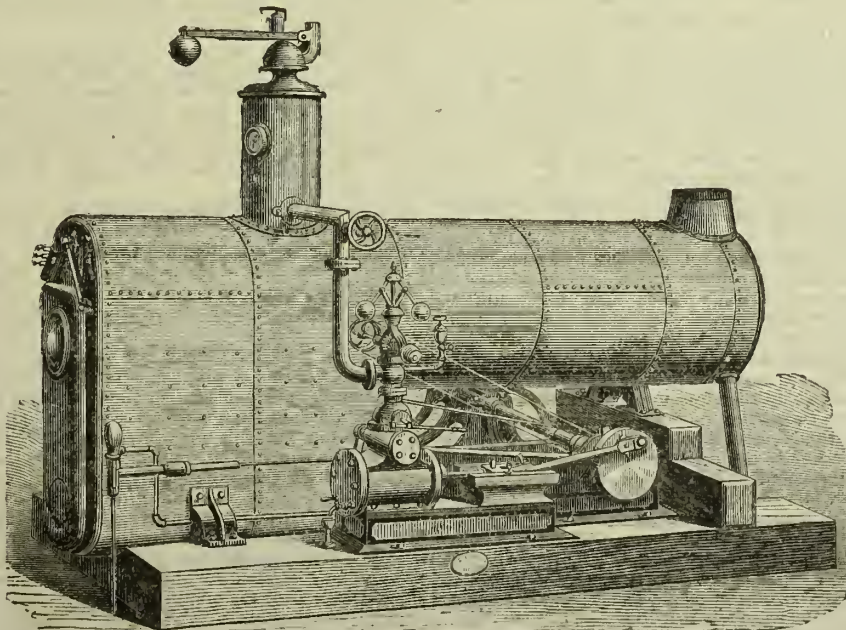
The boiler is supplied with sawdust grates, by means of which it is enabled to keep up a full supply of steam with no other fuel than pine sawdust and refuse edgings. It is also covered with hair felting and lagged with wood or sheet iron. Its form is clearly shown in Fig. 2. The plates are of the best English material, and the heads are Lowmoor iron. Each boiler is sub-



CANADIAN PORTABLE SAW MILL.

the expense of the carriage or rafting of the logs to distant points; and being portable, it may readily be removed from an exhausted part of a forest to a new situation. The machine is also excellently adapted for employment in ship-yards, in most of which establishments in Nova Scotia and New Brunswick, we

jected to 120 lbs. cold water pressure before shipment. The 20-horse power engine drives a 56-inch saw, which will, it is claimed, cut from 6,000 to 10,000 feet of lumber per day, or 1,000 feet of one-inch pine lumber in a single hour. The 25-horse power engine, which is usually employed in connection with a tubular stationary



BOILER AND ENGINE.

are informed, it has superseded whip sawing by hand.

In the annexed engravings, Fig. 1 represents the mill as it appeared at work while on exhibition at the Santiago (Chile) exposition of 1875; and in Fig. 2 the portable boiler and engine are shown. The portable machine has a twenty-horse power engine, which, together with its boiler, is of such weight and of such construction that both boiler and engine may easily be loaded on trucks, when changing the position of the mill, without any disconnection being necessary; so that the labor of a skillful machinist is not required to readjust the mechanism. The saw mandrel, feed and gig work are com-

boiler, drives any size of saw up to 66 inches, and its capacity is said to be from 8,000 to 12,000 feet of lumber per day.

At the Chile exposition, the 20-horse power mill, we are informed, sawed and edged 1,060 feet of lumber in 40 minutes, vanquishing all competitors and gaining a medal and diploma. It has received the first premiums at 10 Canadian provincial exhibitions, besides a highly favorable report from the judges at the Centennial.

TEN vessels of the fishing fleet of Gloucester, Mass., are missing, and doubtless lost with all hands.

### The Hops of the World.

It will be interesting to our hop-growing readers to learn the leading facts concerning the European production of hops and the rate of their consumption. A book has been lately published in London, entitled "Hops and their Use in the Different Countries," in which the writer, Mr. Simmonds, shows that in the three countries, Bavaria, Baden and Wurtemberg, which may be called Germany proper, there are very nearly 70,000 acres of hop land, or about the same as the English hop acreage. In Austria it appears that there are nearly 18,000 acres. In Holland and Belgium there are 10,474 acres

and in France 9,223 acres. According to these figures the total Continental acreage amounts to over 100,000 acres, and it is calculated that at least 30% of this has been planted during the last 12 years. Large as is the hop acreage in Germany, rapid as has been its increase, the amount of beer consumed there is proportionately large. It will be seen by tables of the consumption of beer per head of the population of various countries, given in this work, that in Bavaria each person consumes 219 liters (a liter equals one and three-fourths pint), per annum. The inhabitants of Wurtemberg rank next to the Bavarians as thirsty souls, swallowing 154 liters per head per annum. After these come the Belgians, who imbibe 145 liters per head. Then follow the Britishers, with the comparatively moderate allowance of 118 liters each.

From a statistical work entitled "Beer," written by Mr. Vogel, of Nuremberg, it is gathered that the increase in consumption in Germany generally has been immense during the last few years. To give one instance, the annual consumption of beer per head in Wurtemberg was 70 liters in 1852, as against 154 in 1873, thus having more than doubled within that period. The same writer shows that the consumption of beer in Baden has increased 106% within 10 years, and that a great increase has taken place throughout the Continent, so that growers who are frightened at the extraordinary increase in the foreign hop acreage may take heart again, seeing how greatly and rapidly the taste for beer has spread.

Mr. Simmonds shows that the Americans have largely increased their hop acreage, especially in New York and Wisconsin, whose extent of hop land is as large as that of the rest of the States put together, and in California, whose soil and climate are peculiarly suited to the growth of the hop plant.

In Tasmania there are about 664 acres of hops, which do remarkably well. The cultivation of hops has been successfully carried on in New Zealand, in Victoria, where it is encouraged by the government, and attempts are being made to introduce them into India.

TREES AND PLANTS.—We lately had the opportunity of looking through the stock at the San Francisco depot of B. S. Fox's San Jose nursery, on Battery street in this city. There is on hand a very select and comprehensive stock of ornamental trees and shrubs and flowering plants, and the supply is reinforced from San Jose frequently. Mr. Thomas Meheru, Mr. Fox's agent, is one of our most intelligent and obliging Horticulturists, and we are free to say that his stock, as advertised elsewhere, is well worthy of examination.

OREGON WHEAT SHIPMENTS.—We learn from the *Oregonian* that the shipment of wheat from that State, during the year 1876, was 2,894,722 cents, valued at \$4,405,029. This is a gain of 799,190 cents, and \$794,857 over the exports of 1875.

LECTURE ON TREE PLANTING.—No one should fail to read the interesting lecture on tree and vine planting which is published in this issue of the *RURAL*. We have the pleasure of first presenting this lecture in unabridged form.

ON FILE.—"When to Plant Gum Trees," W. A. T. S.; "W. L. at Stockton," G. W. H.; "In Memoriam," San Jose and Tehichipa Granges.



### Tree and Vine Planting.

The following is a lecture delivered by Prof. W. A. Sanders, before the people of the Central California colony, Fresno county, Saturday evening, December 30th, 1876:

I will preface my remarks by a quotation from that most eminent author on fruit culture, Charles Downing, in a note appended to his great work, "Fruits and Fruit Trees of America," after his visit to California a few years ago. He says: "The fruit is rather fairer, handsomer, and quality equally good (as at the East), except strawberries and blackberries, which were not quite so high flavored. Grapes are grown extensively in many localities, and succeed admirably. They are grown in the open air, and require but little labor compared with our system of cultivation. Figs are abundant and of fine quality. English walnuts, almonds and olives are grown successfully in most places."

These are the words of the highest authority on fruit culture in our country; and the admissions of a man who is said to have expressed the belief before coming here that the visit of himself and associates would result in greatly correcting the overestimate placed upon California for fruit production.

We may add to Downing's testimony that the great valley of California, of which your locality here is one of the most favored spots, is the natural home of the choicest fruits of both temperate and semi-tropical climates.

One of my neighbors, Mr. Hazelton, has some old seedling orange trees, that in vigor of growth, and prolific bearing of excellent fruit, remind one of the orange trees of the best parts of tropical Mexico.

Hon. S. O. Houghton informed me, in a conversation some time ago, of the successful growing of a variety of banana in his neighborhood. I have since learned that plants of this variety can be obtained, in any quantity, from W. B. West, of Stockton, and that many of them have been successfully grown in our valley.

But enough of the *what* we can raise, and we will give our attention to the *manner* of doing it. The first matter to claim our notice is

#### Preparing the Land

For trees or vines. The land should be well plowed to a depth of from eight to 10 inches. Then, where it can be done, as here in your favored colony, the entire surface of the land should be covered with water. Where this cannot be done, deep furrows should be plowed where the rows of trees are to be planted, and these furrows should be filled with water at least 48 hours, then turn off the water and when the ground is sufficiently dry, dig the holes for your trees, which should be at least two and a half feet square and 18 inches deep. And here I wish you to understand that no investment of like amount pays anywhere near as well as the labor that makes up the difference between putting your land in *good* condition or leaving it in *poor* condition for the setting of your orchard. I would have you regard each tree as a living being, whose life is to be rendered long, vigorous and fruitful, by the care that you shall now bestow upon it.

#### Trees, Vines, etc.

I suppose that nearly all the trees and vines which you will set here will be obtained from nurseries. Upon the *manner* and *time* of taking them up and setting them out depends not only their rapidity of growth and future value for producing fruit, but in many cases the life of the trees also. It will be seen, then, how very important it is that this matter of transplanting should be well done.

#### Time to Transplant.

All deciduous trees, that is, trees that shed their leaves (not evergreens), should be taken up in January or the first half of February, and should be set out as soon after being taken up as possible. And here the most important thing to be known is that the tree does not live by means of its large underground roots or stems, but that the tree absorbs nourishment only by means of the delicate mouths at the ends of each of the little, hair-like fibrous roots. Be careful, then, that these delicate rootlets shall not become dry or in any wise injured, for upon their vitality depends the growth and usefulness of the tree. If your nurseryman has done as he should, packed the roots of the trees in moist earth or moss, and tied the whole in a covering of sacks or tules, to protect from becoming dry or mutilated, you can set out your trees easily with a certainty of their growing. But if the roots are in any wise exposed, or are not fully covered with dirt, they should be subjected to the operation of

#### Puddling

Before setting them out. This is done as follows: Make a hole two feet square and nearly as deep, in the most convenient place, near the center of the ground you are to set with trees. Fill this hole with water, then stir into the water fine, soft, loose earth, clayey or sedimentary is best, till you have mixed up a hole full of mud of the consistency of pan-cake batter. Take each tree separately, whose roots are not already fully covered with dirt, and dip the roots carefully into this hole full of mud until every root and fiber is completely coated with the mud. Then take the tree to the hole where it is to stand and set it from two to four inches

deeper than it stood in the nursery, Downing and others to the contrary notwithstanding. Press the fine soft dirt carefully around the roots, inclining them a little more downward than they naturally grew, using the top soil for filling in directly around the roots. In our rich, warm soil no manure should be put under the roots of the tree. The hole should be filled up, forming a cone of dirt a foot in diameter around the tree, and an inch or two higher than the surrounding surface. Between this cone and the level of the ground's surface leave a trench about a foot wide and six or eight inches deep.

#### Mulching

Fill this trench around the tree with straw, chaff, leaves, weeds, rough manure from the stable, or what is better than any of them, your last year's tomato vines. They answer well the purposes of a mulch to retain moisture, and also to prevent the baking of the earth when the water is turned off, besides which they harbor no form of insect life, being in this respect superior to anything else that can be used as a mulch.

#### Wrapping the Trunks.

When your orchard is set out, before the hot weather comes on, you should put boards or boxes around your trees to shade the trunks from the sun. Or what will answer the same purpose, is more quickly done, and much cheaper, is to wrap them from an inch below the surface of the ground to the branches. Any kind of cloth or stout paper answers perfectly for this purpose. The object is to protect the body of the tree from becoming burned by the sun; at the same time it keeps out borers and may be made to prevent rabbits from gnawing them. For this latter purpose it is necessary to soak the cloths in a solution of soap or lime and fresh cow manure before winding them around the trees. The trunks of your orchard trees should, during every summer, be protected from the sun till the tops of the trees shall have become broad enough to shade them.

#### Distance Apart for Trees.

Downing says, apples 40 to 50 feet; cherries 18 to 20 feet; peaches, nectarines, apricots and plums 16 to 25 feet; pears 20 to 30 feet. These distances undoubtedly are best for the Eastern States, and possibly for the coast region of our own State, but for our hot valley, where experience has shown that trees grow and bear better where they partially shade each other, the distances should not be more than four-fifths as great, except for apricots, which grow larger here than at the East, and thrive out in the full glare of the sun's rays.

#### Seedling Trees.

Though grafting or budding subserves the purpose of, first, rapidly increasing any valuable sort of tree; second, to renew or change the shape of the head of a tree; third, to render delicate sorts hardy by using hardy stocks; fourth, to dwarf certain kinds by using slow growing stocks; fifth, to produce late and early fruit on the same tree, thereby giving variety; and preventing an overload on the tree at any one time; sixth, to quickly obtain a specimen of fruit from a seedling by grafting a cion from it on to the bearing wood of an older tree; yet natural seedling trees have certain qualities to recommend them, which, I believe, will make them the standard fruit trees of the orchardist in the early future. These qualities are: First, they are vastly longer lived than other trees; second, they are far more hardy; third, if produced from the seed right where they are to grow, they more perfectly adapt themselves to any local peculiarities of soil or climate than do any other trees; fourth, when mature, they are far more prolific bearers and they continue much longer in perfection of bearing than do other trees. Besides, the science of botany is now so well understood that we can produce seedlings exactly like the parent tree with as much certainty as we produce pure blooded chicks from our Brahmas or Leghorn fowls, by keeping them shut up from contact with the scrub poultry of the neighborhood. You have all doubtless noticed how Indian corn mixes. As far as the little dust-like particles from the tassel, called pollen, of one kind will fly and light upon the silk of another kind, just so far will it hybridize or mix. In the blossoms of our common fruits these two parts, the female portion corresponding to the corn-silk and the male portion corresponding to the corn-tassel, are closely united in the same flower; the former is the delicate little stem or tube reaching up from the embryo fruit directly through the center of the flower; the latter are the hair-like fringe surrounding this and directly within the flower leaves or flower cup. (Here, the speaker, by means of large drawings of apple and cherry blossoms, which he had prepared, illustrated to the audience the hybridizing of seeds.) These two sets of organs are so close together in every perfect flower that were it not for bees constantly crawling over them and carrying the pollen on their bodies from one to another, every flower would certainly produce seeds after its own kind. But bees so constantly passing over the flowers of fruit trees hybridize them with pollen from every allied tree growing near them. What then is the remedy, or how can we grow seedling trees that will certainly produce after their own kind? Nothing is more simple. If you wish to start 500 or any other number of vigorous seedling Petite d'Agen (that best and most profitable of all prunes) you have only to write to any reliable orchardist who raises them, and have him cover the entire head of any vigorous bearing d'Agen tree, before it blossoms, with tarleton or mosquito-bar, and keep it cov-

ered, so that no bee or other insect can by any possible means get upon a single one of its blossoms while it remains in bloom. The seed of every blossom so protected will as surely produce perfect d'Agen trees as would grafts or buds from the same tree produce d'Agen trees. What is true of this is equally true of any other tree; they will grow true to their parentage by the same process and with the same certainty.

I am acting on this principle in setting a large acreage to almonds this year. I obtained the seeds from James R. Keene's place, Mission San Jose. The superintendent, J. C. Woods, had the seeds gathered for me from the east end of the almond orchard, nearly half a mile from peach, plum or other stone-fruited trees. This does not give absolute certainty that none of them have been hybridized from peach, plum or other blossoms, but the distance makes it probable that they are impregnated only with their own pollen, or that of surrounding almond trees. If they are hybridized with the peach, plum, nectarine, cherry or certain kinds of apricots, the nuts will be bitter and worthless. If crossed with certain other kinds of apricot, they will be very hard-shelled, but sweet and of good flavor. I shall plant these seeds right where the trees are to grow, thus avoiding the expense and injury to the trees of transplanting.

#### Transplanting Evergreens.

Evergreen trees should be set out when the ground is warm. In this general class of evergreens I include all the trees of the orange family, also the eucalyptus family; in short, the evergreens of the tropics as well as those of more temperate climes.

All authorities do not agree with the rule I have given as to the best time to set out evergreens. Lindley, the highest European authority, says: "The best season for planting evergreens is that which is best for other trees." But he also says: "As evergreens are never deprived of their leaves so they are never incapable of forming roots. If an evergreen is planted in the month of May and the weather happens to be cloudy, mild and damp as the plant is just commencing the renewal of its growth, and is forming fresh roots abundantly, if such a state of weather lasts for a week or two there is no doubt the plant will succeed, and so it will if removed at midsummer." Downing says about the transplanting of evergreens: "The early spring is the best time. We have been very successful in May." Hoopes, the highest American authority on evergreen culture, in his "Book of Evergreens" says: "Practice has fully proven to us the utility of transplanting evergreens when the buds commence perceptibly to swell; at that time the trees, when transplanted, start immediately into action and perform their functions in the new soil; on the other hand, the peculiar fleshy texture of the roots renders them remarkably impatient of being in a state of inactivity after transplanting, and they will perish from this cause, as is instanced in very early spring planting."

Garey, of Los Angeles, the king of orange raisers, and Stratton, who is entitled to a like distinction in the production of blue gum trees, agree to the rule I have laid down. That rule in detail would be this: Prepare your ground as for planting an orchard, then, say some time in February, notify your nurseryman how many trees you want, and give him his own time to dig and send them to you, and don't worry if they do not come before the leaves have made a very perceptible start on other trees.

One of the most successful transplantings of evergreen trees in our State, was done by Mr. Garey. He took 1,000 orange trees from his nursery and set them upon an adjoining farm, with but a minimum of loss, and without perceptibly checking the growth of most of the trees. He did this in the hot weather of the latter part of summer.

Evergreens have alternate periods of active growth and dormancy. After a tree has been dormant for a considerable time, which is evinced by the ends of the twigs becoming well hardened, they may be moved with safety, be it June, October, or any other time in warm weather.

#### Covering Orange Trees.

The trees of this family, being natives of tropical climates, are liable when young to make a very vigorous autumn growth; the wood so produced being yet soft in winter is liable to injury from frost. The young trees must be protected from this cause until they acquire a "second nature" or habit of growth like our native trees, viz., active growth in summer and dormancy and hardening of wood in autumn and winter. Much towards the accomplishment of this end may be done by allowing no irrigation of such trees after the middle of August. Generally, when they are never allowed to "winter-kill," the trees will need no care after they are three years old. By that time their habits of growth will have fully conformed to our seasons. The trees are then perfectly hardy, being able to stand 20 below the freezing point without injury.

#### Planting Vines.

If your grapevines are already rooted you will observe the same manner of preparing the land, puddling and setting the vines, as has been already given for setting orchard trees; except that with the rich soil and abundance of water here in your colony you need not dig the holes near so large, nor should you set your vines more than six or eight feet apart. You should set your grapevines by themselves, and not have a mixed lot of vines and trees together, for the reason that the time will come here, as elsewhere, when to insure perfect health and

best bearing qualities of your vines you will be compelled to

#### Pasture Sheep

In your vineyard. In the raisin region of southern Spain, also among the best vine culturists of our own country, as soon as the grapes are gathered sheep are turned in and kept in the vineyard till they have eaten up everything eatable and have perfectly disposed of all leaves, trash and noisome insects by treading them into the soft mud formed by the early winter rains. They leave the vineyard cleaned for the winter work and fertilized for the next summer crop.

#### Setting Grape Cuttings.

For a vineyard, in which it will pay to wait to obtain the best results, I much prefer cuttings to rooted vines. The cuttings should be three feet long and made from the largest limbs of the vines whence they were obtained, not more than two from each limb - better only one.

Dig your holes 18 inches long, the width of a narrow spade and two spades deep; all extending in a uniform northeast and southwest direction, the southwestern corner being exactly where you want your vine to stand. Then put the butt end of your cutting in the bottom of the northeast corner of the hole; lay it across the bottom to the southwest corner, where you should bend it so that the top half of the cutting will stand nearly upright in the southwest corner, one or two buds extending out at the top above the surface; then fill the hole with fine, soft dirt, treading it firmly down upon and around the cutting. Puddling should be resorted to, as for fruit trees, unless the ground is very wet. Some of the advantages of this exact way of doing are: (1) You know where every underground stem is, and you can avoid them in subsoiling in after years. (2) You can get along with far less water, in times of scarcity, by digging small holes directly over the underground stems into which the water can be conveyed once or twice a month, where, in the absence of mulch, the shade of the vine will keep the ground from baking when the water is turned off. (3) During the first year's growth, when protection from the sun's heat is necessary, the shade of the vine will exactly cover the underground stem during the hottest part of the day. (4) The cuttings being so long, yet no part being below the influence of the sun's heat, each bud will throw out a sprangle of roots, thus insuring a vigorous growth and great vitality to the vine.

#### Novelties.

My advice is, that you invest very sparingly, either of labor or money, in anything new, anything not thoroughly tried. But a few of them I have a desire to try. In many places along our Kings river bottoms there is a dense growth of dewberries (blackberries). They ripen early in May, are of large size, fine flavor and prolific bearers. I believe they will be a valuable accession to our cultivated fruits.

On the north slope of the Campbell mountain, the south one of the "Three Kings," east of Centerville, there is said to be a wonderful growth of wild currants of large size and fine flavor. I have never seen them, but shall do so this summer.

In sight of here, to the eastward, in the Sierra foothills, are storaxes that in profusion and fragrance of flower rival the most beautiful orange trees; rhododendrons and azaleas profuse in their abundance of showy blossoms, and lilies that rival the anemum, while a little beyond them are giant sequoias, with thousands of young seedlings growing beneath their shade, while around are dozens of varieties of trees and shrubs, all to be had for the going after them and bringing and setting them out about our dwellings.

From France we shall doubtless obtain two additional varieties of grapes: the Denizoo, (I spell it as pronounced) the largest grape known, and the Malingre, the earliest grape; both are black and noted only for the leading qualities mentioned.

In France and Spain they grow a dwarf walnut tree, in size and appearance resembling our California buckeye. This is favorably spoken of by Downing as a distinct variety, (page 573, Fruits and Fruit Trees of America). The Italian chestnut, which furnishes the people of Italy with their staple article of food, would, doubtless, grow well and be very profitable here.

From Asia certain things may be worthy of attention. I have tried the tea tree of China and Japan (*Thea viridis*); our climate is too hot for it. The *Thea bohea*, the tea tree of southern China and India, might succeed here. The Chinese wax trees may in future prove themselves profitable for our climate. The lacquer tree of Japan, from which the celebrated varnishes of that country are made, may become a valuable accession to our list of cultivated trees. Japan boasts of over 40 varieties of persimmons; doubtless some of them would be profitable here. And last but not least, I am sure that coffee can be profitably grown in this county; if not here in the valley, it certainly can be grown in the "no-frost belt" of the Sierra foothills.

WEATHER WATCHING.—The chief signal officer in his annual report states that during the last fiscal year over 88 per cent. of his "probabilities" of the weather were verified. He thinks that an average of 90 per cent. is attainable. Owing to lack of appropriations the receipt of signals from the West Indies has been suspended. There are 145 signal stations in the United States. There is now being agitated a proposition to issue "probabilities" applicable to this coast.



## Magnetic Declination.

The latest issued report of the Coast Survey contains a new discussion of "The Secular Change of Magnetic Declination in the United States and other parts of North America," by Charles A. Schott, Assistant, U. S. C. S. Forty-three stations are represented in the discussion, and over 400 observations. Formulae are given for each station, with decennial tables computed therefrom. Mr. Schott says:

"A cursory examination of the column containing the epochs of greatest easterly excursion, the deflecting force producing the secular change attaining them an easterly maximum, shows that the needle became stationary in direction, and then reversed its secular motion, in the New England States toward the end of the past century, in the Atlantic coast States to the west and south early in the present, and in Mexico about the first third of the present century. In California, Oregon and Washington Territory, it has not yet reached this condition. We thus have the following epochs for comparison: Halifax, about 1711; Portland, Portsmouth, Newburyport, Salem, Boston, Cambridge, Nantucket and Providence, about 1779; Hartford, New Haven, New York, Hatborough, Philadelphia, Washington and Cape Henry, about 1800; Charleston, Savannah, Key West and Havana, about 1800; New Orleans, about 1831; Vera Cruz, Mexico, Acapulco and San Blas, about 1837; San Diego, Monterey and San Francisco, expected about 1907 (yet very uncertain).

We are thus directed to the extreme north-eastern States for probable indications of what may be expected to follow on the seaboard in more southern and western States. Respecting the secular movement of the needle, apparently a little more than a century passed before the influence which produced the turning of the north end of the needle westward in Maine (increasing there the western declination) was felt in Lower California (diminishing there the eastern declination). In California, Oregon and Washington Territory the eastern declination is at present still increasing, but with a losing rate. By the time the western elongation of the secular change is reached in Maine, we may expect to see the needle in the opposite phase, or at its eastern elongation, in California. We cannot as yet follow this influence directly over the interior of the United States for want of early observations; the westernmost interior stations for which an epoch could be made out were Buffalo, Erie, Cleveland and Detroit; these give the average turning epoch 1794. It may be quite practicable hereafter to trace out curves uniting all stations where the needle was stationary at a given epoch, and again at other epochs for regular intervals of time, say of 10 or 25 years.

**NITROGEN AND ELECTRICITY.**—Recent French investigations, says the *Journal of Chemistry*, indicate that atmospheric electricity may have an important influence on the absorption of nitrogen from the air by plants. At a meeting of the Academy of Sciences at Paris in October, a paper was presented by M. Berthelot, describing some experiments he had been making which shed light on this subject. He availed himself of the normal electric tension of the atmosphere. A closed tube of thin glass was placed within another; in the former was a roll of platinum connected with a conductor electrified by the atmosphere, at a height of two meters, or about six feet and a half, while a thin sheet of tin surrounding the outer tube was connected with the earth. The space between the tubes contained either pure nitrogen or atmospheric air, along with moist strips of blotting paper, or a few drops of syrupy solution of dextrine. Twelve of these double tubes were exposed to the air from July 29th to October 5th. In all of them nitrogen was fixed by the organic matter, though in varying quantities. In two cases green spots of microscopic algae were found on the strips of moist paper in tubes containing nitrogen alone, showing a greater fixation of nitrogen in these. The experiments are of much interest as suggesting an influence in vegetation hitherto unsuspected, and we shall await further investigations with no little curiosity.

**CLEANSING OLD IRON WATER PIPES AT ELGIN.**—A short time ago the commissioners of Elgin resolved to cleanse the old iron water pipes, and relay them in those parts of the town where they would be of use. The first portion of the pipes (which had been in the ground for more than 20 years, and were much incrustated) has now been cleansed. The process was gone through at New Elgin, where a rough furnace was erected to meet the object in view. The pipes, two at a time, were laid into the furnace, and subjected to an intense heat for about half an hour. The action of the heat loosened the incrustation of the pipes, and when the pipes were lifted out of the furnace the greater portion of it at once fell off. The most troublesome portion of the work, however, remained to be done. The pipes had to be cleaned with a spring scraper, made to exactly fit the size of the pipe. After undergoing this work, the pipe was allowed to cool till it was in a fit condition to be dipped into a "well" some 12 feet deep, containing Smith's patent solution, where it remained for nearly a minute; after which it was taken out, and presented all the appearance of a new pipe. By the adoption of this process the town will, it is said, be £300 richer than if the old pipes were sold as mere metal, and new pipes bought to replace them.—*Ironmonger*.

**ECONOMY DUE TO EMPLOYERS.**—"Waste not, want not," is a grand old proverb. "He that is faithful in little is faithful in much." It is true enough that a person who takes no care of materials committed to his hands by an employer, will not be careful of his own property. Economy and wastefulness are habits that will influence us, whether with our own substance or that of another. As a rule, the man or boy who takes care of his employer's goods will be likely to look after his own, and is on the road to prosperity. Some men are worth much more than others, simply because they waste nothing. If an employer be wealthy, and stock abundant, that is no excuse for waste or carelessness. Loss is loss and robbery, whether it be in much or little. It is forcibly said that "Heaven allows nothing to be destroyed." There has not been a single drop of water wasted since the creation. The decomposed elements of the past autumn will supply aliment for the next spring. Economy, rigid economy, is one of the laws of Nature; and we shall not realize the "good time coming" until we are careful and economical.



Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious, able, and well conducted journal.

Because it is the largest and best agricultural weekly west of the Rocky Mountains.

That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.

That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.

That the *RURAL*, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

SUBSCRIPTION, \$4 a year in advance.

DEWEY & CO., Publishers.  
San Francisco, 1877.

### Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

**Instructions of the U. S. Land Commissioners.**—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissioners; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

**Abstract From the U. S. Statutes.**—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys of Land for Pre-emption, List of California Post Offices.

Published and sold by DEWEY & CO. S. F.

### Our Poultry Department.

E. H. Cheny writes from Bodega, Sonoma county, as follows: "Your paper is worth its subscription price yearly to any farmer who keeps two dozen chickens, to get Mr. Eyre's opinion upon the value of the different breeds of fowls, the proper treatment for them, the diseases to which they are liable and the remedies. I became acquainted with Mr. Eyre through your columns, and I have no cause to regret it, for in my dealings with him I find everything as represented, and without any disparagement for others, I can recommend him as one in whom confidence will not be misplaced."

### "Faith and Confidence."

LIVERMORE, Oct. 1st, 1875.

MESSRS. DEWEY & Co., Patent Solicitors: Gentlemen—Yours of the 24th ult., containing my patent to Elevated R. R. duly received, and I hereby return my sincere thanks to the MIXED AND SCIENTIFIC PRESS Patent Agency for your promptness and honesty in regard to our business connections. I have received a flood of circulars from Eastern firms, desiring to deal with me, but I have declined any communication with them and prefer as soon as circumstances will permit, to negotiate with and patronize a home institution; one in which I have faith and confidence.—DEWEY & Co.

Again thanking you for your promptness in securing my patent, I remain, obediently yours,

WM. H. HARRISON.

**PACIFIC RURAL PRESS.**—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the Grangers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribers at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid.—*Mountain Messenger*, Dec. 16th.

BOUND VOLUMES of the *PACIFIC RURAL PRESS*, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

**PATENTS** obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

DEWEY & CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the *Pacific Rural Press*, 224 Sansome St., S. F.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahma, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

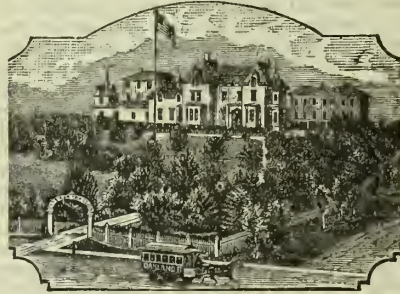
J. M. KERLINGER, Ellis, San Joaquin Co. Brown Leghorns a specialty.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

### CALIFORNIA



### MILITARY ACADEMY.

For circulars, address

Rev. DAVID McCLOURE, Principal,  
OAKLAND, CAL.

### Beware of Dry Seasons!

Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of semi-tropical fruits and all vegetable productions.

### THE BEST ALFALFA LAND IN CALIFORNIA.

Also, irrigated land for rent in quantities to suit, free of charge this season, adjoining the Colony, three miles from Fresno.

Call or send for Maps, Circulars, etc.

CENTRAL CALIFORNIA COLONY,

306 Pine Street, San Francisco.

M. THEO. KEARNEY, Manager.

### TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPARVAIL TYPE, FORMERLY USED ON THIS PAPER, FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,

224 Sansome Street, San Francisco.

### SELECT AND HEAVY FLEECE MERINO SHEEP.

During the winter I will be in San Francisco with some Merino Rams and Ewes that are sold, and if correspondents in California and Texas send their orders with remittance, we can deliver at same time.

JOHN S. GOE,

Brownsville, Fayette Co., Pa.

ALEX. BUSWELL,

BOOK BINDER, PAPER RULER

AND BLANK BOOK MANUFACTURER,

521 Clay Street, S. F.

Blank Books Ruled, Printed, and Bound to Order.



Continued from page 37.

and the offal and meat thrown to the hogs, which thrive and grow fat, when they in turn are sold, slaughtered, and turned into money. It is getting to be high-binding times with our sheep men. In ordinary seasons those who have wool in warehouses at the bay can draw well up to its value in coin, because the commission merchant can borrow of the bank; but in such a season as this, the bankers, knowing that a continued drouth will ruin many sheep men on whom the merchant depends, refuse to loan. In short, the banks keep up the commission men, the commission men keep up the producers, and the producer, having no one to keep him up when the season fails, is ground to powder between the upper and nether mill stones, for he alone, of all the dealers, takes the risk for the smallest share of the profits.

**CAMPFIRE WEED.**—We alluded last week to a disease in sheep, on which account a large number were being slaughtered. We have since learned that the cause of the malady is their feeding on camphor weed, causing a weakness of the spine, affecting the brain and laming the animal in the loins, so that, although fat, and to appearances in good condition, they are unable to walk about. Until all other feed is gone sheep will not eat enough camphor weed to affect their system, but when forced to it by hunger, and there is nothing else to be had, the continued use of it as an entire diet will produce death. If, however, the flocks affected are removed to green feed they recover from its effects.

## YOLO.

**OUR STOCK MEN.**—Mail, Jan. 11: A few enterprising men of Yolo county are making efforts to introduce fine breeds of cattle, sheep and hogs. This is a commendable enterprise, and is as equally commendable as the importation of fine horses. We note an importation from Ohio, by Mr. E. Bynum, of some fine breeds of hogs. They were shipped per express from Butler county in that State and are known as the Magic hogs. The pedigree of these hogs, as given by the producer, is as follows: They were produced from four pure and distinct breeds of hogs, three of which were imported, namely: Poland, Big Spotted China, Big Irish Graziere and Byfield. They are of fine bone, but large in size, combining more eminently than any other the excellencies of both large and small breeds. They fatten readily at any age, and yet attain great weight at maturity. They sometimes dress 350 lbs at from 10 to 12 months old, and from 18 to 20 months old 500 to 600 lbs. They have long bodies, short legs, broad straight backs, deep sides with square, heavy hams and shoulders, and are of fine style generally. Mr. Bynum has three of these hogs. They were received here about three or four weeks ago, and at that time were but small pigs, two of them coming in one box; now they are very large, plump and fat as butter. They are growing rapidly, and will, by the time they are a year old, weigh 500 lbs. It will not only be a gratification, but it will pay any one who will make the trip just to examine them, for they are strangers in these parts, and it may lead to the introduction of a few more of the same sort. Next to those of Mr. Bynum's, Wm. Gibson has some of the finest hogs we have seen in this country. His are also pure China, but are not so neat and smooth as the Magic hog. The introduction of fine-wooled sheep has been going steadily on, and already there are many in Yolo county. Mr. Coil, Mr. Pond, Mr. Watkins and Mr. Blowers have each very nice herds of imported stock, and we learn that others have been introducing fine-wooled breeds. From these initiatory steps we may expect some beneficial results in a few years. We believe there is more of a desire to import fine sheep, hogs and horses than there is to bring blooded cattle to this coast. We don't know why it is, but we never hear of any of our farmers importing fine milk cows, except such as figure at the State fairs for premiums. E. Comstock, living on the Sacramento river, has been dealing in some very good blooded cattle, and Geo. W. Scott, of Cottonwood, bought some at the fair sales two years ago, which we believe were of the finest breeds known to be on the coast. A few Angora goats have been brought into Yolo county, but there does not seem to be any particular sensation created over them. We have an idea that after a while, when irrigation will become more general and the alfalfa fields more numerous for pasture, and when it will not require quite so much care and attention to take care of stock, that a finer and better breed of all kinds will be introduced and become the staple product of stockraisers.

**WHAT THERE IS IN AN ONION.**—The savory onion has at last fallen beneath the scrutiny of the analyst and the *Scientific Farmer* tells us what there is in it. By Messrs. Wellington & Bragg, under the direction of Prof. Goessman, at the Massachusetts Agricultural College chemical laboratory, being the first authentic analysis of this plant on record. One thousand parts, air dry, contain: Water, 892.000; organic matter, 103.638; nitrogen, 2.120; total ash, 4.362; potash, 1.680; soda, 0.082; lime, 0.354; magnesia, 0.159; iron (sesquioxide), 0.027; phosphoric acid, 0.688; sulphuric acid, 1.153; silica, 0.143.

**THE Mark Lane Express** asserts that 500 tons of fresh American beef reach England weekly. This new branch of trade has created considerable anxiety in the English agricultural districts of Shropshire and Staffordshire.

## "Satan Came also Among Them."

[Written for the PRESS, by C. L. ANDERSON, M. D.]

"No quack advertisements inserted in these columns."—RURAL PRESS.

Sometimes I feel a pang of sorrow (and may be a blush of anger) when I take up our religious papers and see the quack advertisements. Side by side with some noble sentiment—some temperance admonition—some extract from a popular sermon, we read of pills for female disorders (which are properly named, no doubt), of "stomach bitters" (made of the worst quality of whisky), or a certificate from some quack doctor or injudicious judge or feeble-minded clergyman, recommending a cure for consumption, or some other disease about which the certifier knows little or nothing.

Some of these papers not only advertise these unblushing frauds, at a rate, too, much below the usual rates paid for honest advertisements, but they enter into a sort of partnership to fleece unsuspecting victims of disease of their slender means by sharing in the sales the advertisement may bring.

Now, this kind of advertising is found not only in our Eastern religious papers, of the most orthodox kind, but in those of this coast. I need not mention one, for I think they are all guilty; but if there should be one that does not advertise such humbugs I should be happy to mention the exception with due credit and praise—that there is a good Christian paper in California that does not "bow the knee to Baal."

It is a singular fact that some of our best agricultural papers ignore all such advertisements. Some years ago the *American Agriculturist* published a number of articles, exposing the system of these quack advertisers. Nine-tenths of them were found to be the basest frauds in existence. The common gambler is an honest man beside some of them. They added to ordinary rascality a touch of religious hypocrisy, representing at times "retired physicians," "missionaries," "clergymen," etc., when in fact their names and places were mythical, and their famous recipes could not be compounded by any druggist. There was always one or more ingredients that the benevolent individual alone could furnish at a very high price, for it was a precious article, only to be found in Africa or India, or some other far-off place.

Now, I thought the exposure of so many of these rogues was known to everybody. But today I took up two leading religious papers and there I saw the same old Satan, with scarcely a change of dress since I noticed him 20 years ago. Among all these good things presented by the sons of God, as in the days of Job, "Satan came also among them." But these good editors ought to know the devil by this time, especially in his old familiar dress! They should not endorse his certificates even by admitting them for pay in their papers. If their papers cannot live without the patronage of Satan they certainly can do no good by living with it. Better for them to die than to eke out a miserable existence advertising for the devil. That the greater part of patent nostrums advertised so extensively are base frauds, and the doctors who advertise in the same way no better, does not need an argument among the enlightened readers of this day. But when a confiding Christian family see an advertisement in a Christian paper, that seems to be an endorsement of the article or person advertised, and thus the unsuspecting are swindled.

It may be the good managers of these papers are acting up to the best light they have. I should be glad to have them consider this subject, and if they can make out a good excuse I have no doubt the editors of the PRESS would gladly publish what they have to say.

Nevertheless there are a good many people who would prefer to take their religious reading without the mixture of quack advertisements.

**SLUTHOUR PUMPS.**—The advantage of being prepared for irrigation, as clearly shown by the late protracted drouth, make pertinent a remark about pumps. The Sluthour pumps, which have been illustrated in the *RURAL*, and which are now offered for sale by J. M. Keeler & Co., as seen in their advertisement, have been tested and we are told are excellently adapted to their work. It is claimed that one man can raise as much water with one of these pumps as can be brought up with a horse with most other contrivances. The largest size, which has a capacity of 1,000 gallons per minute, may be worked with a two-horse power or a small engine. The claim of the pump is for durability and large results, according to the power required. This is accomplished by the mechanism of the pump, which does away with the friction in the ordinary piston pump, and applies the full power of the lever directly to raising the water. The parties presenting this pump claim to be able to get up 1,000 gallons of water per minute at about one-half the cost of any other apparatus.

**NEW MUSIC.**—Oliver Ditson & Co. send us three fine vocal pieces: "Clouds at Eventide," one of four German gems by Franz Lachner, "Sun of my Soul," quartet, which has new music to a favorite hymn, and "Summer Friends," by Pissenti, a composer who has a charming talent for composing neat English songs with Italian melodies. There are also three equally good piano pieces: a perfectly irresistible "Irresistible Schottische" by Sudds, a nice "Fairy Legend," for violin (first position) and piano, by Eichberg, and a beautiful romance, "Angels' Wings," by V. B. Aubert.

## Rain Everywhere.

The rain-storm, which up to this (Wednesday) afternoon had deposited .75 of an inch of rain in the rain gauge of the Signal Service in this city, has been general throughout the coast. We print below some dispatches received last night, January 16th, by the Associated Press. To-day the storm has continued, and doubtless the sprinkle in many places has changed to a pour.

## California.

**COLUSA, COLUSA Co.**—It clouded up last night, and this morning looked very much like rain; but after a slight sprinkle—about a drop to the square yard—it cleared off, and the wind is now in the south. A little snow is observable on the top of the mountains west of here. Most of the wheat is looking well yet, but the ground is very dry.

**MARTINEZ, CONTRA COSTA Co.**—About 8 o'clock this morning a light rain set in, which has continued with slight intervals to the present time. The wind is now slowly changing to the southwest and south, and the prospects are favorable for considerable rain.

**MERCED, MERCED Co.**—The weather has been cloudy for the last three days, with every indication of rain; wind southwest.

**UKIAH, MENDOCINO Co.**—The weather is cloudy, wind changing for several days. It commenced raining last night at 1 o'clock, and rained hard to-day. At 12 it is still showery.

**SALINAS, MONTEREY Co.**—It commenced raining here at 11:30 this morning; been raining most of the time since. South wind to-night; barometer falling slowly; at 6 o'clock this evening it stood at 30.90.

**NAPA, NAPA Co.**—It began raining about 5 o'clock this morning, and has been showery all day, which has brightened the prospects for farmers greatly. What rain has fallen to-day will make the crops all right for some time to come; but there are strong indications that the storm will continue.

**GRASS VALLEY, NEVADA Co.**—It commenced raining at 7:30 A. M. Eighty-three-one-hundredths of an inch fell up to that time, and some hail and snow at intervals during the day. It is still very cloudy. The wind is blowing from the southeast and barometer falling; thermometer, 41°. Indications favorable for an average crop.

**AUBURN, PLACER Co.**—No rain has fallen here since 5 P. M.; mild south wind, very heavy clouds, and every appearance of more rain. Thermometer, 46°. With sufficient rainfall now crops in this vicinity will be fully an average with previous years.

**COLFAX, PLACER Co.**—It commenced raining this morning about 7 o'clock, increasing in force about 10 o'clock, and continuing steadily until about 4 o'clock this afternoon. The indications are that it will continue during the night. The hopes of the miners and the public generally are looking up.

**SACRAMENTO, SACRAMENTO Co.**—At midnight on Monday the wind changed from northerly to southeast. At daylight to-day it blew from the southeast, shifting by sunrise to the south. The sky was heavily overcast, and all day, between sunrise and two o'clock P. M., a sprinkle now and then, but barely perceptible. At 4 P. M. the sky cleared, the wind died away, and at 11 P. M. the sky is all clear and wind about gone. The thermometer is down to freezing, and no rain signs apparent. It rained at Elk Grove and Florin, a few miles southeast of the city, to-day quite sharply.

**GUADALUPE, SANTA BARBARA Co.**—Clouded up at four P. M., with heavy south wind. Commenced at five o'clock; still continues, with good indications for a week's supply.

**SAN JOSE, SANTA CLARA Co.**—The long expected rain is here at last. The wind changed to the southwest this morning, and soon after daylight the drops descended in a light shower. It again cleared off until about noon, since which time it has showered at intervals, and at present the stars are obscured, and the indications are that it will rain throughout the night. The rainfall to-day is twelve-hundredths inches.

**SANTA CRUZ, SANTA CRUZ Co.**—It commenced raining early this morning. It is a cold, piercing rain.

**STOCKTON, SAN JOAQUIN Co.**—It commenced raining here at 2:25 P. M. Now, at 3 P. M., it is raining quite hard. Wind southwest.

**AVILA, SAN LUIS OBISPO Co.**—Very cloudy. Wind southeast. Been raining since three P. M.; slow but sure. Everything is favorable for a rainy spell.

**REDDING, SHASTA Co.**—It commenced to rain here this morning and sprinkled at intervals all day. There was quite a shower this evening, and there is snow all around us on the hills. There are good prospects for a storm. It is reported that snow fell heavily in the mountains all day. The grain is looking well.

**VACAVILLE, SOLANO Co.**—A light rain commenced at 4 A. M., with cold wind from the southeast, which continued until 11 A. M., when the sun came out bright and clear, the wind changing to the north and west. It commenced clouding towards evening and the wind changed again to the southeast. No appearance of rain to night. The prospects for a crop are fair. Barometer 31.

**BENICIA, SOLANO Co.**—It commenced raining here at 10 o'clock this morning, continuing at intervals all day, with strong indications of a heavy storm. Wind very strong from the southwest, from which it has not changed during the

day. The prospects for crops in this locality are very good, with considerable yet to be sown.

**SUMMIT VALLEY, SIERRA Co.**—It began snowing at 7 o'clock this morning. At 2 P. M. four inches had fallen, and the storm is still raging fearfully.

**Petaluma, SONOMA Co.**—We had light showers here during the forenoon to-day, but it cleared up at about 1 P. M. We have had several showers this evening again, and it now looks as though it would be showery during the night. Wind southwest and quite cool. Crops look finely in this vicinity.

**Cloverdale, SONOMA Co.**—We have had considerable rain during the day by showers, enough to make the roads muddy. At 6 P. M. the rain is still falling; weather cold, cloudy and dark; indications of a general rain storm.

**Modesto, Stanislaus Co.**—Indications very favorable for rain. The wind is blowing a gale from the southwest; cloudy; thermometer 60.

**Red Bluff, Tehama.**—Rain commenced falling at an early hour this morning, but lasted only a short time. There are indications now of a heavy storm. The crops are in a good condition.

**Cambria, Ventura Co.**—It commenced raining at one o'clock this afternoon, and has continued with short intermissions since that time. Half an inch is already down, and Grangers offer to bet on a foot before it lets up. Very cloudy; wind southwest.

**Woodland, YOLO Co.**—Weather was dark and cloudy to-day until noon, after which there was a slight sprinkling of rain for about an hour. The rest of the day continued bright and clear. The grain crops in this section of the country look promising and we only need rain to secure a bountiful harvest.

**Marysville, Yuba Co.**—The weather has been windy and cloudy all day, with a slight rain at noon; it is clear to-night. The crops bid fair for a good average.

## Oregon.

**ALBANY.**—Commenced raining about 10 A. M. yesterday, and has been raining with intermissions since. The prospects for an abundant yield of farm products are very flattering.

**Portland.**—The weather is stormy; a heavy rain fell last night. Warm and cloudy with wind south to-day. The prospects for a large yield of cereals was never better.

**ROSEBURG.**—It commenced raining last night about 10 o'clock, and has continued through the day with scarcely any intermission. The prospects for crops are regarded as good by the farmers, and a larger amount of grain has been sown than usual, on account of having so much pleasant weather this winter.

## Washington Territory.

**VANCOUVER.**—It has been raining here at intervals the last day or two, but not cold. The thermometer marked 50 degrees at noon to-day. Fall sown wheat is doing nicely, and the prospects for a heavy crop are flattering.

**NEW TACOMA.**—Yesterday was stormy all day, with strong southerly wind rising to a gale. At 3 o'clock P. M. the barometer stood at 29.50; this morning at 29.45. Cloudy and strong south wind this afternoon. Seven o'clock P. M.—calm and clear. Thermometer 45.

**OLYMPIA.**—The wind is south and southwest. Rain, with an occasional flood of sunshine. Thermometer, 40. Crop prospects good.

A SEVERE northerly gale was felt all over the State on Friday last. Little damage was done in this harbor.

THE fires in the mines at Lykens, Pa., are gradually diminishing. The loss will be smaller than was at first supposed.

GREAT damage was done by the ice breaks in the Ohio river this week.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING JANUARY 20, 1877.

**ORE ROASTING FURNACE.**—William K. Aldersley, Columbia, Cal.

FOR WEEK ENDING JANUARY 27th, 1877.

**PUMP VALVE.**—Gartett D. Hopper and William H. Laufkotter, Sacramento, Cal.

**INCUBATORS.**—Walter Masterton, Stockton Cal.

**CANNED AND PRESERVED FRUITS AND VEGETABLES.**—Stevens & Groom, San Jose, Cal.

Foolishly spent—money paid for children's shoes not protected by SILVER TIPS. Two weeks is about the time it takes a smart, active child to ventilate the toe of a shoe. SILVER TIPS the only preventive. Also try Wire Quilted Soles.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## IMPORTANT!

Notice to Farmers in want of labor! The well-known Employment Agency of ZEEHINDELAAR & CO., formerly the "Free California Labor Exchange," has removed to 606 Clay Street, (up-stairs) San Francisco.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Jan. 17, 1877.

The rainfall is the prevailing topic of conversation in all trade circles. The streets are running with water and heavy with mud, and the difficulty of dry communication makes the streets empty and immediate trade lags. There is, however, a most cheerful tone pervading all lines, and the feeling is that better times in trade are just at hand.

During the week the Liverpool Wheat market has shown some tendency to fluctuation and the closing quotation is a point below the mark of a week ago. To-day, private advices report a stronger market abroad. The local trade has been quiet and within former rates.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday	10s 11d@11s	1d	11s 2d@11s	7d
Friday	10s 11d@11s	—	11s 2d@11s	5d
Saturday	10s 11d@11s	—	11s 1d@11s	4d
Monday	10s 11d@11s	—	11s 1d@11s	4d
Tuesday	10s 11d@11s	—	11s 1d@11s	4d
Wednesday	10s 10d@11s	—	11s 1d@11s	5d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1875	9s 4d@9s	8d	9s 4d@10s	3d
1876	10s 4d@10s	6d	10s 9d@11s	3d
1877	10s 10d@11s	—	11s 1d@11s	5d

## The Foreign Review.

LONDON, January 15th.—The *Mark Lane Express* says: The submergence of the lowland districts has entirely stopped all agricultural labor, while the continual rainfall has seriously affected the condition of all home-grown grain. The heavy snow storms in Scotland have proved very disastrous to stock farmers, many sheep having perished. The Wheat plant, where not submerged, is looking fair. English Wheat is in good condition but rare both in the country and Market, and a ready sale has been found at late rates. The impossibility of working many mills in the country has caused trade to assume narrow dimensions, and supplies to London have been meager. In grain there appears little probability of much improvement, as farmers are unwilling to thresh in the present weather. The arrivals from New York have been a little over 2,000 quarters. Barley has advanced one shilling per quarter for fine qualities. There has been less activity in Maize, which has somewhat depreciated in value. Oats have been dull and unaltered, despite the limited arrivals. The scarcity of Corn has supported full prices. Cargoes which arrived at the beginning of the week are held with great tenacity. Business is limited, but a slight advance has been realized for Wheat and Maize.

## Freights and Charters.

The freight market, says the *Post*, continues stagnant. Engagements of Wheat tonnage to load for a direct port have been made during the week, on a basis of £2@£2 2s 6d, according to vessel. There are said to be orders for rising 10,000 tons of tonnage to load at the Peruvian guano deposits, in the hands of agents in San Francisco. Vessels are eagerly seeking outside business, and it is probable that the above opportunity will soon be exhausted. Other miscellaneous business continues to be rather flat. We have now in port 25,766 tons of tonnage secured for Wheat. The tonnage engaged for miscellaneous purposes aggregates 12,448 tons, while the list of disengaged tonnage foots up 34,779 tons. Following are the engagements of the week: Br ship Trevelyan, 1,042 tons, Wheat to Liverpool at £2 2s 6d, Cork, U. K., £2 6s; Br ship Buckinghamshire and Thirlmere and ship Humboldt, all wheat to Liverpool at current rates; ship Highland Light, 1,315 tons, Wheat to Liverpool at £2; Cork, £2 2s 6d; Continent, £2 7s 6d.

## Flour and Grain on Hand January 1st.

The following is the report of Flour and Grain in the State of California, January 1st, 1877, as taken by the San Francisco Produce Exchange, furnished to the *RURAL PRESS* by W. H. Walker, Secretary:

	Wheat.	Barley.
San Francisco and Oakland, cts.	581,500	416,000
North coast, Russian river and Pet.	34,200	15,900
Napa Valley and Cal. Pac. R. R.	831,700	37,000
Sacramento valley and river.	632,000	182,000
Lower Sacramento, etc.	149,500	37,000
S. F. Bay Landing, etc.	106,200	183,500
San Leandro to Livermore.	142,400	100,400
Stockton and San Joaquin valley.	767,900	75,700
Redwood to Hollister.	312,900	143,600
Salinas and Pajaro valley.	315,500	193,200
Southern coast.	16,900	72,300

Totals.....3,640,700 1,458,600  
Stock January 1st, 1876.....2,822,000 832,400

The stocks of Flour and minor Grain compares as follows with that of a year ago:

	1876.	1877.
Flour, bbls.	57,800	58,800
Oats, centals.	52,000	80,700
Corn, sacks.	60,000	142,700
Rye, sacks.	5,700	14,000

The stock of Flour on the 1st embraced 36,000 bbls at San Francisco, Oakland and afloat in the harbor, and 10,600 bbls in Sonoma and Napa counties. Of the Oats, 62,200 cts, and of the Rye, 7,800 cts are credited to San Francisco. Of the Corn, 113,800 bags is still at the places of growth on the Southern coast, 12,500 sacks at San Francisco and 10,000 sacks at the landings on the East side of the Bay.

## New York Grain Market.

New York, January 14th.—The Grain trade continues dull, and prices show little change. Early in the week Wheat sold at rather better prices, but the improvement was not sustained, the conditions of trade being against exporters. Graded Spring Wheat has sold at \$1.33 to \$1.48, and Winter \$1.40 to \$1.55. Corn, Rye and Barley have been steady, with a cargo of the latter sold for England at 55c for feeding. With the rate of freight at 6s 3d, shipping Flour is scarce and firm, with little to be had below 80c, prices being relatively higher at the sources of supply than in this market.

## Chicago Grain Market.

Chicago, January 14th.—Breadstuffs have been firm and Wheat strong and higher during nearly the entire week, closing with considerable excitement. The strength of the market has astonished the bears, and the bulls are more than surprised. Receipts for the week—Wheat, 175,000 bushels; Corn, 809,000; Oats, 138,000; same week last year, Wheat, 247,000; Corn, 344,000; Oats, 76,000. Shipments—Wheat, 83,000 bushels; Corn, 317,000; Oats, 94,000; last year, Wheat, 75,000; Corn, 149,000; Oats, 55,000. Wheat closed at \$1.20, Corn 44c, Oats 35c, Rye 72c, Barley 61c—a large decline in the latter, in spite of the news from California that the Wheat and Barley markets there were much excited about the drought. Provisions have been very active, and closed nearly a dollar lower for Pork, and 25c lower than last week.

## Eastern Wool Markets.

New York, January 14th.—The Wool market has ruled

dull all through the week, and prices have declined on all descriptions of Domestic, excepting XX Ohio. This is chiefly due to the large supply of short inferior Wools on hand, such as Fall California and Texas, and to the absence of new and fine grades at the moment. Fine Ohio is required in the manufacture of all good grades, as a long and strong staple is needed for the warp. Unless an improved demand for goods sets in, nothing of a favorable nature may be looked for in the market for raw material. The sales for the week are 38,000 lbs Spring California at 24¢@31¢; 5,000 lbs scoured Fall, do, 53c; 90,000 lbs Western Texas, 21¢@26¢; 10,000 lbs Eastern do, 30c; 13,000 lbs low do, 22¢@24¢; 65,000 lbs X and XX Ohio, 45¢@47¢; and 5,000 lbs medium unwashed Indiana, 30,000 lbs do State, 29 and 114 bales Donskol, 100 bags Colorado, 2,000 lbs do, pulled, 7,000 lbs combing Ohio, 6,000 lbs low do, 1,500 lbs Black do, 5,000 lbs unwashed Michigan, 5,000 Missouri, 50 bales X pulled, 31 do super do, and 11 do No. 1, on private terms.

PHILADELPHIA, January 10th.—Wool is in good demand. Fine grades are scarce and higher; mediums firm, and light supply; coarse grades are dull and weak. Colorado washed, 18¢@22¢, unwashed, 16¢@17¢; Extra and Merino pulled, 35¢@38¢; No. 1 and super pulled, 33¢@38¢; Texas fine and medium, 20¢@25¢; coarse, 16¢@20¢; California fine and medium, 17¢@28¢; coarse, 15¢@25¢.

Boston, January 17th.—In Wool, prices are steady and firm, with no indications of any pressure to sell desirable lots at reduced prices. Fine fleeces are in fair demand at from 45¢ to 49¢ for X and XX Ohio and Pennsylvania; 43¢ for 45c for medium and No. 1, and 40¢@42¢ for Michigan, Wisconsin and New York. Combing and Delaine in fair demand; sales at 45¢@53¢ for washed; super and X pulled in fair demand at 34¢@45¢; very choice super, at 47¢@50¢; Fall California moves slowly at 14¢@20¢, as to quality.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Dec. 27.	WEEK Jan. 3.	WEEK Jan. 10.	WEEK Jan. 17.
Flour, quarter sacks.	23,568	27,612	56,257	75,076
Wheat, centals.	157,148	104,432	273,023	132,827
Barley, centals.	32,601	22,220	6,788	13,788
Beans, sacks.	3,449	1,383	1,084	401
Corn, centals.	5,533	5,072	4,936	5,325
Oats, centals.	3,738	3,119	3,687	1,345
Potatoes, sacks.	19,210	13,523	14,349	11,338
Onions, sacks.	1,743	1,200	802	588
Wool, bales.	107	98	124	162
Hops, bales.	65	40	32	66
Hay, bales.	970	1,195	724	1,042

Corn—Corn has advanced to \$1.42½ for the best large Yellow and White. We note sales of 300 sks White and large Yellow at \$1.42½, silver.

Dairy Produce—Butter is still in excess; only the best fancy brands can be sold for 32½c by the single box. Other good lots sell at 27¢@30c. Cheese is unchanged.

Eggs—Eggs are dull and weak at 30¢@31c.

Fruit—There is but little change in the Fruit market. Some of the best Pears have sold as high as \$3 per box, and Limes, owing to the poor quality, have sold as low as \$2.50 per M. Full prices may be found in our tables.

Feed—Corn Meal has advanced to \$32.50@35 per ton.

Hay has also advanced to \$20 per ton for the best. We note sales as follows: 52 tons, two cargoes, fair stock, \$14; 45 do coarse Wheat, \$16; 32 tons good Wheat and Oat, \$17; 40 do Wheat, Oat and Barley, \$18.

Hops—The steamer City of New York for Australia on the 4th inst, carried 10,076 lbs for New Zealand and 8,933 lbs for Australia, most of which was of medium quality sales previously reported. Prices now offered in this market are very low. We hear of no sales. Emmet Wells reports the New York market, for the week ending January 5th, as follows:

The clearance for export to London of over 3,000 bales this week has given a better tone to the market, and caused an advance of 2 cents per lb on choice New York and California Hops. Low and medium grades continue to be offered at late rates, and as stocks are large of this class, holders are always glad to sell whenever an opportunity offers. The shipment of 2,000 to 3,000 bales a week of our choice Hops will produce a very salutary effect upon the market, and perhaps result in higher prices than have yet ruled this season. Germany is entirely out of the market for our Hops, and only in the event of a Hop famine in that country need we expect any more orders of importance from there. Quotations—New Yorks, good to choice, 20 to 27c; New Yorks, low to fair, 13 to 18c; Eastern, 18 to 23c; Wisconsin, 12 to 17c; Yearlings, 10 to 15c; Olds, all growths, 4 to 8c; Californians, 23 to 27c; Oregon, 23 to 27c.

Rye—Rye is now quoted at \$2. We note a sale of 2,000 cts from warehouse at this figure.

Vegetables—A few changes may be found in the tables below.

Wheat—Sales have been made within former ranges.

We note sales: 3,000 sks choice Milling, \$2.20; 10,000 cts Shipping and Milling, \$2.20, and 3,000 cts Shipping at \$2.15; 400 sks choice Milling, \$2.25; 300 tons, \$2.15; and some parcels of choice Milling at \$2.20@2.25.

Wool—We have nothing new in Wool except the reports of the Eastern markets, which appear in another column. In the local trade there has been nothing but a few sales to local manufacturers at quotations below.

## LUMBER.

WEDNESDAY, M., Jan. 17, 1877.

## CARGO PRICES OF PUGGET SOUND PINE.

REDWOOD.	ROUGH.	RETAIL PRICE.
Rough, M.	\$18.00	Feuching.....\$22.50
Refuse.	14.00	Flooring and Step.....22.50
Clear.	30.00	Narrow.....35.00
Clear Refuse.	20.00	2d quality.....25.00
Rustic.	32.50	Laths.....3.50
Refuse.	22.50	Furring, lineal ft.....1
Surfaced.	30.00	REDWOOD.
Refuse.	20.00	RETAIL PRICE.
Flooring.	28.00	Rough, M.....\$22.50
Refuse.	18.00	Refuse.....18.00
Beaded Flooring.	30.00	Pickets, Rough.....18.00
Refuse.	20.00	Pointed.....20.00
Half-inch Siding.	20.00	Fancy.....30.00
Refuse.	16.00	Siding.....25.00
Half-inch Surfaced.	25.00	Surfaced & Long Beaded.....37.50
Refuse.	20.00	Flooring.....35.00
Half-inch Battens.	20.00	Refuse.....35.00
Pickets, Rough.	1.00	Half-inch Surfaced.....32.50
Rough, Pointed.	13.00	Rustic, No. 1.....40.00
Fancy, Pointed.	26.00	Battens, lineal ft.....4
Shingles.	35.00	Shingles, M.....3

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; CO.]

SAN FRANCISCO, Jan. 17, 3 P. M.

LEGAL TENDERS IN S. F., 11 A. M., 94¢@94½. SILVER, 61¢@67.

GOLD IN NEW YORK 106½. GOLD BARS, 890¢@900. SILVER BARS, 7¢@10 ¢ cent. discount.

EXCHANGE ON NEW YORK, 50¢@55-100 ¢ cent. premium for gold; on London bankers, 49¢; Commercial, 49¢; Paris, five francs ¢ dollar; Mexican dollars, 98.

LONDON CONSOLS, 93½; Bonds, 102½.

QUICKSILVER IN S. F., by the flask, ¢ lb, 50c.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY, M., Jan. 17, 1877.

BEANS.	Chile Walnuts.	11 @ 12
Bayo, cts.	Pecans.	17 @ 18
Butter.	Peanuts.	8 @ 9
Fea.	Filberts.	15 @ 16

ONIONS.	POTATOES.
Union City, cts.	Petaluma, cts.
Stockton.	1.50 @ 1.25
Stockton.	1.00 @ 1.25

Cotton, lb.....	15 @ 16	Early rose, new..	35 @ 1 00
<b>DAIRY PRODUCE, ETC.</b>		<b>Sweet.....</b> 75 @ 87 1/2	
<b>BUTTER.</b>		<b>POULTRY &amp; GAME.</b>	
Cal. Fresh Roll, lb	27 1/2 @ 32 1/2	Hens, doz.....	7 00 @ 8 25
Point Reyes.....	32 1/2 @ 34	Roosters.....	6 00 @ 7 00
Pickle Roll	27 1/2 @ 30	Broilers.....	5 00 @ 6 50

Pickle Roll.....	24 @ 30	Broilers.....	5 00 @ 5 50
Pirkin.....	22 1/2 @ 27 1/2	Ducks, tame.....	9 50 @ 10 50
Western Reserve..	16 @ 25	Geese, pair.....	2 25 @ 2 75
New York.....	— @ —	Wild Gray.....	2 50 @ —
CHEESE.			
Cheddar.....	10 @ 15	White.....	1 00 @ —

Cheese, Cal., lb....	10 @ 15	Turkeys, Live, lb..	18 @ —
Old.....	— @ —	Dressed.....	18 @ —
Eastern.....	12 1/2 @ 15	Quail, doz.....	1 00 @ 1 25
N. Y. State.....	19 @ 20	Snipe, Eng.....	2 50 @ —
EGGS.		Doves.....	50 @ 57

Cal. fresh, doz....	30	@	31	Rabbits.....	1	25	@	1	50
Ducks'.....	32½	@	—	Hare.....	2	00	@	—	—
Oregon.....	25	@	—	<b>PROVISIONS.</b>					
Eastern.....	—	@	—	Cal. Bacon, L't, lb	14	@	15		
<b>FEED.</b>				Medium.....	13½	@	14		

Bran, ton.....	22 50	@	—	Heavy.....	13½	@	—
Corn Meal.....	33 50	@	35 00	Lard.....	12½	@	14
Hay.....	16 00	@	20 00	Cal. Smoked Beef	10	@	10½
Middlings.....	32 50	@	—	Eastern.....	—	@	—
Oil Cake Meal.....	37 50	@	—	Eastern Shoulders	—	@	—

Straw, bale.....	70	@	75	Hams, Cal.....	14	@	14
<b>FLOUR.</b>				Armour.....	16	@	—
Extra, bbl.....	6	50	@ 7 25	Worster's.....	15	@	—
Superfine.....	4	75	@ 5 50	Dupe's.....	17	@	—
Graham.....	5	50	@ 6 00	Davis Bros'.....	17	@	—

FRESH MEAT.		SEEDS.	
Beef, 1st qual'y, lb	4½@	7 Alfalfa, Chile, lb..	8 @ 13
Second.....	3½@	4½ California.....	16 @ 18
Third.....	3 @	3½ Canary.....	10 @ 12½
Mutton.....	4 @	4½ Clover, Red.....	22 @

Butter, ..... 4 @ 7½	Clover, Red..... 22 @
Pork, undressed. 6 @ 6½	White..... 50 @ 55
Dressed..... 8 @ 8½	Cotton..... 6 @ 10
Veal..... 5½ @ 6	Flaxseed..... 3½ @
Milk Calves, ..... 7 @ 8½	Hemp..... 5 @ 7
<b>GRAIN, ETC.</b>	
	Italian Rye Grass 25 @ 30

GRAIN, ETC.			Italian Rye Grass	25 @	30
Barley, feed, ctl...	1 25	@ 1 45	Perennial.....	20 @	12
Brewing.....	1 35	@ 1 50	Millet.....	10 @	30
Chevalier.....	1 25	@ 1 50	Mustard, White...	10 @	—
Corn, White.....	1 30	@ 1 42½	Brown.....	3½ @	4
Yellow.....	1 30	@ 1 41½	Rape.....	2 @	4

Yellow.....	1 30	(a) 4 1/2	Rape.....	3	(a) 4
Oats.....	2 00	(a) 2 40	Ky. Blue Grass....	30	(a) —
Milling.....	2 45	(a) —	2d quality.....	29	(a) —
Rye.....	2 00	(a) —	Sweet V Grass....	75	(a) —
Wheat, shipping..	2 10	(a) 2 25	Orchard.....	30	(a) 35
Wheat, feed.....	2 00	(a) 2 00	Orchard.....	27	(a) —

Milling.....	2	20	@	2	25	Red Top.....	25	(a)	—
<b>HIDES.</b>									
Hides, dry.....	20	(a)	21	Hungarian.....	8	(a)	12		
Wet salted.....	7	(a)	8½	Lawn.....	50	(a)	—		
<b>HONEY, ETC.</b>									
				Mezquite.....	20	(a)	25		
				Timothy.....	10	(a)	10½		

Beeswax, lb.....	25 @ 27	<b>TALLOW.</b>	
Honey in comb....	10 @ 12	Crude, lb.....	6 @ 6
Strained.....	6 @ 8	Refined.....	8 @ 8
<b>HOPS.</b>		<b>WOOL, ETC.</b>	
New Crop.....	20 @ 25	<b>FALL.</b>	

<b>NUTS—Jobbing.</b>			Free.....	12 @	14
Almonds, hd shl lb	7 @	—	Choice.....	14 @	16
Soft sh'l.....	15 @	17	Northern.....	17 @	21
Brazil.....	14 @	16	Burry.....	10 @	16
Cal. Walnuts.....	8 @	10	Oregon, Eastern...	20 @	—

Valley.....	25 @	—
-------------	------	---

---

# LEATHER

WOOL, ETC.	
Free.	12 @ 14
Chad.	14 @ 16
Northern.	17 @ 21

WEDNESDAY, M., Jan. 11, 1871.			
Sole Leather, heavy, lb.....	\$	26 @	29
Light.....		22 @	24
Jodot, 8 Kil., doz.....		48 00 @	50 00
11 to 13 Kil.....		68 00 @	79 00

11 to 13 Kil.....	88 00	@75 00
14 to 19 Kil.....	82 00	@94 00
Second Choice, 11 to 16 Kil.....	57 00	@74 00
Cornellian, 12 to 16 Kil.....	57 00	@67 00
Females, 12 to 13 Kil.....	63 00	@67 00
14 to 16 Kil.....	71 00	@76 50

14 to 16 Kil.....	71 00	@76 50
Simon Ullmo, Females, 12 to 13 Kil.....	58 00	@62 00
14 to 15 Kil.....	66 00	@70 00
16 to 17 Kil.....	72 00	@74 00
Simon, 18 Kil.....	61 00	@63 00
00 00	02 00	@00 00

20 Kil.....	63 00	@67 00
24 Kil.....	72 00	@74 00
Robert Calf, 7 and 9 Kil.....	35 00	@40 00
Kips, French, lb .....	1 00	@ 1 35
Cal. doz.....	40 00	@60 00
.....	0 00	@15 00

French Sheep, all colors.....	8 00	@ 15 00
Eastern Calf for Backs, lb.....	1 00	@ 1 25
Sheep Rouas for Topping, all colors, doz.....	9 00	@ 13 00
For Linings.....	5 50	@ 10 50
Cal. Russet Sheep Linings.....	1 75	@ 4 50

Boot Legs, French Calf, pair.....	4 00	@	—	—
Good French Calf.....	4 00	@	4	75
Best Jodot Calf.....	5 00	@	5	25
Leather, Harness, lb.....	24	@	—	32
Fair Bridle, doz.....	48 00	@	72	00

Skirting, lb.....	33 @ 37
Welt, doz.....	30 00 @ 50 00
Buff, ft.....	18 @ 19
Wax Side.....	17 @ 18

FRUITS AND VEGETABLES.	
[TABLE HERE]	

[WHOLESALE.]	
WEDNESDAY, M., Jan. 17, 1877.	
<b>FRUIT MARKET.</b>	Raisins, Cal, bx 1 50 @ 2 50

Oranges, Mex.			Malaga.....	3 00 @	—
M.....	30 00	@35 00	Figs, Black, lb..	4 @	6
Tahiti.....	—	@—	White.....	10 @—	—
Cal.....	10 00	@30 00	Prunes.....	12 1/2 @	17
Limes.....	2 50	@10 00	Citron.....	28 @	30

Lemons, Cal....	10 00	@ 15 00	Zante Currants..	9 @	10
Sicily, bx.....	9 00	@ —	<b>VEGETABLES.</b>		
Bananas, buch..	2 00	@ 3 50	Asparagus, lb...	— @	—
Cocoanuts, 100..	5 00	@ 6 00	Beets, ctl.....	60 @	—
Pineapples, doz	6 00	@ 8 00	Cabbage, 100 lbs	65 @	75

Apples, bx.....	40 @ 1 75	Carrots.....	50 @ 62
Crab, lb.....	2 @ 3	Cauliflower, doz	75 @ —
Figs, lb.....	4 @ 5	Celery.....	75 @ —
Pomegranates...	— @ —	Garlic, lb.....	2 @ 2
Pears, bx.....	1 00 @ 3 00	Squash, Marrow-	

DRIED FRUIT.				Squash, Marrow			
fat, tn.....15 00 @20 00							
Apples, lb.....	4 1/2 @	6	Artichokes, doz—	— @—	—	—	—
Apricots.....	10 @	12 1/2	Parsnips, lb.....	1 @	—	1	—
Pears.....	7 @	8	Lettuce, doz.....	10 @	—	—	—
Peaches.....	7 @	9	Turnips ctl.....	60 @	—	75	—

Peaches.....	1 @ 3	Pumpkins, cut.....	50 @ 10
Plums.....	3 @ 4	White.....	1 00 @ —
Pitted.....	12 @ 14	Mushrooms.....	— @ —

RETAIL GROCERIES, ETC.	
WEDNESDAY, M., Jan. 17, 1877.	



## Nurserymen.

RARE AND VALUABLE  
PLANTS AND TREES.

STRAWBERRIES.—Ever-bearing French Bush Straw berries, with and without runners; the best of all in flavor and taste. Plants without runners make fine borders. Prices: With runners, 1,000 plants, \$10; 100, \$1.50; 12, 25c. Without runners, 1,000 plants, \$20; 100, \$3; 12, 50c.

TREES.—The real Paulownia Imperialis, 50c. Two dollars each for trees from two to nine feet high. Walnuts, paper shell, the best of all, one year old, 50c. each. Walnuts bearing three years from the seed. Four kinds of the finest French Chestnuts, just received from France, one and two years old, 50 and 75c. Twelve thousand Plants and Trees just received from France, including many new varieties.

For sale by

J. GRELOCK, Los Angeles.

P. O. Box 233.

FRUIT, EVERGREEN, NEW AND RARE  
TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Prichardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF  
ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Ad-  
dress

JOHN ROCK, San Jose, Cal.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES,  
EVERGREENS,SHRUBS AND GREENHOUSE PLANTS,  
Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons,  
And Other Tropical Fruits.I have imported superior Figs and Raisin Grapes di-  
rect from the place of their nativity in Europe, and hav-  
ing propagated large quantities, can now offer them to the  
trade and the public on the

Most Reasonable Terms.

200,000

Australian Gum Trees For Sale,

—AT—

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high.  
transplanted regularly into boxes 30x20 inches square.  
weighing 150 pounds. 150 or 500 in each box, in  
splendid condition for transplanting to their permanent  
location. Price, \$3 to \$12 per 1,000. Will con-  
tract to plant the trees, or furnish superintendence, on  
low terms. Cash must accompany orders for less than  
\$50, or if greater than that amount, city reference must  
be given. Address,

JAS. T. STRATTON,  
East Oakland, Alameda County, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE,  
PEAR, PLUM, CHERRY, PEACH, APRICOT,  
ALMOND, QUINCE, OLIVE, FIG,  
GRAPEVINES, AND SMALL  
FRUITS.EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER,  
ELM, POPLAR, ETC., ETC.Our Trees are well grown and healthy, and those wishing  
to plant largely will study their own interests by giving  
us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.



## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON,

Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Ever-  
green Shrubbery.

## PETALUMA NURSERY.

Established - - - - - 1860.

We offer this season a large and well-selected stock of  
Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general  
assortment of Evergreen Trees and Shrubs. We have 1,000,  
000 Gums from \$5 per M up, according to size. We have also  
an over-stock of Pinus insignis, Monterey Cypress, Pure  
White Pampas Plants, large plumes, Large Araucaria Ex-  
cellens, American Elm, Black Walnuts and Blackberry Roots,  
at very low rates. Price List sent on application. Address,  
WM. SEXTON, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb  
Catalogue GRATIS. Address, F.  
K. PHENIX, Bloomington Nursery, Ill.

## PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed  
furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

## BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over  
the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations  
with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and  
sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly  
from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which  
for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials  
from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to  
purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE &amp; CO., Agents.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,  
etc., etc.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

## PEPPER'S NURSERIES

ESTABLISHED IN 1858.

The largest and most complete stock of Fruit Trees  
north of San Francisco Bay, also, a general  
assortment of Shade Trees, Evergreen Trees  
and Shrubs, Green House Plants, etc.  
Eucalyptus in variety. Prices low.

Catalogues and list of prices furnished on application.  
Address, W. H. PEPPER, Petaluma, Cal.

## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.  
Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



My annual Catalogue of Vegetable and Flower Seed for  
1877 will be ready by January, and sent FREE to all who  
ply. Customers of last season need not write for it.  
I offer one of the largest collections of Vegetable Seed ever  
sent out by any seed house in America, a large portion  
of which were grown on my six seed farms. Printed di-  
rections for cultivation on every package. All seed sold  
from my establishment warranted to be both fresh and  
true to name; so far, that should it prove otherwise I  
will refund the order gratis. As the original introducer  
of the Hubbard and Marbled Squashes, the Marbled  
Cabbages, and a score of other new vegetables, I invite  
the patronage of all who are anxious to have their seed  
fresh, true, and of the very best strain. New Vegetables  
a specialty.

JAMES J. H. GREGORY,  
Marblehead, Mass.

## SEEDS. SEEDS. SEEDS.

MY CATALOGUE OF

Field, Flower and Garden Seeds, Etc.,

For 1877, will be mailed free to all applicants.

WILLIAM RENNIE, - - - TORONTO, CANADA

## SPANISH CHUFA

SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the  
Pacific Coast in the towns  
and farming districts for  
over four years, and wher-  
ever they have been sold  
(and there are thousands of  
them out) they are doing  
their work as well as when  
put up. A careful perusal  
of our Circulars gives a fair  
representation of them and  
shows their simplicity.

We are prepared to fill orders, from a  
PUMPING MILL to a 24-foot POWER MILL for running  
Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT).

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now  
been tested to entire satisfaction  
of all, and meets the demand for  
an article of that kind that has  
not been supplied on the Pacific  
Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars  
and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

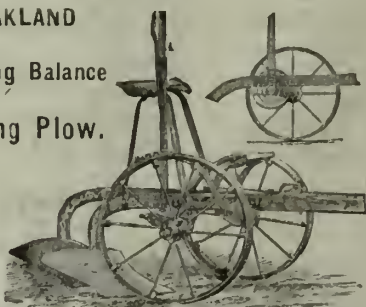
General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## OAKLAND

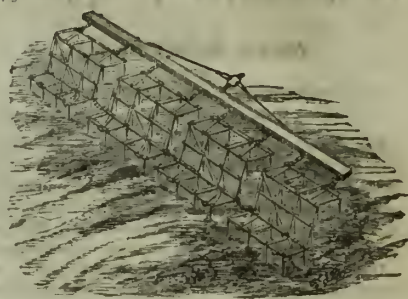
Spring Balance

Gang Plow.



Patented and manufactured by H. N. Dalton, at the  
Pacific Agricultural Implement Works, Pacheco, Cal.  
Published in 1858. Send for Circular and Price List.

## IRON SECTIONAL HARROW.



This Harrow was Awarded the First  
Premium at the California  
State Fair in 1875.

The undersigned, having purchased the patent right of  
this Harrow for California, are now manufacturing them  
in Roseville, Placer County, and would call the attention  
of Farmers to the superior merits of this Harrow over all  
others now in use.

As its name indicates, it is made in sections of about  
three feet in width, each section having four bars, in  
which the teeth are inserted, and by connecting the sec-  
tions with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do  
all kinds of work, he should purchase six sections, which  
would be suitable for four horses, and would cut 18 feet  
in width; by disconnecting two sections he will have a two  
or three-horse Harrow, cutting about 13 feet. One sec-  
tion alone is complete in itself, and suitable for garden  
work, with one horse. The Harrows are made of the best  
quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superi-  
ority for these Harrows over all others in use on this  
Coast:

First—By the lightness of the draft, taking into considera-  
tion the amount of work it does.

Second—By working uneven or rolling ground just as  
well and as evenly as if it was entirely level.

Third—They are made of Iron and Steel, and therefore  
are not affected at all by sun or rain, or by heat and  
cold; they are always tight, and ready for use; they are  
also durable. A farmer purchasing one has a Harrow  
that will last a life time.

Fourth—The teeth being fastened with a nut and screw  
into the cross bars, should one break, another can be  
inserted in a moment. We are making three sizes, all  
being the same in width, but different in depth and  
weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

## BREWSTER &amp; CO.,

Roseville, Placer County.,

Will be promptly attended to, and satisfaction guaran-  
teed in all cases.

## CAUTION.

It has come to our notice that certain parties are now  
making and selling this Harrow in this State, and that several of  
them have been sent here from the East. Now this is to  
caution all persons against making, selling or buying  
them, so made and offered for sale, as we shall enforce our  
rights in relation to the matter, and would call the atten-  
tion of all persons infringing upon our patent, to the law  
in regard to it.

BREWSTER &amp; CO.

Roseville, July 15th, 1876.



## THE SLUTHOUR PUMP

HAS NO EQUAL FOR

## IRRIGATION.

Send Your Orders to

J. M. KEELER &amp; CO., Agents,

330 Sansome Street, - - San Francisco.

## MATTESON &amp; WILLIAMSON'S

Took the Premium over all at the great plowing Match  
in Stockton, in 1870.

This Plow is thoroughly made by practical men who  
have been long in the business and know what is required  
in the construction of Gang Plows. It is quickly adjusted.  
Sufficient play is given so that the tongue will pass over  
cradle knolls without changing the working position of the  
shares. It is so constructed that the wheels themselves  
govern the action of the Plow correctly. It has various  
points of superiority, and can be relied upon as the best  
and most desirable Gang Plow in the world. Send for  
circular to

MATTESON & WILLIAMSON,  
Stockton, Cal.

## DAVIS &amp; SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a Produce

REFERENCE.—Traders' National Bank, N. Y.; Ell-  
wanger & Barry, Rochester, N. Y.; C. W. Reed, Sacra-  
mento, Cal.; A. Lusk & Co., San Francisco, Cal.



A Book For All That Have a Garden.

FRACARICULTURE,  
OR THE  
CULTURE of the STRAWBERRY,  
A Practical Treatise on the  
Culture, Propagation, Management and  
Marketing of Strawberries.

ILLUSTRATED with PHOTOGRAPHS representing the  
average size of best varieties, especially adapted to the  
family garden; by FELIX GILLET, Nevada City, Cal.

PRICE OF TREATISE.—Illustrated with two pho-  
tographs, 50 cts.; with five photographs, 75 cts.; with eight  
photographs, \$1.00; with 12 photographs, \$1.25. Twelve  
different varieties represented, including Princess Dagmar,  
The Lady, Col. Cheney, Exhibition, Gov. Booth, Jucunda,  
Cockscomb, etc. It is the best and most complete, practical,  
interesting treatise on strawberry culture ever published in  
the United States. Will be sent by mail, prepaid,  
at the above prices after receipt of money.

For sale, at moderate prices, plants of 48 different varieties  
of the nicest and largest sorts of Strawberries (English,  
French, American and Californian). Ever bearing  
Raspberry (three crops a year). Clons for grafting of  
French Chestnut, (Marron de Lyon and Marron Combale).  
Best varieties of Pear, Cherry, etc.

Send for full descriptive and price list.

FELIX GILLET, Nevada City, Cal.

CAUTION.

To Farmers and all others who put Barbs  
upon Wire Fences, Making a Barbed  
Wire Fence, and to all Manufac-  
turers and Dealers in Fence  
Barbs and Barbed  
Fence Wire.

You are hereby notified, that in putting barbs upon  
wire, making a barbed wire fence, or in using or dealing  
in barbs or barbed fence wire, not made under license  
from us, you are infringing upon our patents, and we  
shall hold you strictly accountable for damages for all in-  
fringements of Letters Patent, Nos. 66,182, 67,117, 74,379,  
84,062, 153,965, 157,124, 157,508, 164,181, 173,667; reissues,  
Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914, and  
other patents. Copies of our claims can be obtained of  
our attorneys, Coburn and Thacher, Chicago, Ill., or of  
our counsel, Thos. H. Dodge, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,  
Worcester, Mass.

I. L. ELLWOOD & CO.,  
De Kalb, Ill.,

Sole owners and manufacturers, to whom orders for  
Barb Fence or for Loose Barbs should be addressed.

SANBORN & BYRNES,



Mechanics' Mills, Mission Street,  
Bet. First and Fremont, San Francisco. Orders from  
the country promptly attended to. All kinds of Stair  
Material furnished to order. Wood and Ivory Turn-  
ers. Billiard Balls and and Ten Pins, Fancy Jewels and  
Balusters.



TULE LANDS.

FOR SALE OR TO LEASE. ABUNDANCE OF PAS-  
TURE ON THEM. Address,  
MERCER & McAFEE,  
426 Montgomery St., San Francisco.

BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS  
and have them constantly on hand. Also, fifteen two and  
three-year-old Sows, several of them with Pig. These are  
all from Pigs I imported from Kentucky.

PETER SAXE, Importer.  
Commercial Hotel, San Francisco.



LOOK!

ALBERT E. BURBANK, importer  
and breeder of Fancy Fowls,  
Pigeons, Rabbits, Dogs, Birds, Etc.,  
Eggs for hatching from the finest of  
imported stock. Eggs and Fowls at  
reduced prices. Send stamp for  
Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco.

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).  
THOS. UPTON.  
I. C. STEELE.

THOS. FLINT.  
G. P. KELLOGG.  
W. L. OVERHISER.

O. HUBBELL.

D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and  
Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise,  
Farm Implements, Wagons, etc., solicited and promptly attended to.

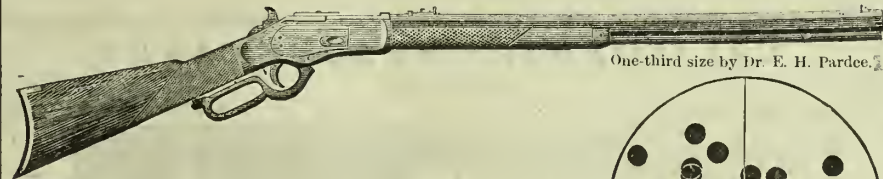
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will  
enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be  
furnished free on application.

DANIEL INMAN, Manager.

Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting,  
Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles  
of Arms manufactured by the Winchester Repeating Arms Company, to wit:

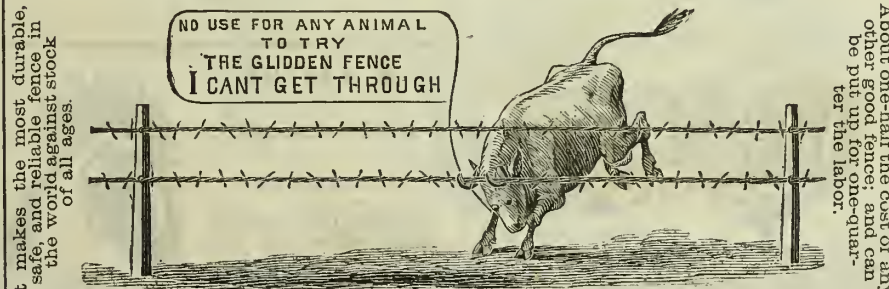
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch blued. Octagon barrel, set, 24,  
26, 28, 30 inch blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24,  
26, 28, 30 extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—  
extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S.,  
known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines  
blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines,  
model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles  
and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 108 Battery Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by  
J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and  
is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLID-  
DEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO  
UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of  
any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb  
and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot  
be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire,  
which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested  
equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer  
and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and  
drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has  
greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.



CALVERT'S CARBOLIC  
SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is use-  
ful for Preserving Wet Hides, De-  
stroying the Vine Pest, and for  
Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Solo  
Agent for California and Nevada.

ALL SHOULD HAVE IT.—The last RURAL PRESS is worth  
the subscription for a year. Every farmer should have it.  
—Southern Californian, March 23d

WANTED AND FOR SALE.

I HAVE AT THE

Bull's Head Live & Let Live Stock Yards,  
Cor. 9th, 10th and Howard Streets,  
SAN FRANCISCO,

Two Thoroughbred Short-Horn Bulls, imported from  
Kentucky, and two years old; RED, and fine pedigrees.  
As I have quit importing I will sell one of the above at  
\$350 (has cost me over \$900,) and take it in fresh Milk  
Cows or good hay, at the market price. A good chance to  
get a fine bull cheap.

ROLLIN P. SAXE, Proprietor,  
Bull's Head Live and Let Live Stock Yards

CALIFORNIA FARMERS' MUTUAL

Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING,)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - \$200,000 00  
ASSETS, OCT. 19, 1876, - 268,716 00

MUTUAL PLAN.

AMOUNT. PREMIUMS  
Risks written to Oct. 1, '76... \$8,181,591.00 \$114,445.57  
Less Amount Canceled..... 309,644.00 6,297.50

Amount in force, Oct. 1, '76... \$1,880,947.00 \$103,148.07  
Losses paid..... \$7,251.00

CASH PLAN.

AMOUNT. PREMIUMS  
Risks written to Oct. 1, '76... \$2,585,914.19 \$51,606.96  
Less Canceled and Expired.... 976,908.00 19,538.16

Amount in force, Oct. 1, '76... \$1,609,006.19 \$32,068.80  
Losses paid..... \$10,153.71

OFFICERS.

J. D. BLANCHARD.....PRESIDENT  
I. G. GARDNER.....VICE-PRESIDENT  
G. P. KELLOGG.....TREASURER  
A. W. THOMPSON.....ATTORNEY  
FERD. K. RULE.....SECRETARY

TRUSTEES.

J. D. Blanchard.....San Francisco  
G. P. Kellogg.....Salinas  
I. G. Gardner.....San Francisco  
Chas. Laird.....Salinas  
Uriah Wood.....San Benito  
A. B. Nally.....Santa Rosa  
A. W. Thompson.....San Francisco  
A. D. Logan.....Colusa  
I. C. Steele.....San Mateo  
G. W. Colby.....Butte County  
A. Wolf.....Stockton  
C. J. Cressey.....Oakland  
J. C. Merryfield.....Dixon  
E. W. Steele.....San Luis Obispo  
C. S. Abbott.....Monterey  
Dr. T. Flint.....Rollister

Farm property insured at actual cost on the Mutual  
Plan. Other desirable property insured, and rated accord-  
ing to merit.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT.....GILBERT W. COLBY.  
MANAGING DIRECTOR.....C. J. CRESSEY.  
CASHIER.....ALBERT MONTEPELLIER.  
SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for  
the transaction of a general banking business.

HEALD'S BUSINESS  
COLLEGE  
No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its  
teachers are competent and experienced. Its pupils are  
from the best class of young men in the State. It makes  
Business Education a specialty; yet its instruction is not  
confined to Book-keeping and Arithmetic merely, but gives  
such broad culture as the times demand. Thorough in-  
struction is given in all the branches of an English educa-  
tion, and Modern Languages are practically taught. The  
discipline is excellent, and its system of Actual Business  
Practice is unsurpassed.

LADIES' DEPARTMENT - Ladies will be admitted for in-  
struction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT - In this Department young  
men and young ladies are practically and thoroughly fit-  
ted for operators, both by sound and paper.

For further particulars call at the College, 24 Post  
street, or address for circulars, E. P. HEALD,  
President Business College, San Francisco, Cal.

The Patron's Almanac for 1877.

Second year of issue. Greatly enlarged and improved.  
Contains 72 pages of useful matter; The Constitution and  
By-laws of the Order; Rules for Subordinate Granges;  
Decisions of the National Body; Declaration of Purposes;  
Rules of Order in the Grange; Origin and Object of the  
Grange, etc. Also, many useful and correct rules, tables,  
etc., for weighing, measuring and calculating the contents  
of timber, lumber, land, boxes, cribs, etc., besides accu-  
rate calendar pages for all parts of the Union. In short,  
it is an indispensable companion for every Patron or  
farmer in the Pacific as well as in the Atlantic States.  
Price, by mail, postpaid: Single copies, 10 cents; 12 copies,  
75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies,  
\$5.00. Address,

S. HOWARD WILSON,  
Mechanicsville, Bucks Co., Pa.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents  
CLINTON BROS., Clintonville, Ct.



# TWENTY-FIVE TONS CHILE ALFALFA SEED

IN LOTS TO SUIT, AT FROM \$8 TO \$13 PER 100 POUNDS.

THIS SEED IS BEING SOWN BY THE LARGEST STOCK-RAISERS ON THE PACIFIC COAST. I ALSO HAVE

# 20 TONS GENUINE PERUVIAN GUANO,

IN LOTS TO SUIT, AT \$3 PER 100 POUNDS. OR \$50 PER TON.

VEGETABLE AND FLOWER SEEDS AT EASTERN PRICES. SEND FOR CATALOGUE.

R. J. TRUMBULL, 419 and 421 Sansome Street,

San Francisco.

## MUSIC BOOKS

—FOR—

### Schools, Academies & Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older **HOUR OF SINGING**, (\$1.) by EMERSON & TILDEN, **CHOICE TUNES**, (\$1.) for 3 female voices, by W. S. TILDEN, and **DEEM'S SOLFEGGI**, (75 cents) which has exercises in Italian style.

**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our **Sabbath School Song Books**, **RIVER OF LIFE**, (35 cents.) **SHINING RIVER**, (35 cents.) **GOOD NEWS**, (35 cents.)

Either book mailed, post-free, for Retail Price.

### OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL

Eggs Shipped to

OF FOWLS

Any part of the

GUARANTEED

Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

## NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal.

JAMES W. WEBB, President.  
CHARLES MALTBY, Secretary.

## LABOR.

Who wants to employ good labor of any description? or mechanics? Send your orders (free of charge) to ZEEHANDELAAR, 606 Clay Street, San Francisco. He has furnished our interior with over 200,000 farmers and other help during the last nine years, as Secretary of the Free Labor Exchange and as a private employment agent.

## John Saul's Catalogue of New, Rare and Beautiful Plants, will be ready in February, with a colored plate of the New Striped Rose,

BEAUTY OF GLAZENWOOD.

"A rose of golden-yellow, striped and flaked with scarlet vermillion. Sounds like a dream or a fairy tale; it is nevertheless a reality."—H. Curtis, in the *Gardener*. Catalogues free to all my customers; to others, price 10 cents, or a plain copy free. JOHN SAUL, Washington, D. C.

20 SWISS MOTTO CARDS, 200 styles, with name, 20c.; 25 Fancy cards, 15 styles, with name, 10c.; 30 Masonic or Odd-Fellow's Cards, with name, 20c., postpaid. J. B. HUSTED, Nassau, N. Y.

## CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO.,

SACRAMENTO, CAL.

Ask Your Grocer for Them.



Use None Other.

TRADE MARK.

B. B. SCOTT, General Agent,

Sacramento, Cal.

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco,  
Taber, Barker & Co., San Francisco,  
Newton Bros. & Co., San Francisco,  
J. A. Folger & Co., San Francisco,

A. P. Whitney, Petaluma,  
Luther & Schneider, San Jose,  
Chas. Jones, Oakland,  
J. H. Seymour, Los Angeles,

Adams, McNeil & Co., Sacramento.  
T. M. Lindley & Co., Sacramento.  
Booth & Co., Sacramento,  
H. S. Sargent, Stockton.



OFFICE OF THE  
Engraving and Scientific Press, } 224 Sansome St., } San Francisco,  
CAL.

MACHINERY, BUILDINGS, PORTRAITS, LANDSCAPES, TRADE-MARKS, LABELS, SEALS, MONOGRAMS, etc.

DESIGNED AND ENGRAVED

IN THE HIGHEST STYLE OF THE ART.

E. SCHULTZE,  
MANAGER.

DEWEY & CO.,  
Publishers and Patent Agents.



Fifty pages—300 illustrations, with Descriptions of thousands of the best Flowers and Vegetables in the world, and the way to grow them—all for a two cent postage stamp. Printed in German and English.  
Vick's Floral Guide, quarterly, 25 cents a year.  
Vick's Floral and Vegetable Garden, 50 cents in paper; in elegant cloth covers, \$1.00.  
Address, JAMES VICK, Rochester, N. Y.



OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG & CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,

Ceres, Stanislaus County, Cal.

## M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

## FRUIT AND ORNAMENTAL TREES,

Evergreens and Green-house Plants, Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco, Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

## SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

Early Canada } Yellow Flint Corn.  
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

## R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application. "My 'Guide to the Vegetable and Flower Garden' will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST. NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lunibago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, S. F.

WANTED.

HELP IN THE BRE-KEEPING BUSINESS. Address, R. WILKIN, San Buenaventura, Cal.





Volume XIII.]

SAN FRANCISCO, SATURDAY, JANUARY 27, 1877.

[Number 4.]

#### Ichneumon Flies.

EDITORS PRESS.—Please find inclosed specimen of shell containing small flies. There are a great many of those shells on my apple trees, all filled as you will find this, with a small fly, some full grown, whilst others are very small. I do not know whether this is something strange to you or not, but I have never seen anything like it until this fall. I find them on no other tree but the apple. I have watched those flies come out and go back into the shell when it is warm, but if they are disturbed they fly away.—M. F. TYLER, Ranchito, Los Angeles county.

The "shell" which Mr. Tyler sends is a chrysalis of a butterfly. Mr. Edwards recognizes it as the chrysalis of the *Papilio rutulus*, or "yellow swallow-tail butterfly." The chrysalis is probably formed by a greenish, spotted grub. It is this grub which does the mischief on the apple trees.

The little flies, to which Mr. Tyler calls especial attention, are his best friends. The eggs from which they come are laid in the "shell," or chrysalis. They hatch quickly, and the maggots begin at once to feed upon the large grub in the chrysalis, and they destroy it before it can come out. If it were not for these flies, a large butterfly would emerge from each of the numerous "shells" which Mr. Tyler finds on his trees, and each butterfly would lay a bunch of eggs, from which would hatch hundreds of grubs, which would devour the apple leaves greedily. The little flies see to it that this butterfly never appears, and thus they are an illustration of the wise provision in nature which aids the husbandmen in their warfare with noxious insects.

As these flies are such true friends of the farmer, we will quote from a book by Prof. Morse a few interesting facts concerning them: "The ichneumon flies are a group of insects which deposit their eggs directly in the bodies of the larva and pupæ of other insects. These insects have on the hinder part of the body a sharp, piercing sting, and with this organ the necessary hole is made through which the egg is deposited. A caterpillar soon hatches from the egg thus deposited by the ichneumon fly, and feeds upon the fatty portions of the body of the larva in which it has been so placed. But this larva containing the ichneumon caterpillar, meanwhile, completes its growth and changes into a chrysalis, when the inclosed ichneumon larva devours the entire contents of the chrysalis, and then changing into the pupa state, soon emerges as an ichneumon fly, to go in quest of caterpillars, in which to deposit its eggs. Thus it will often happen that a number of cocoons have been collected, from which ought to appear a certain kind of a butterfly, for example, but from many of them a brown ichneumon fly will emerge—a sight quite as startling, to one not familiar with insects, as if a robin should be seen to hatch from a hen's egg. If pupils will collect a large number of the chrysalides of the common yellow cabbage butterfly, and keep them in a box, with a piece of glass for a cover, they will observe that while a butterfly comes from many, from others, which have already changed to a lighter color, little black flies will appear, crawling out of a hole in the side of the chrysalis, which had been made by some of the imprisoned ichneumons. Nearly every species of insect is infested with one or more species of ichneumons, which deposit their eggs either within the pupæ, larva, or the eggs themselves. There are some species of ichneumons which deposit their eggs within the eggs of the canker-worm moth, and, as tiny as these eggs are, they are still large enough to furnish nourishment and room for the complete development of the insect feeding within."

THE STRAW BURNER TRIAL.—The suit brought by Mr. H. W. Rice against John L. Heald for alleged infringement on his patent for straw burning attachment to threshing engines, which was recently tried in this city, was watched with interest by manufacturers and users of steam threshing machinery. The issue was tried in the United States Circuit Court, before Judge Lorenzo Sawyer. It has been pending just a year, and after a long contest, lasting through eight days, was decided on the 1st instant in favor of the plaintiff, Mr. Rice. The result is an affirmation of Mr. Rice's right to the combination of the straw feeding attachment to return-flue boilers, and manufacturers must now accord him this right or contest the point further in the higher courts.

#### California Flowers.

The rains have insured a harvest both of worth and beauty. While our earnest workers will rejoice over the weight of grain and fruit, many also will give thanks that the wealth of bloom will cover our rural landscapes. California is famous for her wild flowers. In their season one can ride for miles, yes, for days, through a sea of blossoms such as can be found nowhere else in the world. Poets and prose writers have both exhausted their resources of fine words in attempts to describe the infinite variety of forms and exquisite mingling of shades which may be found in our vast wild flower gardens. The valley in bloom, the hills in blossom and the mountains aglow with the rich flowering—these are scenes which every Californian may enjoy.

We give upon this page an engraving of a cluster of California flowers as drawn by our able botanist and enthusiastic flower-lover, Dr. A. Kellogg. Dr. Kellogg has done much with his pen and pencil to bring our native flowering plants to the attention of the admiring world.



CALIFORNIA WILD FLOWERS

The group which we give this week could be multiplied many times and yet the great wealth of our resources of bloom would be but entered upon. We trust, however, that the little illustration may aid some of our readers in recognizing the plants which will shoot up this spring by their pathways and induce many to study the flowers and take in the delightful pastime of sketching from nature in this line of nature's beauties.

In the beautiful group, No. 1, represents the largest and most common iris of this coast—*Iris longipetala*; the flowers pale blue, or whitish, with deep blue veins. There are many species of the *Fleur de Lis* found here, some of which may prove to be new.

No. 2 is the Western or Pacific (false) honeysuckle, *Azalea occidentalis*. The flowers are perfectly white, except the lower division of its border, which is creamy, or ochraceous yellowish. Some specimens we have seen with pink flowers; others of a beautiful yellow color. These plants vary much in form; but, when properly studied, we are satisfied that several distinct species may be identified.

No. 3, the rice root of the miners, wild guinea hen flower, checkered lily, etc., *Eritillaria nutica*. A dark brown or purplish checkered, nodding liliaceous flower; plant about two feet in height, with four to eight, or even as high as twenty flowers. The glandular and beautifully crenulated margins are not

noticed in the descriptions. A very common bulbous plant of California. The single radicle fleshy leaf, as large as the palm of one's hand, is absent when flowering.

No. 4, *Oenothera arcuata* (Kellogg.) Sickle-leaf primrose.

No. 5, *Anemopsis Californica*. A beautiful scarlet flower, found in wet places.

No. 6, Downing's beauty—*Downingia pulchella*. In honor of the late A. J. Downing, well known to horticultural and rural fame.

No. 7, *Specularia*, a species of Venus's looking-glass.

A NEW MOVEMENT IN WOOL SELLING.—We may state as a matter of information to wool-growers that Faulkner, Bell & Co., of this city, propose something new in the handling of wool in this market. Their plan is outlined in the following circular which we have received: We have arranged to add to our business a wool-growers' agency, and from and after the 1st of January 1877, we shall be prepared to receive consignments of wool, and attend to any business with which wool-growers may intrust

#### Manihot Carthagensis.

A reader of the RURAL PRESS, at Jacksonville, Florida, Mr. A. F. Styles, sent us recently a little package of seeds which he had grown. Among them were a few seeds of the *Jatropha manihot*, of which he says: "It is a rapid-growing deciduous tree, having handsome foliage. It does not grow tall—from 20 to 30 feet—but branches regularly, and is somewhat umbrella-shaped. It will sometimes bear seed the first year. Whether the tree is of any value, except as an ornamental tree, I cannot say. It continues in bloom a long time, and is thronged with honey bees every morning, but I do not know whether they find honey or some other material."

We shall plant the seeds, and if anything desirable results we shall be pleased to place it at the disposal of our readers. To trace the characteristics of the tree further we gave the subject to one of our botanical friends, who returns us these paragraphs: The *Spurge* family, or *Euphorbiaceæ*, is very extensive, containing not less than 3,000 species, widely distributed over the earth. In temperate countries they are chiefly herbs. In south and eastern Africa they have succulent stems, while in tropical America they are large leafy trees. The family includes *Manihot utilisima*, and *M. aipi*, extensively cultivated in tropical America and the West Indies for their large fleshy roots, from which cassava, a much valued article of food, is made. The castor oil, croton oil, fallow tree, candle nut, *Siphonia elastica*, from which large quantities of caoutchouc, or india rubber is obtained, and many other useful trees and plants belong to the family.

The *Manihot Carthagensis*, the species seeds of which were received from Mr. Styles, is sparsely scattered along the Gulf coast from Texas to southern Mississippi, and is known by most people as the olive, though it bears no resemblance whatever to the true olive, *Olea Europea*. The *Rural Carolinian* describes it as follows: "We have growing in our grounds a new ornamental tree, the seeds of which were originally brought from Mexico. It came to us without a name, but proves to be, according to good botanical authority, *Manihot Carthagensis*, (Muller.) It is a deciduous tree of exceedingly rapid growth, with spreading and somewhat pendulous branches, divided regularly and continuously into threes, bearing at the axles of the branches umbels of greenish yellow, and reddish spotted flowers, followed by clusters of nut-like, three-sided capsules, of the size of a cherry. But the principal beauty of the tree, aside from its regular and graceful form, lies in its foliage, which is not exceeded in elegance by that of any species, native or exotic, known to us. The leaves are what botanists call pedate, with deep, narrow sinuses, resembling somewhat those of the *Palma Christi*, though not so large and more delicately cut. They are borne on long petioles, and are of a bright green color. The tree will not grow or prove hardy much farther north than Charleston; we think bearing about the same degree of cold as the orange. It grows readily from seed or cuttings."

Mr. A. F. Styles, of Jacksonville, has one of the trees upon his grounds, from which these seeds were gathered. A tree of the same kind grows in the West Indies under the local name of physic nut, the seeds of which have medicinal properties and are very purgative.

LIME FOR PHYLLOXERA.—M. Pignone found an effective remedy for phylloxera in digging, during March and April, a trench four inches deep around his infested vines, and throwing in 500 grammes (1,1025 pounds) of burnt lime. He then whitewashed the vine after having removed its bark. This operation, he declares, destroyed the greater part of the insects and their eggs, and arrested the hatching of the eggs already deposited upon the vine. The first year afterward the vines gave out vigorous shoots, and the second year fine grapes in large quantities. Lime, applied to healthy vines, preserves them from the attacks of the phylloxera.

THE MINING DEBRIS TRIAL.—The trial of this important issue, which has been in progress in Sacramento for the past three weeks, is now approaching its termination. The testimony on both sides is all in, and the summing up of the lawyers will occupy the remainder of this week. Perhaps in next week's PRESS we shall be able to give the result of the trial, with some of the main points in the evidence.

THE SENATE railroad committee have amended Gordon's bill so as to require the Pacific railroad companies to establish a sinking fund at once, with \$1,000,000 paid in and not less than \$750,000 annually, until the whole amount is paid, with interest at six per cent.



## CORRESPONDENCE.

### Do Not Buy a Farm That Has Been Skinned.

EDITORS PRESS:—Wishing to enjoy the delights of country life, the writer purchased 100 acres of land adjoining one of the small interior cities of Ohio, several years ago. For generations the place had been hard run by owners and tenants. The soil, naturally good, no longer produced paying crops. Fences and buildings, long neglected, needed costly repairs before the place would be habitable.

I paid a little over \$10,000 down for it—we will say \$10,000. At first the novelty of living in the country was exhilarating. But wife and the girls sometimes rebelled on encountering the discomforts. However, my boy and I, aided by a man of all work, "went in on our muscle," and reset worm fences, and cleared off briar patches, and trimmed up trees, and pulled down rickety outhouses, and rebuilt others; so that, at the end of the first year, we had remodeled the whole concern. The wagon yard and watering place no longer occupied the beautiful grove in front of the dwelling. An unsightly barn, that intercepted the view from the house towards town, was removed a quarter of a mile and placed in the rear. A spring 1,500 feet distant, was piped down hill to the house and barn, and supplied a fountain in the lawn. The old lane leading at right angles from the highway, past the orchard to the dwelling, was obliterated, and a graveled drive was constructed along the route nature made for it, in a hollow with gently winding curves, to the door. Trees were planted, and the old, leaky roof was replaced with one of slate. So much for the first year. Independent of our labor, about \$3,000 had been invested in improvements.

Then the 20-acre meadow needed reconstruction—the modern term for it being "bull-dozing." I believe. At any rate it had lain in grass time out of mind, and was fairly run out. We tried to coax it with a top dressing of ashes and manure, but so poor was the yield that in places where moss and wild strawberry vines were thickest, hardly a show of hay could be gathered after the mow. Having read about "draining for profit," I thought we would take the bull by the horns and begin at the beginning.

The field, though by no means a wet one, showed signs of the need of underdraining. Little bunches of wire grass grew here and there; craw-fish made holes and threw up little piles of black dirt, and the soil cracked open in dry weather. It only produced three-quarters of a ton of hay per acre. I borrowed an engineer's level and proceeded to make a survey of the ground, in order to determine the location of the drains. Being an engineer, the work gave little trouble, and we soon had 20 Irishmen cutting the drains for 700 rods of tile. Each ditch went down 42 inches, and the tiles were carefully laid as fast as they could be hauled from the depot. The work was done in the green soil of November. The ditches were filled in before freezing, and commenced discharging clear water, and continued all winter.

The next spring the sod was turned under for a crop of corn. In plowing, it was shown that the parts formerly the wettest had become as dry as an ash heap, while an elevated clay knoll, not underdrained, in the middle of the field, was wet and sticky. The next season we cured that by extending the underdrains through it. Portions of the field, with six plowings, yielded 50 bushels of corn per acre—the underdrained part only 30.

The year succeeding the corn crop we hauled 30 loads of manure on each acre, and raised 40 bushels of oats; or 800 on the tract. The stubble was plowed under in August, well harrowed, and by the 10th of September it was sowed down with a peck of clear timothy per acre. The grass came on very well, and we then sowed 300 loads of fine rotted manure on it, with a machine invented by McGinniss. This top-dressing carried it through a severe winter, and made a crop of 30 tons. The next year the meadow was cut by the party to whom we sold. This man wrote me that it was the wonder and admiration of all the neighbors, and yielded immensely. I only regret it was not weighed.

The original investment in this 20 acres, the cost of underdraining, new fences, manure, etc., amounted to quite enough to purchase a good, large Western farm with pure virgin soil. To be sure, the result was a triumph, but at what a cost! The residue of the farm being pasture and woods, and an old orchard, made a poor showing as to profits. The orchard blossomed profusely every spring, but the fruit regularly fell off long before it matured. Sometimes a few lop-sided apples ripened, with knots on the surface and worms in the core. Still, the hills with their fringe of forest, the sloping pastures, and the undulating land made a good framework for landscape gardening. With some skill and time very striking effects were produced, one especially to be noted, the sinking of another \$10,000 in fixing up the old place which others had skinned. As to fruit, we consoled ourselves by purchasing apples in Michigan, while our new orchard, planted now 10 years ago, might

be expected to bear sometime towards the close of the present century, if let alone by codling moth and curculio. But the run-down farm was transposed into a place of some attraction, and one day a city gent came along and offered me, cash, \$17,000 for it. He got it, and at once began to "improve" by tearing off the new slate roof, and building another story to the house. Moral: Do as the writer did *not*, at first, come to California if struck with agricultural or horticultural longings, where there is a kindly soil and climate. But do not, even here, purchase a run-down farm.

J. B. ARMSTRONG.

### Agricultural Notes from Montana.

"Homeward the plowman plods his weary way."

EDITORS PRESS:—Although in mid-winter when the best agricultural portions of Gallatin, Meagher and other counties were passed, but little plowing had been done, the farmers being too busy in harvesting and threshing either to put in much grain or prepare the ground for the coming season. The most of this kind of work is done in the spring.

Gallatin county is more highly favored by nature than any other county in the Territory. Besides possessing a very large area of tillable land, with a soil deep, rich and mellow, it is well watered by the Jefferson, Madison and Gallatin rivers and their numerous tributaries, the former uniting and forming the Missouri at the northern extremity of the county, near where Lewis and Clarke once encamped, for the winter, as the remains of their old stockade may still be seen on the spot.

#### The Grasshoppers.

The crop of Gallatin valley is said to have been not so large as usual the past season, from the fact that less grain was put in for fear of being destroyed by the young grasshoppers, as the eggs had been deposited the previous year.

By the way, contrary to the views of most political economists, this so-called grasshopper pest is looked upon by many intelligent farmers as a blessing in disguise. It has the tendency to check the supply. California and the older States have the world for a market. Montana has no outlet for her surplus produce. The home market is easily glutted. Labor is comparatively high and as a consequence, an abundant yield from year to year would so reduce the price of grain as not to pay for the raising. Such is the argument. To say the least, it looks plausible. Such questions may well be left to some Adam Smith or J. Stuart Mill for solution.

#### The Yield of Produce.

Wherever the land of this valley was under cultivation handsome returns were received, particularly in the neighborhood of Bozeman, both on the creek above and also on the East Gallatin for many miles below. Some choice spots on Bozeman creek produced about 90 bushels of oats. Mr. Menefee had 360 acres in wheat, barley and oats, which gave an average of 65 bushels to the acre, some of the oats measuring as high as 87 bushels. The average oats crop of the East Gallatin was estimated at 60 bushels to the acre. The soil in both these neighborhoods is a black loam, with sufficient sand to make it easily cultivated. Mr. J. W. Nelson, four miles below Bozeman, purchased his farm the year before, and paid for it with the product of the first crop, leaving him a nice little margin besides for living and seeding the ensuing season, reminding us of similar occurrences in the early history of California.

Grain is bringing a good round price here at present, probably averaging, for wheat, oats and barley, three cents per pound. Good improved farms can be obtained in Gallatin county and in other portions of the Territory, from \$1,000 to \$3,000, and any amount of unimproved land suitable for farming or grazing at Government and railroad prices. Hay is found generally in abundance, and sells from \$10 to \$15 per ton. Mr. T. Reese, of Reese creek, has often cut as high as three tons to the acre. It is a native grass, mixed with timothy. Some attention has been given by Mr. Tharpe, and also by Mr. Pease, on the West Gallatin, as also by many others throughout the Territory, to the improvement of cattle, the breed introduced being mostly the Short Horn.

Some fine ranches were seen on the banks of the Missouri in Meagher county, and also in Prickly Pear valley, in Lewis and Clarke county, in the vicinity of Helena, the capital of the Territory. Indian corn, although not usually looked upon as a profitable crop, is raised in sufficient quantity to supply meal for family use. Mr. J. P. Barnes, of Lewis and Clarke county, produced last year as much as 30 bushels to the acre, most of which was fed to hogs and turned into excellent bacon. Peas are said to be a profitable crop and are rarely disturbed by the grasshopper. They make good food in some form or other for poultry, horses, hogs and cattle.

Four hundred bushels of potatoes were grown to the acre by Mr. Millegan in Prickly Pear valley, near Helena, the past season. Instances are reported where as many as 20 tons had been produced. Onions turn out at nearly the same rate. Mr. Turner on the East Gallatin had a yield of 24,000 pounds from a single acre. As the crops here are often damaged to a greater or less extent by the grasshoppers, or by hail storms, it would be advisable for farmers not to

confine themselves to small grain, or to some particular kind, such as oats or wheat, as is sometimes the case, but to sow a variety of these as well as of vegetables, in this way being almost sure of having something that will bring a good price in the market.

### A Great Stock Growing Country.

In giving first impressions of Montana, in a letter from Madison county, its advantages as a stock-growing country were highly commended. Further observation and inquiry have only tended to deepen the conviction as to the immense value and extent of its resources in this respect. Bunch grass takes the place of the sagebrush of Nevada, and is found everywhere, on high table lands or broad valleys, in deep ravines, on the mountain sides, and may often be seen peeping up from the snow on the loftiest summit. Bands of fat horses, cattle and sheep are encountered, go where you will, ranging from 500 head to 5,000.

Some flocks of sheep have come in recently from California, which seem to be doing well. There are at present not less than 10,000 head each in the counties of Deer Lodge and Lewis and Clarke, and not far from 25,000 head in Meagher county and leaving a wide range for many thousand more. In fact, such is the nature of the grass that it soon recuperates after being eaten down. It grows from the roots and not from the seed. As far as can be observed or learned, the apparent rigor of the climate seems to be no serious drawback to the successful rearing of sheep, while the wool is clean and pure, being entirely free from the dirt and burrs so often met with in much of the California clip.

### Chance for a Railroad.

It must be evident that this Territory is, in many respects, an inviting field for the immigrant. Its greatest need is a railroad. It is too much isolated and too far from market. If San Francisco should be the first to open communication she would at once secure a large amount of trade that now goes east by way of the Missouri river. A wider market could be found for the limes, lemons and oranges of your southern counties, for the various green and dried fruits of Central California, for your wines, brandies, your honey and your hops, for tea, coffee, rice and other groceries, for the products of your woolen mills and special kinds of clothing, and more particularly for the quartz machinery from your foundries, and a large class of agricultural implements, both of which are believed to be superior to anything of the kind manufactured in the older States.

A word to the wise is sufficient. A good, easy grade can be found into the very heart of the Territory. The sooner the work is commenced the better.

A. C. K.

### Modoc and Lassen Counties.

EDITORS PRESS:—Having received a few letters of inquiry concerning this country, I have selected the RURAL PRESS as the best medium through which to convey the desired information.

There are yet several hundred thousand acres of good agricultural Government land open for settlement in Modoc and Lassen counties. Irrigation is generally practiced. We have, however, considerable land which requires no irrigation, even in the driest season. This class of land and some of the other, easily irrigated, embraces the settled portion of this country. Large tracts of land, equally as good and less liable to frost, because of their elevation above damp bottoms, can be irrigated at a trifling cost. Some irrigate their grain and some do not, owing, I suppose, to the moist or dry nature of the land. The few who practice summer fallowing are well repaid, receiving 35 and 40 bushels of wheat to the acre. But it is only a few in this thinly and newly settled country who are yet prepared to conduct farming half-way right. Most of our settlers are men of small means, many of whom have not even plowed up a potato patch.

Our tillable land is mostly what is termed level, and some rolling. It is destitute of timber, covered, in some localities, with bunch grass and weeds, and in others with grass, weeds and broom, sage and similar brush. Some of our land is covered with wild rye. All the moist land along the small streams and springs is more or less covered with a growth of chokecherries, plums, poplars and willows, which, when cleared, will make the best garden land in the world. It is a black mold. Some of our land has a base composed of clay, which is enriched by decomposed vegetation. A kind of wild sunflower grows upon this land, together with wide-leaved weeds, grass, roots and scattering bunches of brush. This is splendid land. The largest portion of our land is composed of decomposed rock, washed from the hills, and decayed vegetation. There is no marl or limestone to speak of—two very important ingredients for certain vegetables.

We have abundance of timber handy for nearly all uses. Yellow pine, some sugar pine, cedar, fir, juniper and some black oak and mountain mahogany constitute our timber. Sawmills are adjacent to nearly every settlement and good lumber is sold at \$10 per M. There are flouring mills at all the leading points.

Red Bluff is the market for all the Pit river and Goose lake country, and Reno for Honey Lake valley and surroundings. All freight is

hauled by teams to and from those points, at from two to four cents, according to distance. Large quantities of wool and butter are shipped from this county, besides hides, pelts, furs, etc. Many thousands of beef cattle are yearly driven down.

The question so often asked, "What are the chances for a man of but little means?" can only be answered thus: First, what is the amount of his means? and, second, has he the habits of industry and frugality, united with the pluck which "dies game." With the latter qualifications and only a few dollars a man is certain to succeed here or in most any other place. Some start in here with a capital of \$400 or \$500, and manage to do first-rate. Others with twice the capital have failed, sold their places for half price and set off for Texas. Just such opportunities are now offered for men of a few hundred, who desire to find good homes in the healthiest of countries.

Most of our settlers have families. Our society, although mostly of the "back-woods" style, is enjoyable for all of that. Dances and social gatherings are common. It is noticeable that, in newly settled countries, people appreciate the social qualities of one another, more so than in thickly settled countries. We have very good schools considering population. Churches and preachers are scarce. I have not heard a sermon since my two years' residence in Modoc. Let it not be understood we are behind the van of civilization. Good books, papers and magazines are to be found in nearly every household. I meet occasionally with the RURAL PRESS. It is the paper for this country, and I hope to see it take deep root among our people.

H. W. HILBERT.

Canby, Cal., Jan. 9th, 1877.

## THE STOCK YARD.

### Mad Itch in Tulare County.

Recently we quoted from the *Visalia Delta* concerning the loss of some cattle with "mad itch." We now find in the same journal a letter from the owner of the cattle, Mr. C. H. Robinson, giving full particulars of the misfortune:

About the 21st of November I put five head of cattle, viz: Two three-year-old steers, one two-year-old heifer, one yearling heifer, and one yearling steer, into a large yard containing about 12 stock hogs. My object was to fatten a portion of the steers for beef. I commenced feeding the three largest all the pumpkins they would eat, cut up in boxes, and at the same time commenced feeding cut-up corn fodder (corn and all), thrown into the yard. The whole seemed to be doing well, both hogs and cattle. I continued feeding this until about the 15th of December, when my pumpkins were exhausted, and I fed the corn more freely.

#### First Symptoms of Disease.

On the morning of the 21st I found the yearling steer dead in the corral, and being in a hurry to go from home, I made no examination, thinking it had got choked. I was about three miles from home at work, and at about 10 o'clock A. M. a neighbor came and told me that my yearling heifer was choked, and my presence at home was needed. I immediately went, and soon ascertained she was not choked, but was coughing a little, frothing at the mouth, and seemed to be trying to chew some imaginary cud. She was in great distress, and had a cold perspiration. She seemed anxious to scratch her head and neck; her eyes were very much inflamed, and one side of her head was very much swollen. I then went to the neighbors for information, and found one man who said he saw a cow near Grangeville the week before that seemed to be similarly affected, and died in great distress during the first night after she was taken sick, and the owner called it

#### Mad Itch.

And proceeded to burn the carcass for fear his other stock should take the disease. I immediately started home to remove the remainder of the cattle for fear it was contagious. On my way I met another neighbor who said he had heard of the disease, and had "Navin's Exploratory Stock Doctor," which book gave a description of the disease called "mad itch." I at once procured the book, and found that the symptoms and description could not be mistaken, and he says: "This disease is a most fearful and fatal disease of cattle, caused almost if not quite exclusively by their eating the dry portions of corn stalks which had been chewed and spit out by hogs. Physicking and pouring large quantities of lard into the stomach to soothe the irritation, is all that can be done, but the hope of cure is very remote." I immediately returned home and removed the other stock from the yard. I now found the heifer very much worse, and scratching and rubbing the head and neck at a fearful rate, and had spells when she seemed to be nearly mad—trying to tear the skin from her head and neck. She continued thus until about three o'clock P. M., when she became exhausted and died in great distress.

#### Post-Mortem Examination.

I now made as good an examination as I could, and found that the lungs and gullet were apparently all right, also the first and second stomachs, except that the first stomach or rumen seemed to be rather fuller than common, and its contents somewhat dry. On reaching



the third stomach, or "manifold," sometimes so called, I found it completely packed, and solid with dry, ruminated corn fodder—so dry that it was impossible for it to pass off. I also found it greatly inflamed; also the muscles of the neck and along the side of the head; eyes red and glaring, and when dead seemed to be blood-shot. I afterwards examined others that died, with exactly the same results, except that in one case the creature bloated so much that I punctured her first stomach, or "paunch," and let out the gas, but it gave no relief.

#### The Rest of the Stock Affected.

At 9 o'clock P. M., on the same day, I found no signs of the remaining three being affected. At 11 P. M. I again went to the stock and found the two-year-old heifer standing, and observed that once in every few minutes she would shake her head, and seemed to be a little troubled, and was not chewing her cud (or ruminating). I also found one of the three-year-old steers lying down, and occasionally rubbing his head very slightly on the ground. I immediately procured help and gave each of these two nearly one quart of castor oil, in the hope that it might relieve them. On the next morning, the 22d, they both seemed much worse, and continued getting worse, when one died about 10 A. M., and the other about 3 P. M. the same day. One thing I had noticed, that the animals had not been ruminating during the day previous. The other three-year-old steer seemed all right, and was running at large with access to the corn fodder (but no hogs); was ruminating properly, and continued to do so until the 25th, at 12 o'clock M., when he was taken sick, and died at 5 P. M., the same day.

#### Conclusions Drawn.

Thus you see that all I had in the yard died; and I am forced to the following conclusions: First, that the stock was diseased by eating corn fodder; second, that as long as they had a supply of pumpkins the fodder passed from the system, but as soon as I ceased to feed them the stomach became clogged, causing inflammation, etc.; third, that it was not the hogs entirely, or the last one would not have died; and lastly, that when a creature shows signs of mad itch there is no remedy.

## SHEEP AND WOOL.

### Wool Product of the World.

In the last report of the Commissioner of Agriculture, we find an elaborate and highly interesting and useful paper on "The Sheep and Wool of the World." It is from the pen of the Department statistician, Mr. J. R. Dodge, who has bestowed upon the subject a great deal of pains-taking labor. We make the following extracts from it, which are of especial interest to wool-growers and flock masters in this country:

It is a suggestive and gratifying fact, that while the value of our manufactures is about four times as great as in 1850, the average of imports of woolsens of the past five years (\$23,797,698) exceeds but little that of the entire period of 55 years, (\$21,191,674,) beginning with the very infancy of this beneficent industry. It is particularly noteworthy that our imports since 1870 are less by several millions annually than for the period between 1850 and 1860, notwithstanding the immense increase in the consumption of woolen goods.

The necessities of the government for revenue, and the happy agreement of producers of wool and makers of cloth, have conspired to give a stability to customs-legislation for a period comparatively long, and a profit to both manufacturers and wool growers, and at the same time lower prices to consumers of woolen goods than could be possible in the cloth famine resulting from consumption without production in the United States. If now the interest of mere carriers, who desire larger profits for handling goods than manufacturers expect for making them, are not again made paramount, the future of the woolen manufacture will soon be secure; new triumphs of invention will be gained, every variety of fabric will be produced in this country, and all classes will thrive equally, except that importers of woolsens will fail to realize their thousands with greater ease than the wool grower now obtains his hard earned dollars.

It is not proposed to enter into details of wool growing in this country, to describe its breeds, report the progress of improvement, or indicate the probable direction of future efforts of sheep breeders. It is sufficient here to say that the American Merino is still the sheep of the country, with a distinctive character of its own, and a higher value for our uses than its most noted congeners abroad; that sheep husbandry is increasing, not east of the Missouri, but manifestly in the continental area of nutritious pasturage beyond, and that the production of early lambs and fat mutton, with the increase of the numbers of easily fattening breeds, is making slow but sure progress in the more populous and highly cultivated districts.

In conclusion, I will attempt to give, from examination of official records of wool production, and from comparison of estimates of experts where no official data are found, or where such records are several years in arrears, an approximate idea of the amount of wool produced in the world, and also the numbers of sheep of all kinds that are domesticated and kept for the production of wool. In this investigation the incompleteness and tardiness of official enumerations, and the evident lack of public apprecia-

tion of the value of statistics, is painfully apparent; and yet the enumeration of domestic animals is among the simplest and most practicable of accomplishment of all census work. In the more advanced and intelligent communities, these records are nearest complete. The official returns of sheep rarely if ever exceed the true numbers; it is often the case that they underestimate them. It is believed that in this country the census aggregates approximate closely the real numbers, except in Texas, California, and in some border States, in which large flocks are kept in situations remote from the view of assessors. The census of Great Britain is probably quite accurate, and that of the central countries of Europe measurably so. The latest available official publications of the number of sheep in European countries, some of them eight to ten years in arrears of the present date, are given as follows:

Countries.	Date.	Sheep and Lambs.
Great Britain.....	1874	30,318,914
Ireland.....	1874	4,437,613
Russia.....	1870	45,132,000
Sweden.....	1872	1,659,044
Norway.....	1865	1,710,061
Denmark.....	1871	1,842,451
Prussia.....	1873	19,624,753
Württemberg.....	1873	577,290
Bavaria.....	1873	1,342,100
Saxony.....	1867	304,087
Holland.....	1872	855,265
Belgium.....	1866	586,097
France.....	1872	24,589,647
Portugal.....	1870	2,706,777
Spain.....	1865	22,054,967
Italy.....	1867	11,040,339
Austria (proper).....	1871	5,026,398
Hungary.....	1871	15,076,997
Switzerland.....	1866	447,001
Greece.....	1867	2,539,538
Total.....		194,867,003

Next to the European flocks in numbers and in alliance of blood and proprietary interest are those of Australia, which here includes all British colonies in that antipodal region. The increase of sheep has been marvelous. The imports of Great Britain from that quarter were only 10,000,000 pounds of wool in 1840; they were 39,000,000 in 1850; 53,000,000 in 1859; 158,000,000 in 1869; and 238,000,000 in 1874. Since 1868 all these colonies, except Queensland and Tasmania, have increased their flocks, some of them very heavily, averaging in the table below about 17%, notwithstanding the decrease in the two named. It is really more, probably at least 20%, as the latest New Zealand figures are those of 1871, some of the others of 1873 and some of 1874. The returns are as follows, being the latest extant at the respective dates of publication, 1868 and 1874:

Colonies.	1868.	1874.
New South Wales.....	13,909,574	19,928,590
Victoria.....	9,532,811	11,323,080
South Australia.....	4,477,445	5,617,419
West Australia.....	599,756	748,536
Queensland.....	8,921,784	6,687,997
Tasmania.....	1,742,914	1,490,746
New Zealand.....	8,409,919	9,700,629
Total.....	47,504,203	55,496,907

In Asia the investigation rests necessarily upon more obscure data, and the more moderate estimates are accepted. The estimate, 350,000,000 pounds, covers the entire area of Asia, consisting mainly of the wool of Asiatic Russia, Turkey, Persia and India, as large portions of China and Japan are said to be substantially non-producing. It is less by 30% than some current estimates, and believed to be more consistent with a conservative and judicious view of the probabilities.

There has been a recent increase in the production of the Cape of Good Hope, and the estimate is certainly not too high, in fact scarcely more than the actual shipments for the past two or three years. As to South America, it is difficult to find in any markets, or in home consumption, the quantity sometimes attributed to this quarter of the globe.

## ARBORICULTURE.

### When to Plant Blue Gum Trees.

EDITORS PRESS:—I wish it distinctly understood by all, I have an axe to grind, (thanks to Mr. Berwick's candid statement of his incredulity, yet his marked success in late planting), and the implement is a massive and peculiar one, and I feel confident there are scores of readers of the RURAL who will assist in the mechanical operation. It somewhat resembles a tomahawk and yet, critically speaking, it may prove a grade or a thoroughbred in the absence of a pedigree (a rose will smell as sweet by any other name), and I may be induced in the near future to treat the readers of the PRESS with an interesting description of it. Axes have ever been a peculiar implement of warfare, and the ancient Britons and Romans, for want of bombshells, did good execution with them. Society at the present day is deeply indebted to them, as a valuable auxiliary in the advancement of civilization in primitive times when their sphere of usefulness was more valued than at the present day. Since then they have been degraded to the base purpose of decapitating pugilistic roosters. Therefore I trust my candid acknowledgement at this time, of my intentions for the present and future, will be accepted as due atonement for all appearances of selfishness in the past. I advise all to believe nothing, but first to investigate.

It may appear a useless labor of love to some to further discuss the planting of our eucalyptus; yet who is perfect? The accepted theorems of

yesterday are set aside by the investigations of to-day, and thus we go on, step by step, experimenting and learning, each year simplifying our knowledge and labor, and thus preparing us for the grand triumph of success in the near future. The original plantations of these trees were made in early fall on general principles alone, and have been accepted by the masses as correct. The principle involved in late spring planting is one of unusual interest to the horticulturist from the fact that less labor is required for the first year's growth, a healthier growth is gained and there is a decrease of loss over fall planting and a more perfect root formation. The only exceptions are in localities with a southern exposure, or soils of that gravelly, porous nature, that no water will remain on the surface immediately after heavy rainfalls, and even in these excepted localities we cannot plant deep with safety in early fall or winter, because we imperil the surface roots, being liable to decay from excessive moisture and cold. The principle of spring planting is simply to plant deep, no matter what the nature of the soils, whether adobe or sandy, by placing the roots of the young trees deep down in semi-permanent moisture, working the soil gradually up to and around the tree as warm weather approaches. Then care and labor are lessened, and we find in adobe soils, their continued growth during the summer and fall months fully as remarkable as in the more favorable sandy loams. But it must not be forgotten that the quality of the young tree is important. In adobe soils those grown in boxes alone are suitable (unless the convenience of obtaining sand or loam is near), when they are worked out so that they may be cut out with a square ball of earth, say three inches. For trees 12 inches high the box should be not less than four inches deep; but I am opposed to the principle of box-grown trees. My experience and all the heavy planters in our adjoining counties coincide with me, and in proof, none of them will plant anything but good healthy trees from the open ground, when they can get them. This subject of box-grown trees will be referred to again in a future article, and I shall also consider their root growth, showing by illustration the deforming of roots by box culture.

W. A. T. STRATTON.

Petaluma, Jan. 14th, 1877.

## THE VINEYARD.

### Sulphur and Mildew.

The late issue of the Report of the Department of Agriculture makes the following points on the action of sulphur in destroying the mildew on grapevines: Sulphur has generally been relied on as an antidote to mildew, and is commonly supposed to be an antiferment. Whatever its curative properties may be in relation to the grapevine, sulphur is not an antiferment as chemically considered; and it cannot be classed as either an antiseptic or as a disinfectant, but it may have the power to foster a healthy growth of the living plant to which it is applied.

The following experiment will throw some light on this subject: To a pint of pure water I added half an ounce of the flowers of sulphur, and immersed in the solution two leaves of a foreign grapevine. The liquid was exposed to a temperature of about 70° Fahrenheit. On the third day, fermentation was in full force. On the sixth, the odor of sulphureted hydrogen was very strong, bacteria and mycelium of fungi covered the whole surface of the water, and the vine leaves were decayed. I have frequently tried this experiment, using various kinds of foliage, and have always obtained the same results.

Some of the compounds of sulphur, as sulphurous acid, dilute sulphuric acid, and combinations of sulphur with the alkalis, are of an antiferment character; but these differ so essentially from the flowers of sulphur in their chemical characters that they cannot necessarily be classed with that substance. Sulphurous acid has a great affinity for oxygen at ordinary temperatures, and is easily decomposed, while pure sulphur remains unchanged when exposed to the air only. When sulphur is boiled with caustic potash, soda, or lime, sulphides are formed, and such compounds are antiferments; but the caustic alkalis mentioned are themselves antiferments, and the addition of sulphur will not render them more so. Sulphur in a soluble condition may be absorbed by plants as food; and, since it is a well-established fact that albumen of both vegetables and animals is never free from sulphur, it may be that the application of sulphur in a soluble state may indirectly destroy fungoid growths by building up the organic structure of the diseased plants, and thus enabling them to resist decay by fermentation, which is generally, if not always, the result of cryptogamic plants growing on them.

### The Brighton Grape.

Last year we gave an illustration of a new grape called the "Brighton." We now read in the *Fruit Recorder* some notes of the deeds of the grape last season. H. E. Hooker, of Rochester, (N. Y.) writes: "I believe we may now claim to have secured an early grape which should be in every garden; I mean the Brighton, of which I shall say but little, because I have done a good deal to introduce, and propagate, and sell it, and may be prejudiced and overestimate it, but will say that this season's experience satisfies me that this grape (which ripens one week

before the Delaware) will supply a great necessity in grape growing, namely, a variety of rapid, vigorous growth (which the Delaware is not), very hardy vine, which ripens handsome fruit of the highest excellence here, on the 5th to 12th of September, and thus furnishes the householder with its superb fruit long before frost comes, and which will be enjoyed and praised, and probably all consumed before the Concord, the Iona, the Eumelan, or the Isabella are ripe, and excelling them all in quality. I do not desire to see and do not look for all the excellencies in any one sort, but among early grapes I look to see the Brighton in the first rank."

Upon the above the editor of the *Recorder* comments as follows: "Our friend Hooker is very modest in his statement about the Brighton. His indorsement of the grape, and the fact of his paying \$500 for the original vine three years ago, is sufficient to show its great value. For tenderness of flesh and skin, as an out-door grape it has no superior, if an equal, in our judgment. The skin is so thin, tender and palatable that one invariably swallows it with the pulp, instead of spitting it out, as is the case with most other grapes. It is in flavor similar to the finest hot-house grapes, while its hardiness to vine, great productiveness, and is shown by the drawings we give, makes it one of the best, if not the best, dark colored out-door grapes yet introduced."

## HORTICULTURE.

### Bones and How to Use Them.

The value of bones as a fertilizer is generally known, but the knowledge of easy ways of making them available is not so widespread. The practice of turning the material to profit in the orchard, field and garden is even less prevalent. The following excellent article, written for the *Journal and Farmer*, will, we trust, lead to a gathering of the scattered bones and a gift of their rich substance to the soil:

Bones are too good a fertilizer to be lost. They are about two-thirds phosphate of lime, nearly one-third gelatine, or glue, and a little carbonate of lime, the same as common limestone. The latter being but trifling in quantity and cheaply attainable in other forms, as of stone or shell lime, is of course worth but little. The gelatine, constituting as it does nearly one-third of fresh bones, and being a nitrogenous, ammonia-forming substance, is worth more. The phosphate of lime constituting two-thirds of recent bones, and a still larger proportion of those that are old and dry, is by far the most valuable ingredient. Applied in an immediately available form, it is worth at least two cents a pound. Three hundred pounds of bones then would give 200 lbs. of phosphate of lime, or more, worth four dollars or upwards, and this exclusive of considerable value attached to the gelatine, and a trifle belonging to the carbonate of lime. The value of the ammonia in the gelatine, as we purchase that article in the shape of Peruvian guano, could not be less than one dollar for 300 lbs. of bones, making the whole value five dollars or more. The farmer, therefore, might as well throw away his \$5 bills as his bones; or he might as well lock up his bills for a future generation, as to let his bones be about his premises till some future occupant shall learn their use. The bills, safely stowed away, would be less a nuisance, and the loss of interest would be no greater in one case than the other.

On many premises, which we have seen, there are at least 300 lbs. of bones. There would have been three times that amount had they not been wasted. But there are 300 lbs. as it is, and they are worth \$5. If put into the most available form, and properly applied, they would return more than \$5 in a few months. But it is not very convenient for the farmer to put them into such a form; what then shall be done with them?

1. If he would bury them unbroken under and about fruit trees that he is transplanting, or in the vicinity of older fruit trees, or even in his garden or fields, below the reach of the plow, a considerable part of their value would be sure to come out sooner or later, but it might be a long time first, a half century probably, perhaps a whole century before the ingredients would be entirely given up.

2. If he would break them up with an axe head or sledge hammer, into pieces of from one to three inches long, and throw them over his fields to mingle with the surface soil, where the air and the heat of the sun would reach them, the process of decomposition would be somewhat hastened, but would still be slow, more beneficial perhaps to the next than to the present generation. It would be too much like hoarding money instead of using it.

3. If we were to burn the bones with a quantity of refuse wood and chips, letting the whole smother down into ashes and then apply the ashes to his fields, he would save about two-thirds of the value of the bones. The gelatine would in this case be dissipated, but the phosphate of lime would remain, and would act more promptly than in the last case, but being a phosphate (not a super-phosphate), and but slowly soluble, several years would pass, possibly as many as eight or ten, before its ingredients would be wholly given up to plants. The trouble of thus disposing of bones could

Continued on page 58.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS. The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### The Worthy Lecturer at Stockton.

At the risk of repetition in some points we print another report of the visit of the Worthy Lecturer at Stockton Grange in the following stirring letter:

EDITORS PRESS:—January 6th was appointed for the installation of officers of Stockton Grange, a harvest feast and a lecture by Bro. Pilkington, W. L. The installation was set for 11 o'clock, and the ball began to roll promptly. Bro. Andrew Wolf, P. M., officiated, assisted by Deputy W. L. Overhiser. The promptness of manner with which the services were performed made it a fact patent that we were in a live Grange. They were assisted by music, vocal and instrumental, which was in keeping with the rest. After the W. M., Dr. Grattan, was led to the chair, W. M. Phelps gave his retiring address, in which he expressed thanks for the fraternal feelings manifested by the members of the Grange during his term of office. After the last officer had been conducted to her position, the audience were invited to the banquet hall, to which they responded, marching around the Grange hall to martial music. The feast spread before us showed that matters here had been arranged with as much precision as in the former ceremonies, and the company, nearly 200 in number, in their earnest appreciation of the merits of the good things spread before them, seemed to rival the attention exhibited at the other ceremonies.

But one's appetite while being gratified fades from him as a dream or the morning dew; and though we lingered at the tables in pleasant converse and social interchange, the good things provided were too many, and many a fowl and delicacy in pastry was left untouched.

We found ourselves in our lothness to leave the social board encroaching upon the time set for the Worthy Lecturer. Down came the Master's gavel and we were invited back to the lecture room. If the feast to the body was sumptuous and bountiful, the feast to the mind and soul which we now enjoyed was the crowning glory of the day's exercises. We hear from our enemies that we are dead; that at a stated time we shall be buried. Were there any tendency to decay in this Grange that lecture would dispel it; but such is not the case at Stockton Grange. They are not dead, neither do they sleep. They are quiet and calm, but solid as our everlasting rocks. We listened to the Worthy Lecturer one and a half hours, when he invited questions, but he was so true and clear in his ideas and statements that he was not cross-examined.

The newly installed Master made a few remarks as to the future. They were short, terse and to the point, showing that although he is gentle, he has also the iron of a man in him; that when assailed from without he can face the storm! We were then dismissed with an invitation to join in a social dance, which was indulged in for a short time by those who wished. The Lecturer was besieged with expressions of pleasure and endorsement. We were loth to part, until the sinking sun admonished all that we must do so.

Bro. Overhiser secured the Worthy Lecturer as his guest, whose guests we also were. With such a host and hostess as Brother and Sister Overhiser, whose hospitality is simply perfect, we enjoyed a season of unalloyed pleasure. I should feel remiss if I did not mention a few of the interesting points on Bro. Overhiser's farm. The first, and noteworthy for this State or the United States, is a dairy of thoroughbred Short Horn Durhams, of about twenty-five in number, which, by choice selection and breeding, have been brought up to a high standard in butter and milk qualities, both as to quantity and quality. We have not seen any Short Horn herd which showed so much ability. His Berkshires and Merinos also show that he is carrying out practically the idea that it costs no more to rear a good than a poor animal. In our rambles over the place, Bro. Grattan was in company with us by invitation of our host, and we passed over the line into his fields and to his stables to see his Blackhaws and Hambletonians. The Doctor has achieved high honor in the horse line. I will mention only one: a two-year-old colt, a Hambletonian, which is a "thing of beauty, etc." We think the Doctor has nearly reached perfection. But these remarks are not intended for praise, but for truth.

What of the Grangers' Union? Well, the San Joaquin valley for its field of traffic, the San Joaquin Grangers as its supporters and bulwark, it is, as it should be, in time, the bulwark of the farmers of San Joaquin. There is no flurry about it, no boasting. Its strides are measured and strong. The load is moving

and it is sure to go to the top of the hill, and when it arrives at the top let those who have stood in its path stand aside or they in turn will be ground to powder as others have been. But time flies, and we must say "good by" to our kind friends, for home is sixty miles away; so away we whirl homeward, gratified beyond telling, inspired with hope and courage, and hoping many times to meet again. G. W. H.

### Reunion at Vallejo Grange.

EDITORS PRESS:—A very pleasant and noteworthy day was last Saturday in the annals of Vallejo Grange, notwithstanding an untoward circumstance or two during the afternoon meeting. Learning that their officers would be installed that day, that Bro. Pilkington would be with them in performance of his duties as State Lecturer, and that a zest was to be given to all the duties of the day by one of those Grange dinners which the skillful hands of our sisters and the genuine sociability of our Order invariably make a most enjoyable occasion, I determined that I would go and share the reunion with our fellow-Patrons of that stanch Grange, after my long absence. So Bro. Earl and I took the early boat across the bay and reached the handsome Masonic lodge-room—in which their Grange has long held its meetings—soon after the first arrival of its members. Two years ago this month it was my pleasant duty to install their officers in the same hall. I was glad to find the Grange quite as strong and thriving now as then. Your humble servant expected to be present as a listener, but after Bro. Pilkington arrived he insisted on my attending to the installation ceremony.

After a brief Grange meeting, the officers, whose election the RURAL has already announced, were publicly installed. Soon after 1 P. M. we adjourned to a lower room, where a really sumptuous feast was enjoyed in company with outside friends.

About 3 P. M. the chief feature of the day began—the lecture by Bro. Pilkington. It is with no common interest that I listened to the words of the worthy brother, my successor in this work. He certainly handled with great ability and much originality the questions of labor combinations, the necessity for purity in all good governments, reform in finance and other respects, the Rochdale system of co-operation as a sure remedy, when properly managed, for numerous evils which hinder the prosperity of our industrial classes. His very forcible, instructive lecture was followed by request with the off-hand remarks of visiting members. Meanwhile Bro. Pilkington having been fraternally informed in private that some of his scathing invective against political corruption had given offence to several members, who looked upon some of his sweeping, pointed sentences as having a partisan allusion, and hence being inappropriate in a Grange address, he explained and disclaimed altogether having the slightest intention to be personal or partisan in any allusions. This led to one of the spiciest little debates, for about 20 minutes, that it ever fell to the lot of the writer to hear. Even in fraternities, when people get terribly in earnest, sometimes, you know, we will be decidedly spicy. The whole thing reminded me of little incidents I have witnessed in State Granges, in the National Grange, even in the Co-operative Congress of Great Britain, where members usually staid and quiet got excited and for a few minutes just "went for each other," and fairly "made the fur fly," but when they came to think about it, talk it over and remember they were supposed to be brothers in the same good cause, good humor would finally prevail, they would mutually explain, smooth the fur down, and soon all would be going on with the work as if nothing had happened—the cause sometimes stronger than before the small earthquake settled it down. So it was at Vallejo, last Saturday. After it was all over, there was among our members as fine an exhibition of the power of true fraternity, to heal discord and weld our strength together, as is ever seen in any brotherhood. So may it always be—"In essentials, unity; in non-essentials, liberty; in all things, charity."

S. F., Jan. 24th, 1877.

WORTHY LECTURER'S VISITS.—We have had the pleasure of taking Bro. Pilkington by the hand upon his return from his arduous campaign among the Subordinate Granges of the interior. He reports that he has everywhere received a most kindly and fraternal greeting and rejoices to see the life and spirit of earnest work which pervades the members. Our Worthy Lecturer has given himself almost wholly to his work during the last three months, and in spite of the good care which the brothers and sisters have taken of him, he bears marks of the fatigue of talk and travel. He now goes to his home in Santa Cruz to set the wheels of his business affairs in motion. Bro. Pilkington left us a stirring letter, descriptive of his many visits, which we reserve for next week, because we wish to present it in its entirety. It is a cheering narrative, and readers may confidently look forward to refreshing columns in this department next week.

### From the Granges.

#### Sonora Grange.

EDITORS PRESS:—The officers-elect of Sonora Grange were duly installed on last Saturday by Bro. Soulsby, P. M. The meeting was very interesting and harmonious. Many of the officers were re-elected. Our retiring chief, George I. Soulsby, has filled the Master's office for two years. The Grange, fully appreciating his services, unanimously passed a vote of thanks for the impartial and courteous manner he had filled the chair. It is gratifying to the recipient as well as to the brothers and sisters to participate in these social amenities. It is pleasant to give and receive; a flower is planted in the heart which yields its fragrance for all coming time. How much better is it to receive the commendations of our associates while trying to elevate the condition of the husbandman, than to give way to petty malice or fancied grievance, leaving the Order with a burst of indignation, expecting to see the structure demolished in your wake. Charity, forbearance and perseverance should be our motto, no matter what the provocation. If our desire is for the welfare of humanity at large, and our loved Grange in particular, soon will the responsive vote be placed on heart and record, "Well done, good and faithful servant." But those who turn back, having once put their hands to the plow, will soon find themselves in the gloom of obscurity.

Music is one of our inspiring forces. Sister Florence Kelly, by her devotion to the melodeon, and those assisting in giving us sweet vocal music, deservedly came in for a vote of thanks and expressions of gratification for pleasures derived from united effort in the performance of the Grange melodies.

My own remarks—as Lecturer—were in accordance with the duties of the day—taking a retrospective view of the past and present, and peering into the future from "cause and effect." We cannot tell the future of the Grange movement except from its past progress and its own inherent capabilities for the dissemination of good principles and protection from grasping monopoly. If the present year only prove as prosperous as the past, the friends of the cause will have reason to be thankful. We have only to plant the seed, heaven will water it, so that it will germinate in garlands of beauty to adorn the home of our second existence. If man's career were ended with this life, much that is done might as well be left undone. But man is gifted with immortality—a life endless as time itself. It behooves us to see that our whole duty is faithfully performed, to ourselves and families first, and all that is possible to suffering humanity.

JOHN TAYLOR.

Mt. Pleasant, Jan. 18th.

#### Santa Rosa Grange.

EDITORS PRESS:—Santa Rosa Grange is not dead, nor is it sleeping; but one might think there is no such organization as a Grange here, were the report in the PRESS the only guide. The fact is, our people are over modest, and do not like to see themselves in print very often. And we hope the editors and readers of the PRESS won't think we are losing our modesty if we tell them a little of the truth concerning the Grange and its work hereabout. During the fall, and so far into the winter, our Grange meetings have been well attended. The interest of the members is still increasing, and the last two meetings have been the most pleasant and profitable ones of the year. The newly-made officers have begun to work in real earnest. The yearly report of officers showed our finances in good condition. A splendid surplus on hand, which the Board of Trustees of the Grange were authorized by the Grange to loan, invest or dispose of, as the Board think best. The membership is increasing. We elected two new members at the last meeting and we hear of some others about to come forward to help and be helped by the Grange.

At the last meeting a decided improvement in the music was noticeable. We have the use of a fine organ, and we have succeeded in getting a fine performer (a sister) to preside. Nothing does more to make the meetings attractive, pleasant and successful than good music. Let other Granges try it and see if they do not agree with our opinion.

D. ART.

Santa Rosa, January 22d, 1877.

#### Sacramento Grange.

EDITORS PRESS:—Sacramento Grange had a pleasant gathering at the opening of the new year and the installation of the new officers. We intend to have essays and questions of interest on Grange and farm matters, and perhaps the sisters will conduct a monthly paper on domestic and household affairs. What we need is more life and interest in general affairs. I look for better opening in the future.

GEORGE RICH.

#### Georgiana Grange.

EDITORS PRESS:—Last Saturday was our regular meeting. The fourth degree was conferred on a class of one sister and five brothers, after which the members of the Grange and their friends assembled around the table spread with a beautiful harvest feast, where a good social time was had; every one seeming well pleased with their day's amusement.

Isleton, Jan. 15th.

P. H. G.

#### Keystone Grange.

EDITORS PRESS:—Worthy Bro. W. L. Morton installed our officers to-day. After the installation a repast was spread by our good sisters, to which all present were invited most cordially. General good feeling prevailed.

AMOS CHILD, Sec'y Keystone Grange. Lakeside, Tulare Co.

#### Collegeville Grange.

EDITORS PRESS:—Regular monthly meetings of our Grange are held the second Wednesday in each month, at which there is usually a harvest feast and debate.

L. R. CHALMERS, Sec'y.

### Election of Officers.

AMERICAN RIVER GRANGE, No. 172, SACRAMENTO Co.—E. G. Morton, Sr. M.; J. A. Evans, O.; W. W. Kilgore, L.; C. Boye, S.; H. Bryan, C.; W. Bryan, T.; Mira Kilgore, Sec'y; W. Thomasson, G. K.; Mrs. W. Bryan, Ceres; Miss Kitty Studarus, Pomona; Miss M. Criswell, Flora, and Miss Jennie Morton, L. A. S. J. T. Wight, Trustee for three years; D. W. Taylor, one year.

CACHE CREEK GRANGE, No. 82, YOLO Co.—S. B. Holten, M.; D. B. Hurlburt, O.; J. C. Padlock, L.; James Grafton, S.; W. L. Padlock, A. S.; John Gillman, C.; D. Q. Adams, T.; J. G. Fredericks, Sec'y; J. J. Stephens, G. K.; Sister E. Holten, Ceres; Sister D. B. Hurlburt, Pomona; Sister Billie Butter, Flora; Sister A. E. Keller, L. A. S.

CLARKSVILLE GRANGE, No. 149, EL DORADO Co.—William Woodward, M.; Samuel Kyburz, O.; A. T. Leachman, L.; Charles Chapman, S.; J. R. Barret, A. S.; J. F. York, C.; George Carsten, T.; Isaac Maltby, Sec'y; C. P. Winchell, G. K.; Mrs. Emma Woodward, Ceres; Mrs. R. S. Kyburz, Pomona; Mrs. E. F. Maltby, Flora; Mrs. Mary E. Porter, L. A. S.

COLLEGEVILLE GRANGE, No. 184, SAN JOAQUIN Co.—W. H. Snow, M.; G. W. Brown, O.; P. P. Ward, S.; M. W. Woodward, L.; A. S. Woodbridge, A. S.; A. Mayberry, C.; A. M. D. McIntosh, T.; L. R. Chalmers, Sec'y; D. C. McIntosh, G. K.; Mrs. Ward, Ceres; Mrs. M. McIntosh, Pomona; Mrs. Snow, Flora; Mrs. M. Garwood, L. A. S.

ENTERPRISE GRANGE, No. 129, SACRAMENTO Co.—Election, Dec. 2d: A. M. Plummer, M.; Wm. Baker, O.; Sammel Green, S.; Monroe Miller, A. S.; P. S. Lowell, L.; H. Cronkite, C.; J. M. Bell, T.; A. A. Nordyke, Sec'y; F. B. Fitch, G. K.; Mrs. G. Beckley, Ceres; Mrs. C. Toomey, Pomona; Mrs. P. S. Lowell, Flora; Miss Mary Shaver, L. A. S.

GEORGIANA GRANGE, No. 122, SACRAMENTO Co.—H. F. Smith, M.; F. M. Kittrell, O.; E. B. Sparks, L.; J. P. Norman, S.; J. B. Allington, A. S.; J. W. Ferguson, C.; M. M. Wheeler, T.; P. H. Gardiner, Sec'y; S. C. Mare, G. K.; Angie Davis, Ceres; Sarah Pool, Pomona; Mary Pool, Flora; Annie Allington, L. A. S.

KEYSTONE GRANGE, No. 244, TULARE Co.—Election, Jan. 13th: E. Axtel, M.; W. N. Barker, O.; W. L. Prior, L.; I. Coffey, S.; M. E. Griffin, A. S.; A. I. Burdy, C.; J. J. Cole, T.; A. Child, Sec'y; N. R. Goldin, G. K.; Sister N. Axtel, Ceres; Sister N. Prior, Flora; Sister A. Daggs, Pomona; Sister M. E. Coffey, L. A. S.

TOMALES GRANGE, No. 153, MARIN Co.—Election, Dec. 30: O. Hubbell, M.; J. L. Blake, O.; A. Gericke, L.; F. A. Plank, S.; F. W. Bemis, A. S.; Mrs. O. Hubbell, C.; Thos. Caruthers, T.; R. H. Prince, Sec'y; A. S. Marshall, G. K.; Mrs. C. Stump, Ceres; Miss Alice Bailey, Pomona; Mrs. T. M. Johnson, Flora; Mrs. L. A. Plank, L. A. S.; Miss Mary E. Bailey, Organist.

WESTMINSTER GRANGE, No. 127, LOS ANGELES Co.—Election, January 6th: Geo. C. Mack, M.; John Anderson, O.; A. G. Cook, L.; J. D. Bowley, T.; A. T. Taylor, Sec'y; Geo. Danskin, C.; F. H. Porter, S.; C. Howe, A. S.; George Crittenden, G. K.; Sister S. A. Mack, Ceres; Sister V. C. Anderson, Pomona; Sister Flora Bowley, Flora; Sister Porter, L. A. S.

### The Grangers' Business Association.

Amos Adams, Secretary, prints elsewhere this week, as required by law, the list of stockholders in the Grangers' Business Association who have not paid the recent assessment upon their stock. This publication should advise all the friends of the association that they should arrange at once to meet the engagement. The association is doing a good business, its directors and manager are well known to the Order, and its cause has been approved by the committee of the State Grange. To enable the association to proceed in its good work the assessment was levied, and it seems to us that this aid should be freely given by the stockholders.

GRANGE DIRECTORY.—We return thanks to those who have favored us with reports of the elections in the Subordinate Granges. We desire to prepare our corrected Grange directory for printing in the first February issue of the PRESS, and we request all Granges which have not sent us their new list to do so as soon as convenient, so that the directory may be accurate.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**STOLEN CATTLE RECOVERED.**—*Independent*, Jan. 20: Some time since about 70 head of thoroughbred cattle were stolen from William Rice, of Contra Costa county. He failed to get any clue to them in his neighborhood, and went to San Jose and put the matter into the hands of Sheriff Harris, and about a week ago that officer left there in search of the property, taking with him Mr. Rice and a couple of other associates. He soon got on the track of the missing cattle, and traced them to a gorge in the mountains about 35 miles east of there, where 14 of them were found corralled. The place was very difficult of approach. The ears of those recovered were found to be mutilated in defacing the marks, and they had recently been branded with a Spanish brand. It is supposed that the greater portion of the herd had been butchered. The sheriff and party suffered severely with the cold during the trip. Since the above the sheriff has caught the thieves, Antone Wilson and Pio Ocho, in Livermore valley.

## COLUSA.

**CARE OF WORK HORSES.**—*Sun*, Jan. 20: Some of the farmers who have a good many teams, employ one man whose duty it is to feed them all and see that they have plenty of good fresh water to drink. This has been found by those who have tried it to work well, and the man, if a good careful one, will save his wages in the feed, besides having the teams in good condition all the time. More teams suffer from want of care than from over-work; and it may appear strange, but we are convinced that more horses suffer from the want of the cheap article of water than from the more costly one of barley. Too many farmers allow irresponsible men to take care of the teams, and think if they stand all the while to plenty of feed it is all right, and never think to see that the men let them have a chance to drink all the water they want. And then it is trouble to let a team stand a while after putting up before watering, and too many neglect that precaution. Teams well watered and well cared for will keep fat on straw and a small quantity of barley, while those neglected in those particulars will fall off on good hay and plenty of barley. As to whether whole or ground feed is best for work horses, is a question on which the best farmers are divided. Abram Clark, one of the most systematic and successful farmers in the county, feeds ground barley mixed with cut hay or straw, and he keeps his teams in good condition, while L. S. Wakefield and J. S. Gibson, who have made the care of horses a special study, are inclined to favor whole barley and chopped hay or straw. All these get a great deal of work out of teams, and have them fat all the while. Wakefield says that horses or mules fed ground barley are apt to have colic. This is a subject of much importance to farmers, and we shall be pleased to hear from some of them on it.

## CONTRA COSTA.

**A GOOD RAIN.**—*Gazette*, Jan. 20: Although the measure of the rainfall is not great, every atom has been taken in and stored by the earth, and the spell of the drouth having been broken we may not only expect more from present appearances before a clear-up, but recurring rains through the remainder of the season. Had this rain come with beating force to pack the surface of the ground, half or more of it would have run off and been carried away to the ocean; but it has fallen in gentle showers of brief duration, between which there has been ample time for the water to settle down into the light-lying soil of both plowed and pasture lands. We do not, indeed, remember as long a term of rainy weather when the fall and the condition of the soil was so favorable for its entire absorption and storage. The larger portion of our grain land is already sown, or ready for sowing, and much of it in well forward growth, while, as a rule, in past seasons but a small portion of the land has been in seed at this date, and not more than half of it even plowed until a later date, and we have now certainly a fair chance of good crops.

## FRESNO.

**ALFALFA SEED.**—*Republican*, Jan. 20: J. D. Forthcamp, superintendent of the Weihe or Henrietta ranch, recently purchased by W. S. Chapman, has received from San Francisco 40,000 lbs. of alfalfa seed. It is proposed to sow 2,000 acres of this ranch to alfalfa, as also a large part of the Easterby place. The ditch, farming and colony enterprises of Mr. Chapman in this vicinity are of greater magnitude than ever before conducted in this valley.

**GRAIN SOWN.**—The amount of grain sown in the immediate vicinity of Fresno is very large for a locality so recently settled. On the Weihe place, 900 acres; Esterby place, 2,000 acres; Eggers place, 1,800 acres; Gould place, 200 acres; Voorman place, 2,100 acres. Much of the grain was sown by the early rains and will now grow rapidly, while all of it will soon be up and growing.

## KERN.

**EXAGGERATION.**—*Courier*, Jan. 20: A letter from John G. Dawes, who was reported to have lost all his sheep, denies the report, and says he arrived at his destination with a loss of only 20 head. The report was brought to Mr. G. Saenger, a prominent citizen and stock owner here,

and he gave entire credence to it. The report was brought also by a traveler to Judge Dixon, near Buena Vista, who gave it to us with full faith in the truth of the statement. We now learn that some Basques were driving some sheep north at the same time, and lost their band of 200 rams from their drinking alkali water. They had cost them \$25 a head. Mr. Dawes was in advance, and his friends will rejoice in the denial we are able to give.

## LOS ANGELES.

**CASTOR BEAN LOSS.**—*Los Nietos Courier*, Jan. 13: The castor bean crop did not turn out so well last year as the year previous, on account of the havoc made by squirrels. These pests cut down the plants when about ten inches high. If this wholesale destruction could be avoided the raising of the castor bean would prove highly remunerative. Last year but little more than 24,000 pounds were shipped from this depot, while during the year 1875 the shipments of castor beans amounted to 60,754 pounds.

**RESULTS OF RAIN.**—*Herald*, Jan. 20: We are now reasonably certain of good grass, and no crop except barley will suffer. We can support this the more readily because barley has never proved a remunerative crop in Los Angeles county when all our farmers took a hand in raising it. A stunted barley crop this year, with the hay and grain which remains over from the superabundant yield of the last season, will really result in more money than a full crop would.

**COFFEE.**—Coffee growing is now being tried on the Puente rancho, Los Angeles county, by the Vandillo Brothers, a South American firm. It is said that they purchased one-half of this tract for the purpose, at an outlay of \$42,000. A good number of coffee plants are now growing on the rancho, and will probably mature should the rain be sufficient. The projectors of the enterprise propose to make themselves independent in this matter, however, and will bore for artesian water.

## MENDOCINO.

**EDITORS PRESS.**—Up to the present date we have had 2.09 inches of rain the past 10 days, and still cloudy and warm. Grain never looked better than now, and a large area has been sown. Grass is good, sheep fat, farmers jubilant, but lumbermen despondent, as the streams have not yet risen at all. In this neighborhood many of the creeks are not yet running. All our rain has been gentle and warm, and soaked in the ground as fast as it fell. The season has yielded thus far 8 3/4 inches of rain. With a continuance of the season as propitious as begun, Mendocino will show a better crop than ever before.—C., Ukiah, Jan. 23d.

## MERCED.

**SAFE.**—*Express*, Jan. 20: We have no doubt sufficient rain has fallen, at the present writing, within the two days above mentioned, to render farmers and stock-raisers safe. Of course, without more rain later in the season farmers would do nothing more than raise hay; but it is not to be expected that no more rain will come; for the past history of rains in California warrants the belief among the very oldest settlers that more will follow and that shortly. However this may be, we have had enough at present to bring grass up and cause it to grow, if not luxuriantly, at least sufficient to sustain alive all the stock at present in the country. This of itself is far more than the most sanguine among our farmers and stockmen expected a week ago, and is a source of gratulation. For the next ten days sheep, and especially ewes and their lambs, must needs suffer unless great care is taken to provide feed, other than grass, for them. All sheep-raisers should endeavor to procure hay for their sheep, while the young grass is coming on. There is plenty of good wheat straw within easy reach of every flock of sheep in the county, which can be bought, no doubt, at a very low price, and to sheep men we say, lose no time in purchasing this straw; feed it to your sheep, and by this means preserve their lives.

## MONTEREY.

**FEED.**—*Democrat*, Jan. 20: We noticed yesterday morning a great flock of sheep passing through town. It came from stubble on the Spence ranch, belongs to S. B. Gordon and was heading for its range on the Tulareitos rancho. In this connection, we mention that the rainfall of the week has been exceptionally heavy in the Corral de Tierra, Tulareitos and Carmelo districts, and that "feed" is assured in that quarter.

**WORK.**—The rain is sufficient to start the plows and cheerfulness and confidence, through its benign effect, has taken the place of despondency with workers everywhere. With regard to the good effects of this most seasonable visitation, we understand that a large proportion of the lands from Soledad to Chualar have already been plowed and seeded. In this vicinity and hence to the sea, there is little so prepared—it may be presumed there will not be much time lost now—but that in the opinion of the farmers makes no difference, inasmuch as they have a much longer growing season to count upon.

**DRY SOWING.**—*Cor. San Jose Mercury*: There has been much dry plowing this season. Thousands upon thousands of acres have been skimmed over and seeded to grain, which we sincerely hope will repay the farmer for the labor incurred. As last year was the first experiment of our farmers in raising wheat and barley near Soledad, the desiccating winds that blow in this locality hitherto deterred others

from running any risk, but our pioneer merchant, ex-Mayor Vanderhurst, sowed both barley and wheat on the 15th of February, and realized therefrom about 20 sacks of barley and 12 sacks of wheat to the acre, of the best quality; also Ladd, Goodrich, Mitchell, Kilburn and McKee, between Soledad and Gonzalez, realized about 3,500 tons of wheat, pronounced by Mayhew, Earnest & Co., and Messrs. Starr & Co., to be of a superior quality for milling, being strong and free from any glutinous substance. Undoubtedly, from last year's experience and the heavy rains we are now having up to Thursday morning, a good yield of cereals may be safely calculated on.

## NAPA.

**EDITORS PRESS.**—We have, after about three months' drouth, had about two inches of rain, which fell between the 17th and 19th inst. It came gently, with snow on the mountains around, so that none was wasted, the thirsty ground taking it as fast as it fell. We have frequently had grain in a more forward condition at this season, but I have never seen a better prospect in this county for a large yield on all classes of land. In this, Berryessa, valley, we have farmers who go to each extreme in the plowing line. One man merely scratches the ground, while another neighbor puts on eight heavy mules, and turns out a furrow from 10 to 13 inches in depth. In due time you may look for a comparison of the result from an impartial witness.—J. T. I., Monticello, Cal.

**PRUNING.**—*St. Helena Star*: Pruning is progressing rapidly, many vineyardists being about through. The opinion is expressed by old vintners that it is better to prune this early, after the time for danger of gum exuding has passed, and before the sap flows. Then, if necessary, they can be set back a little in the spring by cutting off a small piece more, for which allowance is left.

**FINE WHEAT.**—*Register*, Jan. 20: We are told by up-valley people that Mr. Thomas Hopper has 300 acres of the finest looking wheat in the valley. It is on corn ground, is up about six inches high, and looks as green and vigorous as any producer could desire. Mr. Hopper is a thorough farmer, and knows how to get the biggest yield from the smallest tract.

## SACRAMENTO.

**EDITORS PRESS.**—A general rejoicing cometh up from the "valley of the plains" as the sea of clouds moistened mother earth. Although not suffering, this clears from the mind all doubts of short crops here—the outlook is promising. The low as well as the uplands will doubtless be cultivated, and if no heavy rains or floods in spring, every foot of arable land will bring forth its increase.—G. R.

**EDITORS PRESS.**—The farmers here all feel much encouraged over the prospects of crops for the coming year. They have their land in good order, and can get along here in the tules with a small amount of rain. The town of Isleton is in a flourishing condition, several new dwellings having gone up this fall.—G., Isleton.

## SAN JOAQUIN.

**ENCOURAGING.**—*Independent*, Jan. 19: The rainfall for the last three days has been sufficient to bring forward the wheat already sown, and will also start the feed so as to furnish abundant pasturage for stock. With seasonable rains, such as may be confidently expected during the months of February and March, the outlook for the farmers is again very encouraging and a general revival of all kinds of business may be expected.

## SANTA CRUZ.

**ENOUGH.**—*Courier*, Jan. 19: Thursday morning a heavy rain fell, accompanied by heavy peals of thunder and vivid flashes of lightning. There is now sufficient moisture in the ground to enable the farmers to plow and sow.

## SONOMA.

**EDITORS PRESS.**—Yesterday I accepted the invitation of a friend to go to the head of Blucher valley, in the direction of Petaluma. All the grain along the route of 16 miles seemed to be doing well, so much better than I expected to see, that I returned well satisfied with the prospects of Sonoma county. Had the farmers harrowed in their early grain as they do later in the season, we would not have felt the least alarm about the drouth. It is customary here to harrow early-sown grain but very little, just enough to cover the seed, leaving the land as rough as possible, as it will stand the long-continued rains better than if smoothed down level, but this season has been so very dry as to require better cultivation. All the late-sown grain has received better cultivation, and is now perfectly moist and coming up well. Yesterday the long-continued bright and cloudless skies were changed to wind and clouds. The rain began to fall in gentle showers throughout the day and night. One-tenth of an inch has fallen and the wind is fair for plenty more to-night.—T. S., Santa Rosa, Jan. 17th.

**THE FROST LINE.**—*Democrat*, Jan. 20: In the mountains in this county and perhaps generally in the State, there is a belt somewhere in the neighborhood of 1,000 feet above the level of the sea that is almost entirely exempt from frost. The extent of this belt we do not know, but we know gentlemen residing in it in different portions of the county and they assure us that no killing frost has visited their places this winter. As a proof of this fact, if any further proof than their assertions were needed, tomato vines are yet untouched and in full bloom and bearing, and all kinds of flowers are blooming in open and unprotected places. All over the

valleys there has been an unusual number of heavy frosts this winter, and also on the high mountain tops, but this belt has enjoyed all the time real vernal weather. It seems to us that this fact is not generally known and appreciated by our people, and we would be glad to hear from some one who is posted and obtain full information on the subject.

**THE WINE COMPANY.**—A satisfactory meeting of the directors of the Santa Rosa Wine Manufacturing Company was held at the office of the savings bank last week. Reports of the secretary and treasurer were read, which showed a healthy condition of affairs. The company have on hand about 125,000 gallons of wine. Its liabilities, including partly the first expenditures for building, cooperage, apparatus, etc., are about \$14,000 and its assets about \$30,000. A brandy still will shortly be put up in connection with the winery. J. R. Myers is president of the company; John Taylor, secretary and superintendent, and J. F. Boyce, treasurer. About \$6,000 was paid by them for grapes last fall.

## STANISLAUS.

**SLAUGHTER OF THE INNOCENTS.**—*News*, Jan. 19: The period commonly known as the lambing season is fully upon many of our sheep raisers. The scarcity of pasturage and fear of a prolonged drouth has caused orders to be issued, by many owners, for their herders to slaughter the young lambs as fast as they make their appearance. This has been done to save the dams of the fold. The ewes would require all of their strength to sustain themselves during the trying ordeal of short feed. Under such orders thousands of lambs must have been slaughtered. The recent rain, and more favorable prospects for grass, will, no doubt, cause such work to be stopped.

## SUTTER.

**THE MINING DEBRIS CASES.**—*Banner*, Jan. 20: The suit of Keyes against the Nevada and Placer county mining companies, first brought in the District Court of Sutter county, has been removed to the United States Circuit Court, and will now be tried in San Francisco. We have anticipated such a result, and have no doubt that taking this course in the early stages of the case will facilitate a settlement. Whatever might have been the result in our State courts, there was a certainty that the case would finally have been carried to the highest Federal Court for adjudication, and a saving of time and trouble will be effected by making the transfer now, instead of at a later date. The case pending in the Sacramento court is still on trial, and seems to be receiving a thorough examination. To enable the jury to decide intelligently as to the damage caused, they were instructed to visit the scene of action and view the land. The earnestness with which this case, a comparatively unimportant one when compared with the Keyes suit, if prosecuted, is an indication that the farming community is awake to the magnitude of the question, and that it is determined to protect its interests.

## TEHAMA.

**POULTRY RAISING.**—*Tocsin*, Jan. 18: Tehama county stands first and foremost in the ranks of fowl-breeding, and it is a pleasure combined with profit. "There's millions in it," if systematically conducted, and they are ornaments to the yard. It is pleasant to notice the interest manifested by many of our townspeople in this business, and early and late care and attention is bestowed upon them with all the pride imaginable. They compare in beauty with budding flowers and creeping vines, and give life and tone to the dismal surroundings of a barnyard. It is a luxury enjoyed by many, and ought to be sought after and engaged in by all. Give the matter a trial. Get the best breed, and—our word for it—you will be happy.

## TUOLUMNE.

**EDITORS PRESS.**—You will be deluged by rain articles, as I suppose our storm is general throughout the State. The heart of man is made to rejoice. Obedient to the general rejoicing vegetation will spring forth with renewed life, to give its life forces to sustain the life of man and beast. How dependent we are upon Nature's wise arrangements. Forgetful we might be if we had no reminder, such as we have passed through. The rich care little for these natural convulsions, but the dependent poor scan the sky with fearful forebodings. To them a drouth is tantamount to a famine, but the Great Dispenser of every good gift sends the refreshing shower, just when despair had found an entrance into many a heart.—J. TAYLOR.

## Oregon.

**FARMING ITEMS.**—*Oregonian*, Jan. 13: We are told that the new grass in the John Day country is from six to eight inches in height. A farmer living on the Touchet, who has no special facilities for raising stock, realized last year \$2,100 from the sale of hogs alone. S. Marks & Co., Canyonville, kill and convert into bacon only 1,400 hogs this season. They have already killed 1,000, and will kill the remaining 400 next week. The *Mountaineer* says the live stock shipment made from the Dalles to the markets below for the year just passed was 10,000 head of mutton sheep, and 6,000 head of beef cattle, besides about 1,000 head of hogs. From all parts of the State come favorable reports of the condition of the crops. Better weather was never experienced for agricultural purposes, and a larger area of ground has been seeded this fall and winter than has been known before in the history of the State.





### A Very Old Song.

"To-morrow, ma, I'm sweet sixteen,  
And Billy Grimes, the drover,  
Has popped the question to me, ma,  
And wants to be my lover:  
To-morrow morn, he says, mamma,  
He's coming here quite early,  
To take a pleasant walk with me,  
Across the field of barley."

"You must not go, my gentle dear,  
There's no use now a-talking;  
You shall not go across the field  
With Billy Grimes a-walking.  
To think of his presumption, too!  
The dirty, ugly drover,  
I wonder where your pride has gone,  
To think of such a lover!"

"Old Grimes is dead, you know, mamma,  
And Billy is so lonely!  
Besides, they say, to Grimes' estate  
That Billy is the only  
Surviving heir to all that's left;  
And that, they say, is nearly  
A good ten thousand dollars, ma—  
And full six hundred yearly!"

"I did not hear, my daughter dear,  
Your last remark quite clearly,  
But Billy is a clever lad  
And no doubt loves you dearly;  
Remember, then, to-morrow morn,  
To be up bright and early,  
To take a pleasant walk with him  
Across the field of barley!"

—St. Louis Times.

### Scenes in Sicily.

[Written for the RURAL PRESS by MRS. M. R. MOORE.]

Perhaps a few lines from this far-away land may not be unacceptable to your many readers. A summer of unremitting work, though spent in this climate, so like California, with its blue skies and sunny days, yet made me feel that rest was needful. Tired brain and nerves needed relaxation, and an old Californian friend just then making his appearance, it was proposed that the right thing to do was to take a little trip to "fresh fields and pastures new." Sicily seemed so near from Capri, where the summer had been spent, so available, and, moreover, had the charm of novelty to recommend it, being out of the ordinary route of travel, that at once we decided to see

#### The Famous Orange and Lemon Groves.

Whose fruit we had eaten when children. A part of an afternoon and one night on the steamer brought us to Messina, sitting placidly at the base of Etna. The town is like all other Italian towns, with nothing in particular to recommend a long stay, so after a couple of hours we took the train for Catania; then followed Taormina and the ascent of Etna. A ride of seven hours through the olive orchards, the orange and lemon groves, heavy with green fruit, and so luxuriant, brought us to Syracuse. It was late when we arrived, and we had but a confused glimpse of high walls, big guns mounted on them and flashing lights glancing across the dark waters of the harbor. The next morning was bright and sunny, in fact too warm for any active exertion, so we concluded to visit the famous papyrus plants on the river Anapo. We found our way through the narrow, crooked streets and outside the walls to the quay—a fine one it is, too, built of the best cut stone—where we hired a little boat with an awning and two oarsmen, and started across the placid harbor. A row of perhaps 20 minutes brought us to the mouth of the creek, called here

#### The River Anapo.

Every stream here bigger than the muzzle of a garden hose is called a river, for this is a dry country, at least half the year—the streams which are raging torrents in winter drying up completely in the summer, when rain seldom falls. This so-called river proved to be a rather deep, clear creek with a strong current. As we rowed up the stream, which flows through a flat plain at the base of the remains of the ancient wall of Syracuse, we saw, standing half way up to their knees in the water, dozens of women washing. Their petticoats were tucked up in the most reckless manner, and they rubbed away on a rough, flat stone, sometimes pounding the garments with a wooden paddle, then sousing them in the water, and chattering in such a vociferous manner that one not used to this country would have thought them quarrelling. As we passed they looked, nodded and laughed, showing most beautiful teeth. Little children climbing on donkeys no bigger than dogs, others hanging on to the tail of the patient beast, and having an immense amount of fun; herds of goats browsing on the banks, followed about by a boy dressed in sheepskin with the wool side out, looking very happy and lazy, varied the rather monotonous banks, which are here low and not beautiful just near the mouth. As we

got further on, however, the scene changed; the country was still flat, but the stream wound around in the most bewildering manner, tall reeds took the place of the low trailing grasses, cane-like "flags," which the natives use for baskets, rose straight up from the banks, and breaking down and bent over by their own weight, swept the sides of our boat with a rushing, rustling sound. The water, so pure and limpid, became filled with water plants swinging along with an undulatory motion in the rapid but quiet current, big and little frogs winked at us from these floating gardens, or plumped into the water with a splash as they caught sight of us, slender water snakes slipped away in the wet grasses, myriads of brilliant dragon-flies dashed through the air, swarms of gay butterflies chased each other in the sun-lit, the day grew hotter and we almost dozed under the grateful shade of the awning. The stream narrowed, the floating plants became more bright in color and denser, so dense our oars could scarcely be used. Masses of the most vivid green were seen spreading over the bottom whenever a vacant bit of water allowed us a glimpse into the depths, and we pushed our way along in the shelter of

#### The Tall Papyrus Plants.

Which now began to tower far above our heads and take the place of the canes and reeds. The papyrus on this little river has a history. It was brought here a thousand years ago, at the time the Saracens had possession of the country, from the banks of the Nile, where I am told there are now no traces of the plant to be found. Its new home has proved a most acceptable one, judging from its luxuriant growth, averaging a height of 20 feet. It is a most beautiful plant, dark green in color, and when in flower with a head not unlike a date palm in shape, but more graceful and feathery, a long, flexible, reed-like stem, thickening suddenly towards the root, where it averages two inches in diameter. Our boatmen cut some of the stalks, and taking about six inches nearest the root, split it into layers nearly as thin as paper, to show us

#### How the Ancients Made Paper of It.

These little narrow strips are placed under a press until dry, then placed side by side, lapping slightly, and gummed together, making a tough, flexible paper of a whitey-brown color, which takes ink readily and is not bad to write on. Our boat was now in the midst of thickets of this lovely plant. The shade was most welcome, but navigation had become almost impossible, so our men put up a tall, stout mast at one end of the boat, attached a rope; one jumped ashore and tugged us along. Sometimes he would run the nose of the boat into the rank growth, take the tugger and rope aboard, then slide around and deposit him on the opposite side to renew the tugging process.

We met a party of English people coming down stream, who looked what they generally are—bored. They gave us the usual cordial English salutation, a grunt, a stare and at last a short nod. Everything was hushed in the heat of the summer afternoon; the whiz of the wings of the water-fowl we scared up, and the rustling sound of our boat sliding over the clinging water weeds alone broke the stillness. As we looked over and peered into the dark cool depths so rich in color, we seemed to be floating in mid-air over the gardens of the Sirens, and would not have been much surprised to have discovered one preparing for her traditional pranks by doing up her back hair in the dark green, shadowy waters.

#### The Stories of the Old Mythology

Came unbidden to our memories, and we talked of the legend which says that the source of this most lovely stream, an "azure spring," was once a nymph, Cyane, who was metamorphosed into this spring for interfering with Pluto when he was performing his celebrated Proserpina abduction act. As we floated and talked we came near the ruins of an old temple of Zeus Olympus, which one might easily pass without notice, if our most obliging guide book had not called attention to it. They looked like hundreds of other piles of ruins one continually finds in this old world, without form or semblance of building. When one first comes abroad it is hard, when moving around these often noble relics of a dead-and-gone religion, to realize that this, which is mythology to us, was once the living faith of a people who feared and loved these to us heathen gods, who burnt sacrifices, built splendid temples for worship, and offered not only there the grateful incense of praise and thanksgiving, but who found in the woods, fields and streams, nymphs, dryads, satyrs and fauns, of like passionate and frailties as themselves. The thought and question came: is there a time in the far-distant future when our faith, our religion and our churches will be dead and in ruins, and another faith, another worship as different from ours as ours is from that of the old Pagans, will take its place? So talking and dreaming and pushing our way over this lovely aquatic garden, we drifted down the stream again to our landing place, and our trip up the Anapo seemed like a lovely tropical dream!

Syracuse, Sicily, 1876.

A FATAL MISTAKE.—A man may drink moderately but steadily all his life, with no apparent harm to himself, but his daughters become nervous wrecks, his sons epileptics, libertines or drunkards, the hereditary tendency to crime having its pathology and unvaried laws, precisely as scrofula, consumption, or any other purely physical disease. These are stale truths

to medical men, but the majority of parents, even those of average intelligence, are either ignorant or wickedly regardless of them. There will be a chance of ridding our jails and almshouses of half their tenants when our people are brought to treat drunkenness as a disease of the stomach and the blood as well as of the soul, to meet it with common sense and a physician, as well as with threats of punishment, and to remove the gin shops and gin sellers for the same reason that they would stagnant ponds or unclean sewers.

### A Lady of the Olden Time.

Now that reports are prevalent of the hollowness of Washington society, it will be pleasing to remember that there were once noble women in high places. Mrs. M. C. Ames, in her book entitled "Ten Years in Washington," gives the following sketch of Mrs. Madison: "President Jefferson evinced his personal appreciation as well as his official recognition of Mrs. Madison, both in his letters and in the fact that he called her to reside at his table during the absence of his own family. But it was as the wife of the fourth President of the United States that she inaugurated the golden reign of the President's house. The beneficence and brilliancy of her reign were never approached before her day and have never been equaled since." We read that she was declared the most popular person in the United States, and wonder what was the secret of her power. Soon the answer is given. "She loved human beings and delighted in their friendship. She never forgot an old friend, and never neglected the opportunity of making a new one." She filled every hour of prosperity with the rare sunshine of her nature, in the hour of trial was not found wanting, and in the face of danger rose to the dignity of heroism. Her gallant stay in the White House while her husband had gone to hold a council of war; her cool commands relative to the protection of the picture of Washington, while in sound of the enemy's cannon and messengers begging her to flee, are proud facts in our history. No eminent man retired from the service of the State ever had more public recognition and more honor bestowed upon him by the government than did this ever-beloved woman. Until her death, on New Year's day, after paying their respects to the President, all the high officers of the government always adjourned to the home of Mrs. Madison, to pay their respects to her. Congress conferred upon her the franking privilege, and unanimously voted her a seat in the Senate chamber—two privileges never before conferred upon any other American woman."

### Grains of Gold.

We may mend our faults as easily as cover them.

The half-learned is sometimes more dangerous than the simpleton.

Lying supplies those who are addicted to it with a plausible apology for every crime, and with a supposed shelter from every punishment. It corrupts the early simplicity of youth; it blasts the fairest blossoms of genius; and will, next assuredly, counteract every effort by which we may hope to improve the talents and mature the virtues of those whom it infects.

As before swift ships there is a hill of water and a corresponding one glides along behind, so always before us is a mountain which we hope to climb, and behind us is still a deep valley out of which we have ascended.

Praise is not valuable unless it comes from one who has also the courage to condemn.

One cheerful face in a household will keep everything bright and warm within. Envy, hatred, malice, selfishness, despondency, and a host of evil passions may lurk around the door, they may even look within, but they can never enter and abide there; the cheerful face will put them to shame and flight.

Laughter very often shows the bright side of man. It brings out his happier nature, and shows of what sort of stuff he is really made. Somehow we feel as if we never thoroughly know a man until we have heard him laugh. We do not feel "at home" with him till then. We do not mean a mere snigger, but a good, hearty, round laugh. The solemn, sober visage, like a Sunday's dress, tells nothing of the real man. He may be very profound, very cross or very jolly. Let us hear him laugh, and we can decipher him at once, and tell how his heart beats.

WATCH THE CHILDREN'S FEET.—The following advice is from the New York Evening Post. Let every mother remember it: Life-long discomfort and sudden death often come to children through the inattention or carelessness of the parents. A child should never be allowed to go to sleep with cold feet; the thing to be last attended to is to see that the feet are dry and warm. Neglect of this has often led to a dangerous attack of erup, diphtheria or a fatal sore throat. Always, on coming from school, on entering the house from a visit or errand in rainy, muddy or thawing weather, the child should remove his shoes, and the mother herself should ascertain whether the stockings are the least damp. If they are, they should be taken off, the feet held before the fire and rubbed with the hands till perfectly dry, and another pair of stockings and another pair of shoes put on. The reserve shoes and stockings should be kept where they are dry, so as to be ready for use on a minute's notice.

### Farmers' Wives.

Some years ago I was talking with Dr. Gray, chief physician in the New York State Lunatic Asylum at Utica, and he told me that as a class more farmers' wives were brought to that institution than people of any other occupation. He said: "The reason why this is so, is that their minds are constantly on one unchangeable routine of work, from daylight in the morning till late at night—no change—no relaxation—no rest."

Farmers should note this fact, and be forewarned before it is too late. It is astonishing what a vast amount of labor farmers' wives perform! Many of them get up and have breakfast ready before their husbands are out of bed. Then it is work, work, work, till near midnight; the mind all the time being on their duties—how they shall supply the meals—how the washing and ironing are to be done—when can the floors be scrubbed—how are the children to be clothed and kept tidy; and many other things, all combined, are enough to break down the strongest woman in the land!

"In no case," said Dr. Gray, "is it safe to be constantly thinking upon one thing or subject;" and in cases where the brain has become weakened by too great a strain on it, as with students and literary men, the remedy is rest and outdoor recreation. Then when men are in trouble, a constant brooding over it is dangerous. The mind should be drawn away from it as much as possible.

Farmers, your duties to your wives are plain. Don't allow them to overwork, to wear out prematurely. It is better to leave a few acres less to your heirs, and less in bonds or mortgages, than to see your wives go down to premature graves with the epitaph, "died of farm drudgery."—T. B. Miner, in Rural New Yorker.

### Wedding Anniversaries.

The following from *Hill's Manual* may not be known to all our readers: Fashion has established the custom, of late years, of celebrating certain anniversaries of the marriage, these being named as follows: The celebration at the expiration of one year is called the cotton wedding; at two years comes the paper; at three, the leather; at the close of five years comes the wooden; and at the seventh anniversary the friends assemble at the woolen, and at ten comes the tin. At 12 years, the silk and fine linen; at 15, the crystal wedding. At 20 the friends gather with their china; and at 25, the married couple that have been true to their vows for a quarter of a century, are rewarded with silver gifts. From this time forward the tokens of esteem become rapidly more valuable. When the 30th anniversary is reached they are presented with pearls; at the 40th come the rubies; and at the 50th occurs the glorious golden wedding. Beyond that time the aged couple are allowed to enjoy their gifts in peace. If, however, by any possibility they reach the 75th anniversary, they are presented with the rarest gifts to be obtained, at the celebration of their diamond wedding.

In issuing invitations for celebrating these anniversaries, it is customary to print them on a material emblematic of the occasion. Thus thin wood, leather, cloth, tinfoil, silk, silver, and gold paper, and other materials are brought into use.

Of course, those who accept such invitations, and partake of the hospitalities of the host and hostess, are expected to contribute to the collection of gifts which will grace the occasion.

WHO IS A GENTLEMAN?—A gentleman is a person not merely acquainted with certain forms and etiquette of life, easy and self-possessed in society, able to speak and act and move in the world without awkwardness, and free from habits which are vulgar and in bad taste. A gentleman is something beyond this—that which lies at the root of every Christian virtue. It is the thoughtful desire of doing in every instance what others should do unto him. He is constantly thinking, not, indeed, how he may give pleasure to others for the mere sense of pleasing, but now he may avoid hurting their feelings. When he is in society, he scrupulously ascertains the position and relations of every one with whom he comes in contact, that he may give to each his due honor, his proper position. He studies how he may avoid touching in conversation on any subject which may call up a disagreeable or offensive association. A gentleman never alludes to, never even appears conscious of, any defect, bodily deformity, inferiority of talent, of rank, or reputation in the person in whose society he is placed—never makes a display of his own power or rank, or advantage—such as is implied in habits, or tricks, or inclinations, which may be offensive to others.

IRON OF ANTIQUITY.—The oldest pieces of iron (wrought iron) now known are probably the sickle blade found by Belzoni under the base of a sphinx at Karnac, near Thebes; the blade found by Col. Vyse embedded in the masonry of the great pyramid; the portion of a cross-cut saw exhumed at Nimrod by Mr. Layard, all of which are now in the British Museum. A wrought bar of Damascus steel was presented by King Porus to Alexander the Great, and the razor steel of China for many centuries has surpassed all European steel in temper and durability of edge. The Hindoos appear to have made wrought iron directly from the ore, without passing it through the furnace, from time immemorial, and elaborately wrought masses of iron are still found in India, which date from the early centuries of the Christian era.



## Brown's Matrimonial Method.

"Brown, I don't see how it is that your girls all marry off as soon as they get old enough, while none of mine can marry."

"Oh! that's simple enough. I marry my girls off on the buckwheat straw principle."

"But what is that principle? I never heard of it before."

"Well, I used to raise a good deal of buckwheat, and it puzzled me to know how to get rid of the straw. Nothing would eat it and it was a great bother to me. At last I thought of a plan. I stacked my buckwheat straw nicely and built a high rail fence around it. My cattle, of course, concluded that it was something good, and at once tore down the fence and began to eat the straw. I dogged them away, and put up the fence a few times; but the more I drove them away the more anxious they became to eat the straw. After this had been repeated a few times, the cattle determined to eat the straw, and eat it they did, every bit of it. As I said, I marry my girls off on the same principle. When a young man that I don't like begins calling on my girls, I encourage him in every way I can. I tell him to come often and stay as late as he pleases, and I take pains to hint to the girls I think they'd better set their caps for him. It works first-rate. He don't make many calls, for the girls treat him as coolly as they can. But when a young fellow that I like comes around, a man that I think would suit me for a son-in-law, I don't let him make many calls before I give him to understand that he isn't wanted around my house. I tell the girls, too, that they shall not have anything to do with him, and give them orders never to speak to him again. The plan always works first-rate. The young folks begin to pity each other, and the next thing I know they are engaged to be married. When I see they are determined to marry, I always give in and pretend to make the best of it. That's the way I manage it."—*Dubuque Telegraph*.

**A BLOODLESS COMBAT.**—Eudocia von Amburg was young, was a beauty, was an orphan, was possessor of great wealth and was a ward of the Emperor Joseph II. of Germany. Of course there were many suitors for her hand; but among them all were only two upon whom the fair Eudocia looked upon with any degree of favor. These two were barons, comparatively young, and had served with her father against the Turks. They were the Baron von Oberndorf and the Baron von Frobach. The Emperor entertaining equal respect for both these suitors, knew not how to decide between them, and the maiden could not give him the benefit of her decision. In this dilemma, Joseph told the two barons that they stood upon equal terms upon his confidence and esteem, he could give neither the preference over the other, and they must decide the matter by their own prowess; and as he did not wish this matter to be the cause of bloodshed, and perhaps of death, as might be the case if offensive weapons were used, he had ordered a large sack to be provided, and he who should be successful enough to put his rival into it should have his fair ward for a wife. The suitors agreed to the proposition, and this strange and ludicrous combat between the two noblemen took place in the presence of the Imperial court. It lasted almost an hour. At length Frobach, utterly exhausted, was forced to yield, and the triumphant Oberndorf, having forced him into the sack, took him upon his back and laid him at the feet of the Emperor; and within a week the fair Eudocia became Baroness von Oberndorf.

**BURIED FORESTS.**—The discovery of a subterranean forest just below the surface of the Thames river, is attracting a good deal of attention in England. The oak, the alder and the willow are the principal trees found. These retain their vegetable character, but other signs show that the forest belongs to the period of the elk and the red deer in the south of England. There is such a subterranean forest in the New Jersey flats; it consists chiefly of cedar trees, which have become very hard, and in some instances have paid the cost of extraction. The time of their burial has not yet been determined, but the cause is undoubtedly due to the slow subsidence of the State of New Jersey, which, it is authoritatively stated, sinks now at the rate of about 16 inches in a century. If this sinking has been uniform, 3,000 years would have caused a sinking of 40 feet, and thus the forest may, 3,000 years ago, have been 30 feet above tide water, while now it is 10 feet below, and buried under the deposits carried on top of it by every flood.

**MAKING FABRICS UNINFLAMMABLE.**—The credit belongs to Mr. Dion Boucicault, in Wall-lack's theater, for practically demonstrating to deputies of the Fire Department, fire insurance companies and others that canvas scenery prepared with tungstate of soda and silicate of soda was totally uninflammable, that a gas flame made scarcely any impression when it came in contact with it, and when submitted for a long time to a very large gas jet, all that happened was disintegration of the parts subjected to the gas flame, they falling in the form of ashes on the ground; but in no case was any flame communicated, nor could the fire possibly spread, from want of any inflammable material, canvas, ropes and wood-work being all made absolutely uninflammable.

ENVY is a littleness of soul which cannot see beyond a certain point; and if it does not occupy the whole space, feels itself excluded.

## Young Folks' Column.

## Hattie's Prop.

Hattie Brown was reading in a paper one morning, about Mr. Gough stepping out of his lecture-room one night to invite a poor drunkard to come in and sign the pledge. It was stated that after he had accomplished his object he turned to the people and said, "Some people think when they have persuaded a drunkard to sign the pledge they have done. It is a mistake; it's then he wants help. He is then at the bottom of the hill, lower than the common level. He must climb. It's hard work. He commences tremulously, feeble, doubting. He raises his feet, and gets a little way, and becomes faint. You see he is about to give up. Run and put a little peg right under his feet. There! you see he rests. He's tired, but starts again, fearing as he goes higher. He gazes around him, and looks worried. He has worked hard, and he stops. Put another peg right under his feet. He rests. Help him up now; peg him right up; and, when he gets up, he'll look and see those little pegs along, and he will not forget them, but will bless and remember you."

By the time Hattie had finished reading this long paragraph, her face was all aglow from some bright idea that seemed suddenly to have come into her mind. Like some other enthusiastic young people, she had a habit of talking aloud to herself.

"Well, now," said she, letting her eye run over the whole piece again, "I wonder if I couldn't help peg somebody up, somebody that's trying to do good. 'Twould be about as good as helping them into the right way in the first place."

She was waiting for her little sister to be ready to go with her to school. Ready at last, the children started, Hattie taking along her nice idea with her. They had not gone far before they overtook two school-boys, one of whom Hattie knew was in the habit of playing truant. Before they had quite reached them, she heard the bad boy say, "Come, the nuts are real thick, we will have glorious fun!"

The other boy had started along very determinedly toward the schoolhouse. But the tempter evidently was drawing hard; and the boy had already begun to slacken his pace.

"There, I'll just put a prop under him," said Hattie, with a most benevolent look in her clear blue eyes. Hastening along, she passed the truant, who was just jumping over a fence into a field that lay between the road and the woods; and catching up with the tempted boy, who had now turned around, and was walking backward with an undecided, half-ashamed look upon his face, she stepped up to him, and laying her hand persuasively on his arm, she whispered earnestly, "Oh, don't, don't, Charlie! come with us to school."

The boy looked at her a moment in some surprise; then, turning quickly, halloed back to the tempter, "No; I won't!"

The other boy, suspecting the influence, set up a great shout of derision, and sent back some very unhandsome words, among which were "meddlesome," and "better mind your own business," and "girl-boy," etc., until Hattie's little sister almost cried with fear. But the brave girl, though trembling somewhat (for she was not used to harsh words), walked along holding tightly upon her little sister's hand, with a glad feeling in her heart; while some verses she had repeated in the Sabbath school about loving your enemies, and praying for those who spitefully use you and persecute you, kept running through her mind.

That afternoon a heavy thunder-storm arose, and that night a sad story rang through the neighborhood about a boy who had been struck by lightning while in the woods; and Hattie Brown, when she learned it was the truant, felt very thankful that she, perhaps, had been the means of saving Charlie Steele from the same dreadful fate.—*H. N. M.*

## What a Dog Tried to Do.

One of our correspondents at Monticello, J. T. I., sends the *RURAL PRESS* the following good story: Mr. J. W. Smith recently sold his flock of sheep to Mr. Jared Walters, of Pope valley, and sent a boy with his shepherd dog "Rover" to help him drive them home. It was a distance of 12 miles, through a very rough, mountainous country. On the following day the boy returned, bringing Rover with him. For several days after this Rover appeared uneasy and restless, and finally disappeared. Search was made throughout the valley for several days, and Rover was given up for lost, when word was received by Mr. S. that his dog was at Mr. Walters's place, in Pope valley. He went immediately to Mr. Walters, and was surprised to learn that Rover had made two attempts to drive the entire flock home. At one time he succeeded in driving them half way back before being overtaken. Now, if any one has a more enterprising dog than Mr. Smith's Rover, we would like to hear from him.

In China there grows a fern which bears a curious likeness to a lamb. This likeness causes English-speaking people who have seen it to call it the Tartarian or Scythian lamb fern. It is covered with a dense, soft, vegetable wool, of a yellow color.

## Good Health.

## Do Not Face the Light When at Work

Statistics kept by oculists employed in infirmaries for eye diseases, says the *Builder*, have shown that the habit of some persons in facing a window from which the light falls directly in the eyes as well as on the work, injures their eyes in the end. The best way is to work with a side light, or, if the work needs a strong illumination, so that it is necessary to have the working table before the window, the lower portion of the latter should be covered with a screen, so as to have a top light alone, which does not shine in the eyes when the head is slightly bent over and downward toward the work.

In the schools in Germany this matter has already been attended to, and the rule adopted to have all the seats and tables so arranged that the pupils never face the windows, but only have side lights from the left; and as a light simultaneously thrown from two sides gives an interference of shadows, it has been strictly forbidden to build school-rooms with windows on both sides, such illumination having also been proved to be injurious to the eyes of the pupils.

We may add to this the advice not to place the lamp in front of you when at work in the evening, but a little to one side; and never to neglect the use of a shade, so as to prevent the strong light shining in the eyes. This is especially to be considered at the present time, when kerosene lamps, with their luminous flames, have become so common.

**CARBOLIC ACID IN DIPHTHERIA.**—W. H. Kempster, one of the health officers of London, writes to the *Lancet* as follows: "On reading Dr. George Johnson's admirable paper on diphtheria in your late issues, in which he advocates local disinfectants in the treatment of that disease, I was surprised to observe that while he recommends the use of chlorine, permanganate of potash, sulphurous acid, and more especially perchloride of iron, no mention is made of carbohc acid—an agent tried by me some years ago in despair at the almost invariably fatal termination of cases treated by the agents recommended by Dr. Johnson. Since that time, by using carbohc acid, given in the form of a mixture of *Acid. Carbohc. Opt.* (Calvert's), one to five minims (according to age), with a drachm or two of syrup of orange and water (thus getting rid of gargles and the painful operation of swabbing the throat, the act of deglutition bringing the medicament into contact with the fauces and other parts affected), I have lost but one patient out of some 30 or 40, in which case the air passages were affected from the first. It is well to state that in all these cases the characteristic exudation was visible, and they were not cases of ordinary croup." Mr. Kempster writes at a later date, that numerous cases since treated on the above plan have all recovered; in very severe cases he obtains good results by local application of No. 1 carbohc and glycerine (1 to 4) with a camel-hair brush.

**HOT WATER FOR INJURIES AND BRUISES.**—The *New York Medical Journal* reports this case: The patient was engaged in a machine shop, and while his hand was upon the anvil of a trip-hammer, the hammer—weighing 700 lbs.—fell. It so happened that a file was on the anvil, and in this way the force of the hammer was arrested about half an inch before it reached the bed. When the hand was examined it was found that the whole palm was a mass of pulp. The metacarpal bones were comminuted extensively, and there was, apparently, but small chance of saving the hand. It was, however, placed in hot water, and kept there for two or three weeks, and then taken out and dressed. In three months the patient was sufficiently well to leave the hospital, and now—nine months after the accident—he is able to move the fingers and has quite a useful hand. Bruises and injuries do much better when treated with hot than with cold water. The temperature should be about 103° Fahrenheit. Another case is reported of compound fracture and discoloration of the ankle joint, in which the proximal end of the first metatarsal bone protruded from the foot. The dislocation was reduced and the foot placed in hot water. At the end of a week it was taken out and dressed in the ordinary manner. The foot is now doing well.

**HYGIENIC INFLUENCE OF COMPRESSED AIR.**—It has been supposed by some that the effects of compressed air on workmen were injurious, but Siebe, an eminent German hydraulic engineer, has established, by a series of experiments during several years, the fact that workmen working in caissons, attain, in a short time, a remarkable degree of comfort; and that their chests become strengthened to a remarkable degree. He has also ascertained that pulmonary complaints become cured by thus working under water. In consequence of this, Dr. Carlo Farlanni, of Milan, has established an arotherapeutic establishment, for the treatment of pulmonary complaints.—*Revue Industrielle*.

**SIMPLE REMEDY TO STOP BLEEDING.**—Mr. F. E. Forster cut himself, and trying to stop bleeding, he did not succeed, notwithstanding he tried to do it in several ways; finally the idea struck him to put on some dry plaster of paris, which happened to be at hand. It stopped the bleeding at once, while it only caused some stinging sensation, lasting a minute or two, but no ill effects were experienced.

## Domestic Economy.

## A Sermon to Girls on Cooking.

Cooking-classes have been popular among fashionable young ladies of late years. But there is no cooking-class which quite equals in its opportunity for excellent information that which you may find at home. Presuming that I am talking to a girl who has just left school, I advise you to make use of your leisure in taking lessons from your mother. There is an absolute splendid feeling of independence in knowing how to make perfectly light, sweet, substantial bread. Then try your hand at biscuits, muffins, corn bread, toast and all the different forms into which breadstuffs may be blended. Toast seems a simple thing enough, but it is frequently so ill-made that it does not deserve the name. Gruel, a necessity of the sick room, is often a hopeless mystery to women, who have the vaguest idea of how it is evolved from the raw material. After you have mastered the bread question, try meats and vegetables. Any bright girl who can comprehend an equation, or formulate a syllogism, can overcome the difficulties which beset her when learning to cook. Lucent syrups, golden cake, delicately browned bread, quivering jellies, melting creams, and the whole set of material things glorified, because made for love's sake and for the good of one's dear ones, are fit expressions for any woman. The charm of this accomplishment lies in the fact that it imparts to its owner a gratifying sense of power, it bestows on her, too, the power of blessing and resting those she loves best. Wherever the cook goes she takes her welcome along. One may tire of the sweetest singing, of the loveliest poetry, of the finest painting, and of the most witty conversation, but of good cooking, never. Yet I will be sorry to have you contented to be only a cook, only a domestic machine. That is not my meaning or intention. Be artist, poet, inventor, and well-bred woman; be the most and best that you can, and add, as a matter of course, ability to keep house well and to do all that good housekeeping includes.—*S. S. Times*.

## Dishes.

Mr. Clarence Cook, in *Scribner*, after giving his reasons for not liking white china, says: "I don't know why we should insist on having all the pieces of porcelain or earthenware on our table—at breakfast, dinner, or supper—alike. Why have everything in sets? We already allow ourselves some freedom at dessert and at tea; why not, ladies, make a heroic strike for freedom the table round? There never were sets known until modern manufacturers began to take a trade view of life in all its phases. Of course there must be harmony, but harmony does not mean uniformity. And if the general color of our service is blue, or red, or yellow, a bit of either of the other colors may come in with the one, and no harm done. Now and then at sales, on the breaking up of old households, pieces of old Worcester, or Wedgwood, or Spode, or Devonshire, may be met with, and if they are in good condition—neither nicked, nor chipped, nor cracked—they should be bought, always provided they are pretty, and they will make a good foundation to work upon. It does not do, however, in china, any more than in pictures, to go by names. Go by what is pretty, or rich, or effective, and if on turning up your teacup or its saucer you should find a famous potter's name written on it, thank the gods that they made you poetical, and gave you a pair of eyes of your own for what is pretty."

**CELERY SOUP.**—Six roots of celery, one large turnip, two ounces of onions, four ounces of bread crumbs, one ounce of butter, one dessert-spoonful of flour, and half a pint of cream. Strip off all the green part of the celery, using only the white; cut it in shreds, reserving the inside of three of the roots to be added afterward; slice the turnip and onion, and put them with the celery into a pan; add two quarts of water, the bread crumbs, and a little salt; let all boil till the vegetables are perfectly soft; rub through a sieve; return it to the pan; add the celery (previously boiled till quite soft), the butter, and flour, well mixed; stir it, seasoning it with a little mace; and, after boiling a quarter of an hour, stir in the cream, and do not allow it to boil afterward.

**CHEESE AND BREAD TOAST.**—Grate half a cup of good cheese—use your crumbs and dry pieces—mix with it one cup of grated bread and the yolk of one egg, half a spoonful of butter, and three spoonfuls of rich cream. Add a salt spoonful of salt, and a sprinkle of cayenne and mustard if desired. Toast two or three slices of bread, spread the cheese mixture on quite thick, put into the oven a minute or two, and send to the table hot. Or lay on a top slice, and make a sandwich. Take a sharp knife and cut into four pieces.

**CORN CAKE, WITH FRUIT.**—Pour one quart boiling water on one quart corn meal, and stir quickly. Wet the hands, and form the dough into small round cakes one-half an inch thick. Bake in a hot oven. The addition of a few raspberries, huckleberries, or any other sub-acid fruit, is a decided improvement. Sweet apples, chopped fine, are also excellent.





A. T. DEWEY. W. B. EWER. O. H. STRONO. J. L. BOONE.  
Principal Editor.....W. B. EWER, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00  
Four weeks are rated a month.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, January 27, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Iehneumon Flies; California Flowers; Movement in Wool; Manihot Carthagensis, 49. The Week; The Movement for Direct Trade; Our New Year, 58. Johnson's Improved Feed-Box; The Grape and the Phylloxera, 57.  
**ILLUSTRATIONS.**—California Wild Flowers, 49. Johnson's Improved Feed-Box; The Fork Graft, 57.  
**CORRESPONDENCE.**—Do Not Buy a Farm That Has Been Skinned; Agricultural Notes from Montana; Modoc and Lassen Counties, 50.  
**THE STOCK YARD.**—Mad Itch in Tulare County, 50-51.  
**SHEEP AND WOOL.**—Wool Product of the World, 51.  
**PATRONS OF HUSBANDRY.**—The Worthy Lecturer at Stockton; From the Granges; Election of Officers; In Memoriam, 53.  
**AGRICULTURE.**—NOTES from various counties in California and Oregon, 53.  
**AGRICULTURE.**—When to Plant Blue Gum Trees, 51.  
**THE VINEYARD.**—Sulphur and Mildew; The Brighton Grape, 51.  
**HORTICULTURE.**—Bones and How to Use Them; 51-58.  
**HOME CIRCLE.**—A Very Old Song (Poetry); Scenes in Sicily; A Fatal Mistake; A Lady of the Olden Time; Grains of Gold; Watch the Children's Feet; Farmers' Wives; Wedding Anniversaries; Who is a Gentleman? Iron of Antiquity; Brown's Matrimonial Method; A Bloodless Combat; Buried Forests; Making Fabrics Un-inflammable, 54-55.  
**YOUNG FOLKS' COLUMN.**—Hattie's Prop; What a Dog Tried to Do, 55.  
**GOOD HEALTH.**—Do Not Face the Light When at Work; Carbolic Acid in Diphtheria; Hot Water for Injuries and Bruises; Hygienic Influence of Compressed Air; Simple Remedy to Stop Bleeding, 55.  
**DOMESTIC ECONOMY.**—A Sermon to Girls on Cooking; Dishes; Celery Soup; Cheese and Bread Toast; Corn Cakes with Fruit, 55.  
**QUERIES AND REPLIES.**—Apple Tree Cuts and Bark; Jerusalem Artichoke; Bleaching Wax; Flax Growing, 56.  
**GENERAL NEWS ITEMS** on page 60 and other pages.  
**MISCELLANEOUS.**—Liquid which will Stand Heat and Cold, 58.

## NEW ADVERTISEMENTS.

Gang Plows, Etc., Marcus C. Hawley & Co., S. F.; Delinquent Notice—Grangers' Business Association, S. F.; Ranch for Sale, "W." Middletown, Lake Co., Cal.; Poultry, J. M. Kerlinger, Ellis, San Joaquin Co., Cal.; Webster's Dictionary, G. & C. Merriam, Springfield, Mass.; Extras for Kirby Machines, D. M. Osborne & Co., S. F.

## The Week.

The rains and the glorious results therefrom are the burden of all our advices from the interior. It has given us genuine pleasure to note how complete has been the change of tune sung by our correspondence and exchanges; to mark how the dirge of distrust has given place to the anthem of thanksgiving. Although the rains have not been heavy they have been of the best possible character. Gently has the moisture fallen and deep has it penetrated. Hardly a drop has been lost. Quick growth will turn the water into permanent profit. The rich natural grasses almost sprang to meet the benediction of the clouds, and fields which had seemed sear and dead are showing fresh green from the seed's fresh rooting. Another week will give data to more fully measure the effect of the visitation.

We have prepared from all available sources the following table, showing the amounts of the rain-fall at the following places, up to January 19th. We regret that we have not reports from all counties:

TOWN AND COUNTY.	STORM.	SEASON.
Poway, San Diego.....	2.00	....
Poway, San Diego.....	.75	....
Visalia, Tulare.....	1.00	1.10
Stockton, San Joaquin.....	1.83	4.32
Hollister, San Benito.....	1.50	....
Martinez, Contra Costa.....	1.50	....
Auburn, Placer.....	3.46	8.63
Colusa, Colusa.....	1.14	6.86
San Luis Obispo, San Luis Obispo.....	3.04	....
Salinas, Monterey.....	1.55	....
Woodland, Yolo.....	1.08	....
Sacramento, Sacramento.....	.59	3.03
Oakland, Alameda.....	1.82	6.32
Petaluma, Sonoma.....	1.43	7.33
Santa Rosa, Sonoma.....	1.40	7.90
Gilroy, Santa Clara.....	1.54	2.90
San Jose, Santa Clara.....	1.81	4.74
Vallejo, Solano.....	2.12	8.87
St. Helena, Napa.....	3.21	....
Napa, Napa.....	1.52	....
San Buenaventura, Ventura.....	1.63	....
Santa Barbara, Santa Barbara.....	2.09	8.70
Ukiah, Mendocino.....	1.52	4.73
San Francisco, San Francisco.....	....	....

## A Movement for Direct Trade.

The disadvantages which accrue to both producer and consumer from unnecessary transportation of produce and frequent handling by those who add commissions to the article at every manipulation, are matters of frequent comment. In this State more than in most other commonwealths is this evil prominent. Not only do our farmers pay freight and commissions on many articles of food which they should produce at home, but they also pay freight and commissions on many articles which should pass directly from their hands to those of the consumer without this costly friction of trade and transport. Many productions of garden and orchard come to this city and are then returned to the interior markets, which should never pass outside the counties in which they are grown. For want of a suitable marketing system in many of the interior towns, it is notably the fact that, in many cases, produce can be bought cheaper in this city than within a few miles of the productive fields. This is not right. The country cannot afford to build up the city in this way. To a certain amount and for certain articles our metropolis must be the distributing center, but not to the extent to which it now is. The need of the State is for more flourishing and self-supporting towns, so that more of our people can enjoy the advantages of nearness to markets and town privileges.

A notable illustration of this fact is now prominent in a movement which is being agitated in Oakland to bring the consumers of fruit and vegetables and other produce into direct trade with the producers whose fields are in adjoining townships. The idea that Alameda county fruits and vegetables should be carried across the bay, laden with commissions, and then returned to take on more commissions before they find their way into Oakland kitchens, is one of the most absurd illustrations of folly in trade. We have urged before that this system should be done away, and we are glad to note that the matter is forcibly presented to the attention of the Oakland common council by Senator Gibbons, of Alameda. In a conversation with a reporter of the *Oakland Transcript*, this gentleman makes the following good points:

"I have," said the Senator, "given much attention to this subject, and I am convinced that it is to the interest of the city to have a free market. The spirit of our ordinances is not to unite the city and country by making their interests identical, but rather to antagonize the country. I don't think the country is too large, and if any cause for complaint exists, one explanation of it is to be found in the fact that we do not encourage the farmers to dispose of their produce here. At present all the vegetables raised in Alameda are sold in San Francisco. From that city a large portion of them are repacked across the bay and sold by retail in the very section in which they were raised. Thus by a short-sighted ordinance we are compelled to pay for the transportation of our produce to a distant city, and for the transportation back again. Then there is the retail profit. Now we will suppose that the free local market is established, and there are two market days. On those days the farmers would crowd into the city either to sell their produce or meet each other. The market would be a rendezvous. A farmer wishing to go to San Francisco would load up his wagon and drive into market, and leaving his son or his wife in charge of it, would go to the other side of the bay to transact his business, and come back to find that in his absence not only had the expenses of his trip been defrayed, but a handsome profit left.

"The wagons should be backed up close to the curb and wide enough apart to allow pedestrians to cross the street at any point. The horses should be removed from the wagons. I have also provided that each stand shall be supplied with a conspicuous sign bearing the name of the owner of the stand and facing the sidewalk. This will answer two purposes. It will enable the market inspector, as he passes along, to tell at a glance who are not complying with the rules, and it will also enable customers to find particular stands. The right of priority will be acknowledged, but when the owner of a stand is absent on three consecutive market days, such right is forfeited. Furthermore, if the stand is not taken at a certain hour in the morning the right is forfeited for that day. The ordinance is still, however, in the rough, and may require several modifications in the different sections."

The plan which is thus hastily marked out by the Senator is one which we have seen working successfully in the Eastern States and in Canada, and the result is a direct and thriving trade between producers and consumers, which gives to the former the full value of his produce, and to the latter it brings the fruits and vegetables with the fresh dew of the garden upon them instead of the dust of the car and the smoke of the ferry-boat.

Not only in Oakland, but in several of the interior cities of the State, would a project of this kind be a decided benefit, and we hope our readers will agitate the subject until the end is attained.

## Our New Year.

Our new type is now working finely and the improved face of our paper is a matter of much satisfaction to us. From the many cheering notes which we receive from our readers it is plain that the satisfaction is mutual between us and them. For this fact we are truly thankful, for if there is anything which gives the true editor incentive to work it is the assurance that his efforts are productive of something which his patrons think a value to them. We do not lack for evidence that such honorable distinction is awarded to the *RURAL PRESS*, and we cannot refrain from noting a few of the many commendations which we receive, in order that all may see how definite and direct our encouragement is:

C. M. K. writes: "Your paper is admirable. Each issue seems better to me than the one before. Please put me down for another copy which you may send to my father at the East, that he may see what an active farmer's paper we have out here."

S. S. H. gives us this: "I can throw down my glasses now when I take up the *Press*, the type is so clear. Mrs. H. reads it through each week from end to end, and frequently makes me listen to something which she considers particularly good."

A lady reader writes: "Your holiday articles were especially pleasant to me—there was so much heart and home in them."

M. F. T. says: "I have taken the *RURAL* for four years and could not afford to be without it."

T. S. writes: "I see my paper is credited but nine months ahead; I hope you will rectify the mistake and continue it for the full year, for I cannot do without the *RURAL PRESS* at any price."

J. M. writes: "I will try and do more for the *RURAL*, my favorite, this year than ever. I have also many items and thoughts which I must write out in the course of the year."

N. B., of Glasgow, Scotland, writes: "I have derived great pleasure and much useful information from the perusal of your paper. The high moral tone of the articles, the many subjects presented, the exclusion of objectionable advertisements and the persistent way in which you attack the prevailing vices, should commend your paper as a family paper, and should secure you as a subscriber every California farmer who desires the prosperity of himself and of his State."

Such earnest words of encouragement and appreciation as these we have quoted are the editor's jewels, and we have a casket full of them. Our readers are helping us splendidly in the promotion of our enterprise, and further improvement and progress are our aims. The season is favorable for the still further spreading of our journal, and we hope every reader will put in a good word for us, to the end that our circle of readers may be still greatly increased. Give us a good push this year, friends, and it will not be our fault if California does not have the best agricultural newspaper in all the world. Nothing short of this is our ambition.

**PERSONAL.**—We heard, some time ago, that our friend, A. Mailliard, Esq., was one of the few who emerged alive from the terrible disaster at Ashtabula, and his many friends among the agriculturists of the State will rejoice with him over his almost miraculous preservation. The *Marin County Journal* makes the following note on Mr. Mailliard's return: Mr. Mailliard reached home on Monday last. He was much bent and temporarily crippled, from the injuries received at the frightful railroad catastrophe at Ashtabula, Ohio. His injuries have been very painful on the homeward trip, but, happily, they are only bruises from which time will completely restore him. The gentlemen with whom he was at cards at the moment of the accident, have since testified that he was killed, supposing that that was the case. Mr. Mailliard's berth was in the front car, but by an error he was changed to the last, and to this he doubtless owes his life. While Mr. Mailliard was standing in the snow, near the horrible scene, he picked up a scarf, and was shocked to find in it a human foot, which had been torn from the person of some poor sufferer. He says that no blame can attach to the railroad company, and that the number of the lost has been greatly overstated.

**SALT FOR RUST.**—We learn that the New York farmers are gaining good results from the application of salt for rust in grain. The proceedings of a farmers' club meeting contains the following: "Mr. Lewis suggested salt or refuse salt as the best remedy for rust in oats. It may be sown at any time after the sowing of the seed. He had also found in the case of vegetables—especially beets—that salt prevents rust, and recruits the strength of the plant. Refuse salt costs but from \$2 to \$3 per ton at Syracuse, and it is better for this purpose than common salt. Mr. Bachelor announced that in Russia and Scotland salt is considered a specific against rust. Six bushels is the amount sown to the acre abroad. Morgan Butler said: Several years ago I applied a barrel of salt to a wheat field after drilling; in the same field a commercial fertilizer and farm-yard manure were also applied in different areas. The salt entirely prevented rust; but the largest yield came from the farm-yard manure. Mr. Miner said: I am satisfied that salt produces a brighter straw and prevents rust."

## QUERIES AND REPLIES.

### Apple Tree Bark Cuts and Knots.

**EDITORS PRESS:**—Those small cuts on apple trees on the smooth bark of body or limb at the East have been a puzzle to me. Limbs will enlarge considerably where encircled by these cuts. They are sometimes the shape of a curculio cut on the plum and form a circle about one-fourth of an inch wide; and after a year's growth the surface of the bark is roughened in shape, resembling the eye of a potato, and on whitening exposes colored spots and a greenish hue. The spots have the appearance of the work of some insect in the bark. This sample may not be what Mr. Greenfield and others have referred to. Woodpeckers in New England make small round holes in the bark of apple trees. What their object is I cannot tell. I have known them to deposit small seeds and nuts in the bark of some trees, which they feed upon in the winter months. I have taken the liberty to enclose two samples, which are quite common here on our apple trees of three and four years' growth. One is a sample of cuts referred to of near one year's standing. The other sample is composed of knots or bunches on the bark the size of beans. In both cases they run around the limb or body in regular circles. Some scientist may be able to unravel the mystery.

I found a misletoe on the limb of a pear tree, and one black knot on a plum tree. I did not know before that the pear was subject to this fungus growth, or that the excrescence called black knot troubled the trees in California. What is it? Who can tell us what is the cause of blight in the pear, peach and other fruit trees?—SOLOMON W. JEWETT, Kern county.

We have examined the specimens sent by Mr. Jewett with a microscope, and find no mark of insect work or the presence of insects. The cuts are the bark breaks which we have often seen; we do not think they are the cuts which Mr. Greenfield described. The bean-sized knots we examined in cross and longitudinal sections. They are pure depositions of woody fiber, in which the layers are beautifully concentric. There appears, however, no trace of insect work, and we are of the opinion that they are simply abnormal growths of some kind. They are very hard and close grained, even finer grained than the usual apple wood.

We were not aware that the black knot had appeared in this State. We should be pleased to hear from any reader who has observed it, and at another time we will give the results of the latest scientific investigations into its character. We should like to know what is the cause of all the blights, and so would a great many others.

### Flax Growing.

**EDITORS PRESS:**—I have read quite a number of articles in your faithful paper on flax culture. Now, I claim to know a little about flax culture myself. I raised flax in the Badger State six or seven years, and found comfort in it when I sold my seed for \$2.50 per bushel. The chinch bugs were in fashion at that time, and tapped my neighbors' wheat far and near, but of the tough old flax they never touched a spear. I have wanted to try flax in California, but have never been able to get the seed handy, but have said every year, I will sow some next year. The farmers never sowed much in Grant county, Wis., until the oil men of the East encouraged them by shipping good seed to them, and selling it to them on time, or lending it to them, and taking in the fall five pecks for each bushel lent. They also lent the farmers seamless sacks to hold the entire flax crop, which saved the farmers an extra expense of building tight bins. Now, will the oil men of your city furnish good, clean seed on such terms, or if not, what is their price for clean seed? I should like to try five or ten acres this year. The Vibrator thresher is the only machine fit to thresh flax, as there are no beaters for the lint to wind around. It is also very close and does not leak like other machines. I have also thrashed it out with horses. It threshes easy when dry, but very tough when damp. It will grow on very poor land, and I have never seen land too rich for it. It was a surer crop in Wisconsin than wheat, and paid better and was less trouble. Fifteen bushels was a fair yield per acre, but I believe it will do better in this State. Let the oil men speak through the *Press*.—BADGER, Berlin Station, Colusa county, Cal.

We are pleased to hear this good word for flax. We can assure our correspondent that even better results than he reports from Wisconsin have been given by California growers. As to obtaining the seed, there is no party of whom we know who would furnish the seed upon the terms the Eastern oil men gave. On inquiry at the Pacific Oil and Lead Works, we learn that they will furnish the best seed at \$3.50 per cental cash, and then they will contract with the grower to take all his clean seed at \$3.25 per cental.

### Price of Chinese Labor.

**EDITORS PRESS:**—The farmers in this vicinity feel the necessity very much of a reduction in the wages of Chinese labor. Heretofore they have been paying from \$1.00 to \$1.25 per day for common Chinese labor here, but, under the existing low prices of produce, think the wages too high. They have resolved in the future to give a preference to white labor, but when it is a necessity to employ Chinese labor to reduce the wages. Please inform your readers the wages that are paid in other agricultural districts of the State.—ISLETON, Sacramento county, Cal.

We cannot tell, except in a general way, the price paid for Chinamen farm hands, but believe the average is about the same as our correspondent notes. We are told by the leading Chinese agency in this city that they send out men in gangs on long jobs for \$25 per month, and choose skilled hands as high as \$35. We remember that the grape growers in Napa county passed a resolution last summer that they could not pay more than 75 cents per day for China pickers, and sent a committee to this city to get the men. Whether they succeeded in making the point we did not hear. If any of our readers have facts different from those stated, we should be pleased to receive them.

### Bleaching Wax.

**EDITORS PRESS:**—Seeing no answer to correspondent inquiring, in late number of the *RURAL*, the manner of bleaching wax, I give you an extract from "Quincy's Bee Keeping Explained." "Wax may be bleached in the sun in a short time in cool weather, but it must be in thin flakes. It is readily obtained in this shape by dipping a thin board or shingle, thoroughly wet, into pure melted wax; enough will adhere to make it the desired thickness and will cool instantly on being withdrawn. Draw a knife along the edges and it will readily cleave off. Expose to the sun in a window, it will become perfectly white." J. D. ENAE.



## Johnson's Feed-Box for Horses.

We have upon this page an illustration of an agricultural invention which will be interesting to examine. It is an arrangement devised by Mr. J. O. Johnson, of Salinas City, and patented through Dewey & Co.'s agency. The object of the inventor is to produce a feed-box which shall prevent the animal from wasting the feed by throwing it out while eating. The way he contrives to accomplish this desirable result may be seen by the engraving, which may be described as follows. *A* is the feed-box, which is made to be set upon one side of the manger. This box has one side, *B*, made flaring or at an angle, and this angular side will be formed upon the left side when the box is fitted to the right side of the manger, and upon the right side when the box is fitted to the left end of the manger.

A wingpiece, *C*, is hinged to the edge of the inclined side, *B*, and projects out as shown in the engraving. A low, inclined front, *D*, is hinged so as to project outward, and a catch, *E*, is secured to it so as to interlock with a latch upon the wing, *C*, the button, *F*, securing them. The box shown in the cut is intended to be placed at the right side of the manger, just outside of the feed-box.

The operation of the contrivance will be as follows: The feed being placed in the box the animal will step back sufficiently to allow him to come inside the wing, *C*, and the flare of this will allow sufficient room for his shoulders. It will be seen that it is impossible for the animal to throw out his feed, the box being three feet high, while the side of the stall on one hand and the wing, *C*, on the other will prevent it being thrown out sideways. When he has finished eating grain he can step back and go to the hay on the other side.

The inventor claims that by the use of this box animals are prevented from wasting grain, and when taught, are not liable to waste when eating from the ordinary box. Air holes are bored in the side of the box, as shown in the engraving, so that the animal will breathe easily and have no occasion to move away until he has finished eating. A saving is also claimed because fowls cannot fly down and get at the grain while the animal is eating. Any further information concerning the feed box can be obtained by addressing the inventor as above.

**SUSPENSION.**—The *Call* makes the following note on a current event: There is general regret in the business community at the embarrassments which have overtaken the firm of Linforth, Kellogg & Co., importers and dealers in agricultural implements and hardware, numbers 3 and 5 Front street; but the sympathy expressed is coupled with the cheering conviction that the firm is sufficiently strong to weather its difficulties, these being regarded as only temporary, and by no means insurmountable, if a moderate amount of patience be exhibited by the creditors. Like other houses, the firm has had to contend with the protracted accident of dull times, accompanied by fluctuations and shrinkage in values, both in money and in stock; and in addition, it had to bear up against a loss of \$40,000, recently embezzled by one of its employees. It likewise has suffered in a very unexpected manner from the non-receipt of certain payments confidently relied upon. Linforth, Kellogg & Co. are among the old firms of San Francisco, and their career is so honorable that the creditors are disposed to be lenient in pressing their demands. The liabilities are estimated at about \$250,000 and the assets at over \$300,000. Attachments for \$50,000, issued by the Bank of California, were the immediate cause of the suspension.

**AGRICULTURAL RESOURCES OF CALIFORNIA.** The fact stands out in bold relief that during the year 1876 the agricultural products of the State aggregate above three-fold the production of the precious metals. And further, the value of California's agricultural product during the past year nearly equals the total bullion product of all our States and Territories during the same period. Again, in comparing the relative importance of the mining and agricultural industries of the State, it must be borne in mind that the soil is reproductive; its productive capacity may be increased by proper culture, and its reproduction is continuous, while the precious metals once extracted from their resting place are gone never to return. Thus, when the mines shall be exhausted, agriculture will remain with all its wealth of capability. Great as is the present product of the soil, its future powers are scarcely foreseen. The State possesses an area of 40,000,000 acres of tillable land, with not more than one-tenth in actual cultivation. Its agricultural lands exceed in area that of Great Britain and Ireland, which contain an average population of about 300 to the square mile, while California contains but about four persons to the square mile.

**THE CASTOR BEAN IN NEW YORK.**—The *London Garden* contains the following from a correspondent in New York State: Measurement of a castor oil plant, grown at Wodenthe, Fishkill on Hudson, between May 1st and Oct. 30th, 1876: Stems and leaves, 20 feet in height; side branches 10 feet in length; circumference of stem at ground, 11½ inches; circumference of stem fourteen feet from ground, 6½ inches. We should like to hear if any of our readers can outdo this statement.

## The Grape and the Phylloxera.

[Written for the RURAL PRESS by FELIX GILLET.]

**EDITORS PRESS:**—I propose in this letter to entertain your readers on the very important subject of grafting the grape and finding a remedy or check to the ravages of the phylloxera.

We have all read about the numerous experiments made in France during late years toward destroying the dreaded little louse, and the so-called success of sulpho-carbonates in obtaining the desired effect, that is, the complete extirpation from the roots of the vines of this unwelcome visitor. M. Dumas, the savant who first discovered the terrible effects of those salts on the phylloxera, was given, if I am right, a handsome reward by agricultural societies in France for having rendered such a great service to that important branch of agriculture. So was M. Pasteur, another savant, presented with a national reward for his method of selection in the manufacturing of "healthy" silkworm eggs. Let us see what the practical men of both industries have to say about the efforts of those distinguished savants in combating the common enemy, pebrine on one side, phylloxera on the

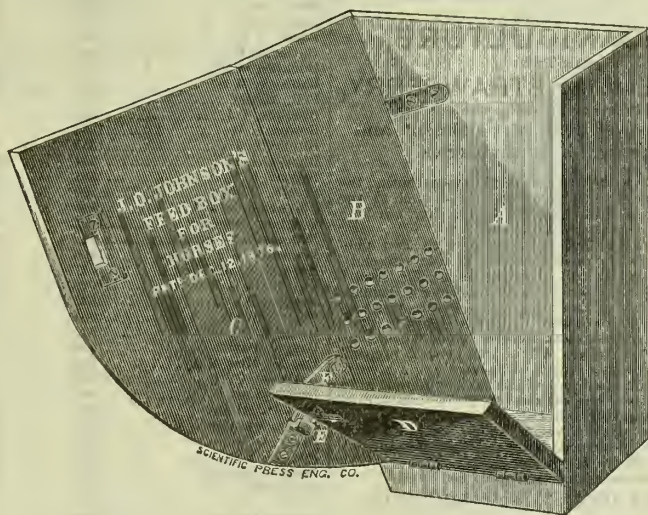
enemy. It is simply by grafting the French varieties on the American grape.

## Phylloxera or Fork Grafting.

It has been ascertained, in fact, that vines of American varieties are either not troubled, or at least very little hurt, by the phylloxera invasion, which likely is due to their exotic vigor. Thence the idea of planting American varieties in the infested districts and grafting on them the finest and more delicate French ones. Of course, the ordinary methods of grafting on the root, and by approach, as generally practiced, could not do, since the phylloxera would be enabled to spread likewise on the cion, and the end could not be attained that way. In Medoc, where this new method of checking the disastrous effects of the phylloxera invasion is now resorted to, they graft the grape by inserting a graft in the cleft of a fork, *above the ground* and where the phylloxera will not reach; hence the name of fork grafting, and which could very properly be called, too, after the name of the insect, the ravages of which it is bent to thwart, "phylloxera grafting."

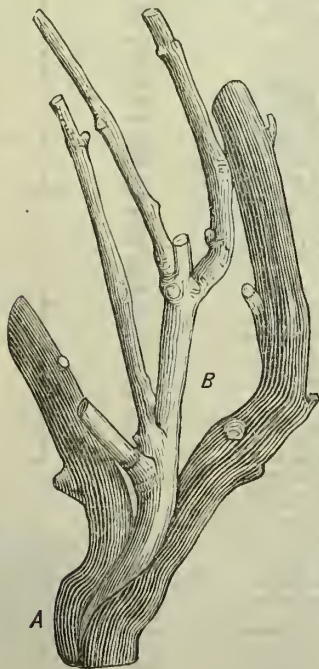
## How to Do It.

It is better to operate in the fall before the shedding of the leaves; or else in the spring when the sap is up. The stock must have forkings near enough from the soil. If it has them too high up, there are two ways of obtaining proper forkings lower down, from six to twelve inches



JOHNSON'S IMPROVED FEED-BOX.

other. To the very last campaign, silkworm eggs raised by the selection system of M. Pasteur have as signally failed or succeeded, no more, no less, than the eggs raised by ordinary process; and it was but another failure to add to the long list of failures for 25 years. Now it seems that it is the very same thing with M. Dumas's discovery, the sulpho-carbonate of potassium and its phylloxera-ticide properties. The application of the deadly stuff to ground infested with phylloxera did produce, it is true,



THE FORK GRAFT.

quite a consternation among this lousy tribe of insects, who appeared to let go their hold at last on the dear roots, lay down and die; so that the glorious salts of potassium got at once a big name for the great victory they achieved.

Now, if I have to believe certain French papers, which are complaining on the inefficiency of the deadly salts, their effect was not so general as to entirely clean out the phylloxera from the vines; for, after a certain time, they were back on the roots as bad as ever. Viticulturists, the very men who own the vineyards, sought then after another remedy, and they are presently trying an altogether different method of subduing their minute but droade

above the ground. The first way is by cutting down the stock to four to ten inches; the second, if the stock should be too old, by cutting its top quite short to force it to grow ramifications below it. When these ramifications are stout enough it can be grafted at their junction with the main stock. When grafting in the fall, cions have to be cut from the vines to propagate just at the time they are needed; if done in the spring, cions then have to be cut in February and kept in a cellar stuck in sand, or on the north side of any building, the butt end stuck in the ground. Cions are cut of a size to suit, but must have at least two buds on, the end being cut into a triangular shape with the cut two inches long and commencing from the lower bud; the stock is then split up right at the forking of two branches and the graft placed in the cleft. Use a knife with a blade straight on the edge, so as to split the fork to the pith, and not through from bark to bark. Anybody can do it right, after a little practice. The graft once in place, is kept secured with strings of old rags. The best to use is

## Grafting Clay,

Known to many of your readers, and what the French call "unguent of Saint Fiacre."

For the convenience of those who are not acquainted with this cheap compound, I will give them gratis the way to make it: Take two parts of good sticking clay to one part of fresh cowdung, and work it together as you would dough; it is instantly ready for use. Be liberal with the stuff and do not spare it around the graft, and to keep it in place tie up a rag all around it. Just as good, if not better, is the "French cold grafting mastic," the nicest, best and handiest preparation I ever met with for grafting purposes, and universally used now-a-days in Europe.

When the stock has no fork whatever low enough, but a good bend, the graft might be inserted in a split made on the outside of the bend. To facilitate the operation of grafting in March, the vines might be pruned first. Some of the wood may be taken off, too, in the fall, when grafting at that time of the year, particularly where severe frosts are not to be feared through the winter. The ensuing year, at pruning time, no other wood than that of the graft is left on the stock. A single stock will receive as many grafts as there are forks at the desired height. As shown in the accompanying illustration, a cion composed of several branches, or one composed of a single portion of a branch with only two buds on may be used equally well. In the illustration *A* is the stock, *B* the graft.

## A Word to Grape Growers.

If I understand the question well, there are three main complaints made by our vineyardists or viticulturists in regard to vines and grapes. First, there is planted and in full bearing too

large a quantity of worthless varieties either for wine or raisin making, like the old Mission grape. Second, there is no market hardly for our wines, particularly that made with inferior grapes like the Mission; third, in certain counties, the ravages of the phylloxera bid fair to destroy all the vines, good as well as bad ones. Now I will ask my friends of the vineyard, whether all these evils cannot be readily remedied by the simple operation of grafting. For if a superior variety to the common Mission or any other grape is desired for wine making, grafting will accomplish the change. If, to both Mission or wine grapes, raisin grapes are desired, grafting will as quickly change a river of sour wine into a pactolus of raisins. Lastly, if the phylloxera must be subdued, or rather its ravages thwarted, a flank movement will render the vineyardist master of the situation by planting American varieties and grafting them above the ground, as described in the present article, letting Mr. Phylloxera look for a more delicate root, if he can get it.

Grafting the grape, either on the root, by approach or in a fork, is easy enough; it requires only a little practice, and if done by an intelligent person so much the better. In all such operations there are little tricks to catch, and one cannot expect, without the least experience, to do it at once as nicely as the veteran orchardist. I have described in late numbers of the RURAL the best methods resorted to in France for grafting the grape; that one by approach being the favorite for its losing no crop whatever, the top of the stock being left on. Did any of your readers try it? In a late number (August) of the RURAL, I read about an orchardist stating that he had tried all methods of grafting with but little success; to those people, then, I would recommend the most simple, easiest and most successful of all grafts, or

## Plug Grafting.

This is the way to do it: Cut the old root off several inches below the ground, and horizontally; then bore one, two or three holes—two are certainly enough—according to the size of the root, using for that operation a smooth, sharp bit rather than a gimlet. The bit must be somewhat smaller than the graft. Bore the hole as near the bark as possible. The hole should be about two inches in depth, and the cions should fit accurately. The end to be inserted should be fitted by removing the bark and enough of the cion to allow it to enter, but fitting as nicely as possible. The upper part of the fitted portion should be cut with a shoulder, that the bark of the lower portion of the part of the cion left out of the stump can fit down fair upon it; and the nearer the bark of the cion comes to meeting the bark of the stump the better, though a positive union is not necessary as in grafting fruit trees. This method of grafting the grape has the advantage on others in this respect, that sometimes the stump of the vine is found at the ground of such a twisted, gnarled growth that it cannot be split in good shape to receive the cion. In such cases plug grafting is certainly preferable.

The foregoing on plug grafting I have taken from an old number of the RURAL PRESS, (No. 4, 1873). What was good at that time is no less good now. I have tried it, and succeeded very well, even without being so particular about the union of the two barks. I will add, however, that the holes must be bored in the direction of the grain of the wood, and after the grafts are all in place (and they need no wax), earth is put back over the root and around the grafts. During the summer every sucker is taken out clear down to the root. After grafting on the root I always mulch heavily the ground about the graft. Next year the earth is removed from the graft, and all but one—the strongest one—removed close to the root. I will wind up this letter by a few

## General Remarks.

We have found up here that our very best table wine is that made with Zinfandel and Black Burgundy, half of each. If I am not mistaken the same thing has been found in almost every county in California where grapes are raised. Some years ago I got stones from France of several varieties of grapes: Liverdon, Champagne and Hermitage; the vines will soon commence to bear, and I will see what kind of wine I will obtain.

Last year, on the 20th of May we had five inches of snow and a black frost on top of it—and surely somebody did curse around Nevada City. It was not me, though all my grapes were killed. But strange to say, a young Proporturiens walnut planted just among the grapevines escaped entirely and bore a nice little crop of very fine nuts. It is the first tree, I am told, that bore nuts in this locality, and there are walnut trees, I mean English walnut, 17 years old and over one foot in diameter, that never bore yet.

Phylloxera is unknown up here, but mildew is frequent, particularly on Black Hamburg. Nevada City, Cal., Jan. 19th, 1877.

**ON FILE.**—"Fruit growing," J. M.; "Trees for Fruit and Fuel," A. K.; "New Gooseberries," H. R. H.; "Offices of Reason," J. G. L.; "Visits of the Worthy Lecturer," "Ranic," E. W. H.; and several "Inquiries."

THE Sheffield butchers have been compelled to reduce the price of domestic beef three pence (six cents) per pound, in order to compete with American meat.



Continued from page 51.

not be great. The same operation would reduce the rubbish of the chip-yard to an excellent fertilizer. The whole value of the bones, except that of the gelatine, would be saved, and would be realized within no very long period. The result of the operation being a mixture of phosphate of lime, which is rather slow in its action, with common wood ashes, which act quickly, could hardly be misapplied. It would be well adapted to any of the cereal grains, to all root crops, and to all or nearly all fruit trees, certainly to the apple, the pear and the quince.

4. Boiling bones in lye, and then reducing them to powder, and applying the lye in which they have been boiled, greatly diluted with water, to growing crops, has the advantage of saving the gelatine as well as the mineral part of the bones; but it is attended with much trouble and considerable labor. It is doubtful, therefore, whether it should be recommended, unless there is a large quantity of bones to be disposed of, and there is every convenience for doing it advantageously. The phosphate of lime would in this case, as in the last, be in a state to require several years to bring it out fully.

5. The only way we know of to make bones return their full value promptly, is, first to reduce them to a powder, then to put with them about half their weight of sulphuric acid, diluted in three or four times as much water, the operation of which is to change the slowly soluble phosphate of lime into the more easily soluble super-phosphate, and to convert the excess of lime (beyond what is required for the super-phosphate), into sulphate of lime (gypsum plaster). On account of the extra labor and the unpleasant nature of the sulphuric acid, the danger even of having it about in families, this mode can hardly be recommended.

Of all the possible modes of applying the bones of the premises, the third which we have mentioned, that of burning them, although attended with the loss of the gelatine, is on the whole to be preferred, if the preparation is to be made at home, as we suppose, and only on a small scale, and without any special conveniences. For this mode we will give more particular directions: Spread on the ground a quantity of coarse chips; set them on fire, and when they are half burnt and the ground is hot, throw the bones on them; cover these again with coarse chips, and when the pile becomes pretty hot, so as not to be easily smothered, throw over the whole all the fine chips, sawdust, brush, rubbish of any kind that you want to get rid of, and let the whole burn down together into ashes.

If the burning should be done in a rainy day, when the wind was blowing away from the house and towards the cultivated grounds, all the better, provided the fire were kindled before the fuel became too wet; for in that case much of the ammonia from the gelatine, and of the other nutritious gases, and of the smoke itself, which is little else than specks of half consumed wood (soot), would be brought back after passing into the air, and lodged on the field.

**LIQUID WHICH WILL STAND HEAT AND COLD.**  
—It is often necessary to surround the pipes of heating or evaporating apparatus, and hot-air apparatus, ovens, stoves, etc., with a liquid which will not boil at a temperature of 212° F.; it is also often necessary to make use of baths which will not easily boil or freeze. The liquids usually employed for this purpose are water in which sea salt has been dissolved, oil baths, etc. Instead of these various agents, it is now proposed to make a solution of chloride of lime in glycerine, a solution which does not boil below 572° or 626° F., and has the further advantages of never attacking metals nor congealing.

## EXTRAS.

## EXTRAS.

## For the Kirby Machines.

D. M. OSBORNE & CO. ARE READY TO SUPPLY ANY DEMAND FOR EXTRA PARTS FOR ANY "KIRBY" EVER MADE. ORDERS SHOULD BE SENT IN BEFORE THE HARVEST SEASON ADVANCES.

Address, D. M. OSBORNE &amp; CO.'S

BRANCH HOUSE,

254, 256 Market St. }  
and } SAN FRANCISCO, CAL.  
8, 10 Front St., }

## RANCH FOR SALE.

\$8,000. Splendid dairy or hog ranch: 300 acres in Lake county; all fenced substantially; 100 acres in cultivation; permanent water; title perfect; terms easy; no failure of crops; healthy climate. For further information write to

"W., Middletown, Lake Co., Cal.

## IMPORTANT!

Notice to Farmers in want of labor! The well-known Employment Agency of ZEEHANDELAAR & CO., formerly the "Free California Labor Exchange," has removed to 600 Clay Street, (upstairs) San Francisco.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older **HOUR OF SINGING**, (\$1.) by EMERSON & TILDEN, **CHOICE TRIOS**, (\$1.) for 3 female voices, by W. S. TILDEN, and **DEEM'S SOLFEGGI**, (75 cents) which has exercises in Italian style.

**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our **Sabbath School Song Books**, **RIVER OF LIFE**, (35 cents.) **SHINING RIVER**, (35 cents.) **GOOD NEWS**, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON &amp; CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## A Book For All That Have a Garden.

### FRAGRANCE, OR THE CULTURE OF THE STRAWBERRY,

A Practical Treatise on the Culture, Propagation, Management and Marketing of Strawberries.

ILLUSTRATED with PHOTOGRAPHS representing the average size of best varieties, especially adapted to the family garden; by FELIX GILLET, Nevada City, Cal.

**PRICE OF TREATISE**—Illustrated with two photographs, 50 cts.; with five photographs, 75 cts.; with eight photographs, \$1.00; with 12 photographs, \$1.25. Twelve different varieties represented, including Princess Dagmar, The Lady, Col. Cheney, Exhibition, Gov. Booth, Juncunda, Cockscumb, etc. It is the best and most complete, practical, interesting treatise on strawberry culture ever published in the United States. Will be sent by mail, prepaid, at the above prices after receipt of money.

For sale, at moderate prices, plants of 43 different varieties of the nicest and largest sorts of Strawberries (English, French, American and Californian). Ever bearing Raspberry (three crops a year). Clons for grafting of French Chestnut, (Marron de Lyon and Marron Comble). Best varieties of Pear, Cherry, etc.

Send for full descriptive and price list.

FELIX GILLET, Nevada City, Cal.

## CAUTION.

To Farmers and all others who put Barbs upon Wire Fences, Making a Barbed Wire Fence, and to all Manufacturers and Dealers in Fence Barbs and Barbed Fence Wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of our Letters Patent, Nos. 66,182, 67,117, 74,379, 84,062, 153,905, 157,124, 157,508, 164,181, 173,667; reissues, Nos. 7,136, 9,076, 6,992, 7,035, 7,036, 6,913, 6,914, and other patents. Copies of our claims can be obtained of our attorneys, Coburn and Thacher, Chicago, Ill., or of our counsel, Thos. H. Dodge, Worcester, Mass.

WASBURN &amp; MOEN MANUFACTURING CO.,

Worcester, Mass.

I. L. ELLWOOD &amp; CO.,

De Kalb, Ill.

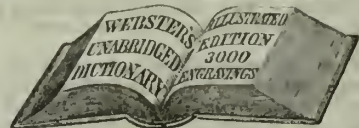
Sole owners and manufacturers, to whom orders for Barbed Fence or for Loose Barbs should be addressed.

## TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPAR-REIL TYPE, FORMERLY USED ON THIS PAPER, FOR SALE AT A BARGAIN. ADDRESS

DEWEY &amp; CO.,

224 Sansome Street, San Francisco.



3000 Emgravings; 1840 Pages Quarto  
FOUR PAGES COLORED PLATES.  
A WHOLE LIBRARY IN ITSELF.  
INVALUABLE IN A FAMILY.

The sale is 20 times as great as the sale of any other large Dictionary.  
More than 30,000 copies have been placed in the public schools of the United States.  
Recommended by 23 State Superintendents of Schools.  
"Indispensable to every student of the English language."—M. R. Waite, Chief Justice United States.  
Published by G. & C. MERRIAM, Springfield, Mass.

## LABOR.

Who wants to employ good labor of any description? or mechanics? Send your orders (free of charge) to ZEEHANDELAAR, 606 Clay Street, San Francisco. He has furnished his interior with over 200,000 farmers and other help during the last nine years, as Secretary of the Free Labor Exchange and as a private employment agent.

## Grangers' Business Association of California.

Location of principal place of business, No. 106 Davis street, San Francisco, Cal. Location of Secretary's office, Room 6, No. 40 California street, San Francisco, Cal.

Notice.—There are delinquent upon the following described stock, on account of assessment No. 1, levied on the thirty-first day of October, A. D. 1876, the several amounts set opposite the names of the respective shareholders, as follows:

No. Certificate.	No. Shares.	Amount.
Arbogast, H. W.	149	2 5 00
Archibald, P.	192	2 5 00
Ashley, W. D.	982	4 10 00
Allen, E. H.	1317	4 10 00
Archer, John	340	4 10 00
Andrews, G. W.	341	2 5 00
Anderson, A. F.	411	4 10 00
Armstrong, J. P.	434	4 10 00
Abbott, A. B.	427	2 5 00
Abbott, George	477	2 5 00
Ahart, Peter	1507	2 5 00
Alston, John	1404	2 5 00
Allen, O. S.	530	2 5 00
Alexander, L. P.	753	4 10 00
Assting, J. T.	826	1 2 50
Allen, Mrs. Dr. C. H.	1249	12 50 00
Ashley, Angeline	921	2 5 00
Austin, D. D.	948	4 10 00
Andrews, G. W.	946	2 5 00
Ashcraft, James	931	4 10 00
Bradley, W. T.	123	1 2 50
Bradley, H. C.	129	1 2 50
Bangs, A. S.	—	2 5 00
Bugbee, R. J.	65	2 5 00
Brackett, J. H.	1469	4 10 00
Bagge, C.	107	1 2 50
Babcock, Nellie G.	168	1 2 50
Beecher, J. S., Jr.	220	1 2 50
Brown, B. E.	219	4 10 00
Blanchard, G. B.	215	1 2 50
Boody, Mrs. J. B.	1425	4 10 00
Boody, J. B.	224	4 10 00
Butler, C. F.	1235	4 10 00
Buckles, H. H.	293	5 12 50
Babcock, M. S.	295	10 25 00
Bell, Henry	817	2 5 00
Brooks, T. J.	320	1 2 50
Bower, J. W.	1354	4 10 00
Blunkall, J.	1355	1 2 50
Bliss, Geo. H.	354	100 250 00
Bryant, C. P.	881	4 10 00
Brown, John	390	1 2 50
Blankenship, J. A.	443	4 10 00
Bingham, Mrs. J. W.	1392	1 2 50
Badger Flat Grange	482	10 25 00
Brewster, N. T.	1406	1 2 50
Bosworth, Mrs. C. M.	1027	3 7 50
Bosworth, C. M.	1029	2 5 00
Barnes, A.	525	4 10 00
Brown, Geo.	384	1 2 50
Bassett, Albert	540	2 5 00
Baggie, Carl	542	1 2 50
Baggie, Miss Mary	541	1 2 50
Bothow, C.	559	2 5 00
Baggie, Carl	567	4 10 00
Bassett, Albert	568	10 25 00
Berry, Mrs. Geo. N.	570	1 2 50
Berry, G. M.	573	1 2 50
Benton, T. S.	591	8 20 00
Boss, Alexander	1431	20 60 00
Boss, Mrs.	1432	10 25 00
Barber, M. R.	1440	4 10 00
Barber, Orpha	1441	2 5 00
Barber, Elan	1442	2 5 00
Bicknell, Jas. W.	1337	1 2 50
Behrens, W. F.	1047	1 2 50
Beckwith, H. A.	637	1 2 50
Dean, Alex.	639	2 5 00
Brady, E.	1347	3 7 50
Barnett, J. P.	705	1 2 50
Boothe, C. A.	706	2 5 00
Boothe, J.	708	2 5 00
Boothe, J. R.	715	1 2 50
Branstetter, M. F.	720	5 12 50
Bryan, J. W.	734	2 5 00
Hillings, J. R.	738	1 2 50
Bubb, John P.	1108	4 10 00
Blingham, O.	1201	4 10 00
Byron, Geo.	748	4 10 00
Brown, T. E.	1205	2 5 00
Brynton, A. A.	778	2 5 00
Bell, Willis	861	1 2 50
Bubb, John P.	1108	4 10 00
Headsley, E. A.	874	4 10 00
Brez, F.	1211	2 5 00
Barnes, Nathan	919	8 20 00
Hohofew, Peter	972	2 5 00
Brownell, Fred	1486	10 25 00
Bailey, S. P.	969	2 5 00
Brashears, J. W.	1089	1 2 50
Boyd, Stewart	1239	4 10 00
Burnes, Owen	1243	10 25 00
Brown, J. H.	1352	1 2 50
Bernard, H. E.	1452	1 2 50
Brooke, T. J.	1484	30 75 00
Bailey, C. K.	1490	4 10 00
Bagge, Emily C.	172	1 2 50
Brooke, T. J.	179	10 25 00
Carson, Jennie	718	1 2 50
Clark, F. J.	102	2 5 00
Clark, J. W.	928	12 50 00
Church, A. M.	1478	2 5 00
Campbell, W. N.	101	1 2 50
Clark, Mrs. Annetta	595	1 2 50
Cross, J. J.	949	4 10 00
Carr, Jeannie C.	164	1 2 50
Carr, E. S.	163	1 2 50
Clark, W. F.	186	10 25 00
Carson, W. M. K.	1421	10 25 00
Charlton, Edward	243	5 12 50
Carter, S. P.	265	4 10 00
Cooper, M. D.	280	2 5 00
Clark, Charles	315	2 5 00
Compton, James	367	4 10 00
Chandler, L.	377	1 2 50
Corey, Noah	378	1 2 50
Carter, S. P.	428	6 15 00
Cottle, Oliver	1250	4 10 00
Cottle, Stella	1172	4 10 00
Chipman, L. F.	1173	4 10 00
Cox, Alexander	506	1 2 50
Cate, T. H.	1014	1 2 50
Cate, Mrs. Elizabeth	1015	1 2 50
Crane, G. B.	37	5 12 50
Caven, William	1049	4 10 00
Combs, Chas. M.	627	1 2 50
Carter, William	1062	4 10 00
Coles, Joseph	1339	2 5 00
Chapman, W. W.	1201	3 7 50
Chapman, Mrs. W. W.	1200	7 17 50
Coudon, James	1335	2 5 00
Cadwell, Mrs. A.	1457	2 5 00
Cushing, Charles S.	675	2 5 00
Crocker, James	687	5 12 50
Coulter, Rachel M.	1082	4 10 00
Cople, George	1280	6 15 00
Cole, H. J.	707	2 5 00
Criss, Jacob	723	2 5 00
Church, L. C.	730	4 10 00
Chook, James	751	2 5 00
Campbell, Benj.	752	4 10 00
Cantelow, William	774	2 5 00
Curpenter, W. H.	1207	2 5 00
Canfield, W. D.	787	10 25 00
Ca. field, Mrs. W. D.	788	2 5 00
Carpenter, C. D.	789	1 2 50
Carpenter, Mrs. C. D.	790	1 2 50
Clark, Charles	834	2 5 00

Names.	No. Certificate.	No. Shares.	Amount.
Clark, Mrs. Mary J.	835	2	5 00
Cadwell, A.	853	7	17 50
Cox, John	856	1	2 50
Cox, Maria	860	1	2 50
Cox, William	863	4	10 00
Chapin, Samuel M.	875	4	10 00
Cowell, H. W.	922	4	10 00
Cahlane, T. J.	923	5	12 50
Corcoran, Thomas	965	4	10 00
Callender, C. R.	970	2	5 00
Casey, Daniel	973	10	25 00
Casey, Wm E.	974	4	10 00
Casey, M. E.	975	2	5 00
Casey, Margaret	970	4	10 00
Champlin, C. C.	1098	2	5 00
Cunningham, John	1238	4	10 00
Cullen, Joseph	1450	1	2 50
Cook, L. H.	1451	1	2 50
Coles, James	1490	5	12 50
Cowden, A.	906	2	5 00
Dickie, A. A.	1513	5	12 50
Davenport, F. W.	997	1	2 50
Davis, Howell	291	5	12 50
Dodge, David	347	4	10 00
Donnelly, Peter	419	2	5 00
Dobblins, J. H.	454	2	5 00
Doss, J. R.	484	4	10 00
Davis & McClung	1400	4	10 00
Dyer, John	1400	2	5 00
Dobbie, John	552	2	5 00
Dick, William	1322	2	5 00
Dick, S.	1323	2	5 00
Dick, D. Y.	1324	2	5 00
Dollarhide, A. J.	1299	4	10 00
Dollarhide, A. J.	987	2	5 00
Dollarhide, Mrs. A. J.	608	2	5 00
Davenport, R. J.	711	1	2 50
Davenport, Mrs. R. J.	712	1	2 50
Dunnigan, Mrs. C.	474	5	12 50
Doss, John R.	77	6	15 00
Denman, Andrew	72	2	5 00
Doak, David	115	1	2 50
Daniels, H. S.	153	2	5 00
Dyer, D. F.	159	1	2 50
Downing, Patrick	174	1	2 50
Dudley, G. G.	722	4	10 00
Dungan, G. A.	721	4	10 00
Dean, G.	729	4	10 00
Dutton, D. D.	764	10	25 00
Decker, Solomon	706	2	5 00
Daggett, George	790	1	2 50
Durkee, Geo. W.	908	2	5 00
Durham, John	959	4	10 00
Davis, T. C.	957	4	10 00
Dunn, J. T.	961	2	5 00
Decker, Mrs. Lottie	708	2	5 00
Edgar, William	82	11	27 50
Eddington, L. T.	104	1	2 50
Eddington, Mrs. J. S.	113	1	2 50
Edmonds, Jefferson	4	2	5 00
Elens, E. H.	234	1	2 50
Eddington, J. S.	107	1	2 50
Edwards, J. G.	1498	10	25 00
Edwards, H. W.	1443	4	10 00
Eby, L. W.	1087	2	5 00
Eddington, Mm.	1179	12	30 00
Eddington, Mrs. Lavina	1018	18	45 00
Eaton, Stephen	1055	5	12 50
Elmore, Mrs. S. O.	1533	2	5 00
Edwards, Ely	1445	1	2 50
Eddy, Mrs. Mary A.	1380	1	2 50
Eddy, Miss Mary C.	1382	1	2 50
Field, Waterman	85	4	10 00
Forbes, Alex.	89	5	12 50
Foltz, Amos	151	1	2 50
Fassett, F. R.	1255	5	12 50
French, E. B.	1316	3	7 50
Fitzpatrick, B.	199	2	5 00
Flourney, Thomas	1156	8	20 00
Fitzgerald, P.	1430	2	5 00
Finney, S. P.	398	10	25 00
Fowler, J. D.	400	4	10 00
Fisk, Rufus	1171	4	10 00
Finley, Miss Mollie	598	1	2 50
Frost, Mrs. S. L.	1039	1	2 50
Freeman, J.	1193	2	5 00
Frazier, D. S.	1348	1	2 50
Fruit, J. S.	28	4	10 00
Fare, F. V.	709	2	5 00
Fleming, D. P.	1204	4	10 00
Fields, E.	1208	2	5 00
Flood, Isaac	837	4	10 00
Flood, Betty	838	2	5 00
Flood, J. A.	840	2	5 00
Flood, Geo. H.	833	2	5 00
Farwell, Jennie M.	862	1	2 50
Foster, Lottie	60	1	2 50
Forrester, Joseph	1210	10	25 00
Foster, A. F.	61	3	7 50
Fruits, Geo. A.	854	2	5 00
Fleas, Adan	887	5	12 50
Furman, F. M.	926	4	10 00
Furman, Mrs. F. M.	941	2	5 00
Fiari, Joseph	1223	2	5 00
Ford, Erastus	1362	2	5 00
Ford, Mrs. Erastus	1375	1	2 50
Fuller, R.	1538	2	5 00
Furman, F. M.	211	2	5 00
Gibbs, Charles	108	1	2 50
Grigsby, A. D.	1001	10	25 00
Genazzi, John	1234	2	5 00
Gibbs, Mrs. Emma	109	1	2 50
Grigsby, A. D.	111	1	2 50
Grigsby, Mrs. A. D.	112	1	2 50
Grigsby, A. F.	117	1	2 50
Grigsby, Mrs. M. E.	118	1	2 50
Gyte, Joseph	139	1	2 50
Grigsby, A. T.	178	3	7 50
Grimes, Eli	1577	2	5 00
Gaston, Hamilton	302	2	5 00
Glass, Albert W.	1143	2	5 00
Glass, David	1145	2	5 00
Gould, Charles	1163	1	2 50
Greenwood, H. A.	1169	4	10 00
Gardner, Mrs. S. M.	350	2	5 00
Goulson, John	374	1	2 50
Goff, W. K.	391	1	2 50
Goodwin, J. P.	463	2	5 00
Guilling, Lawrence	1011	5	12 50
Gould, O. P.	1410	1	2 50
Gallagher, John	531	4	10 00
Grow, W. W.	577	1	2 50
Griffin, Thomas	1333	5	12 50
Griffin, Alice	1334	5	12 50
Gregon, James	518	1	2 50
Goodrich, Miss Ida	1035	1	2 50
Goodrich, Mrs. H.	1036	1	2 50
Goodrich, H.	1033	2	5 00
Gritley, Daniel	1046	4	10 00
Gillaspay, R. C.	629	4	10 00
Grigsby, Mr. Em. J.	1474	18	45 00
Geroche, A.	644	5	12 50
Guldager, Hans	651	2	5 00
Gaven, A. P.	1233	10	25 00
Gilson, C. S.	1306	4	10 00
Gaston, Hugh	663	4	10 00
Gibbs, Mrs. J.	1196	2	5 00
Gregory, Henry	1309	5	12 50
Gibbs, Joseph	1198	2	5 00
Gibbs, Henry	1123	10	25 00
Garrigus, F.	730	1	2 50
Gericke, —	869	5	12 50
Gillis, Peter	48	1	2 50
Gaffin, Mrs. E. E.	878	2	5 00
Giffard, J. P.	915	2	5 00
Gilbert, J. W.	930	4	10 00
Groves, J. E.	950	4	10 00
Green, W. S.	1544	2	5 00
Hawkins, S. A.	891	2	5 00
Haskell, H. W.	1058	2	5 00



# TWENTY-FIVE TONS CHILE ALFALFA SEED

IN LOTS TO SUIT, AT FROM \$8 TO \$13 PER 100 POUNDS.

THIS SEED IS BEING SOWN BY THE LARGEST STOCK-RAISERS ON THE PACIFIC COAST. I ALSO HAVE

# 20 TONS GENUINE PERUVIAN GUANO,

IN LOTS TO SUIT, AT \$3 PER 100 POUNDS. OR \$50 PER TON.

VEGETABLE AND FLOWER SEEDS AT EASTERN PRICES. SEND FOR CATALOGUE.

R. J. TRUMBULL, 419 and 421 Sansome Street,

San Francisco.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Bred Angora Goats.

### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahma, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

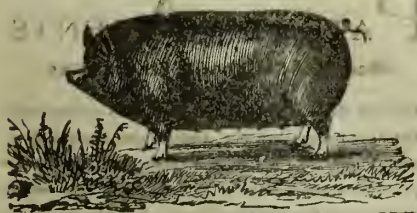
J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Stock Notices.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,

NAPA, CAL.

### BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are all from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Commercial Hotel, San Francisco.

20 SWISS MOTTO CARDS, 200 styles, with name, 20c.; 25 Fancy cards, 15 styles, with name, 10c.; 30 Masonic or Odd-Fellow's Cards, with name, 20c., postpaid. J. B. HUSTED, Nassau, N. Y.

## Poultry.

### OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

### THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks,

Emden Geese,

SAFE ARRIVAL

OF FOWLS

GUARANTEED



Eggs Shipped to Any part of the Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

### M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chickens in their season. Eggs packed with care and sent in rotation as orders are received.

### LOOK!



ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.

### B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,

Ceres, Stanislaus County, Cal.

### DAVIS & SUTTON,

75 Warren St., New York,

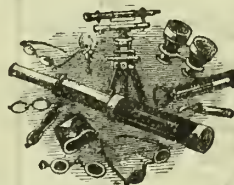
Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

The Leading Optical Depot of the Pacific Coast.

### C. MULLER,

Wholesale and Retail Optician,



### IMPORTER OF OPTICAL GOODS,

No. 135 Montgomery Street, near Bush, SAN FRANCISCO.

Sportsmen, Tourists and Pleasure Seekers are invited to examine our celebrated Tourists' Glasses, which, for power and durability, are unequalled.

SPECTACLES.—Their adaptation to the various conditions of sight has been my specialty for upwards of 30 years. Send for Muller's Pebble Spectacles. Directions and Price List Mailed Free. Orders by mail receive prompt attention. Goods forwarded per Wells, Fargo & Co., C. O. D. (subject to approval).

Those contemplating making Holiday Presents, take notice.

C. MULLER, Optician,

135 Montgomery Street, San Francisco.

### Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

### OFFICERS:

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTEPELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

### Practical

## BOOKS

—AT—

### BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

CIVIL ENGINEERS,

FARMERS,

MACHINISTS,

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

FARMERS, write for your paper.

## LEVI STRAUSS & CO.,

Patent Riveted

Clothing,

14 & 16 Battery St., San Francisco.



These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.

USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## HEALD'S BUSINESS COLLEGE,

No. 24 Post Street, SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.



## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lumbago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 69 Sacramento Street, S. F.



## CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for California and Nevada.

25 ELEGANT CARDS, all styles, with name, 10c., postpaid. GEO. I. REED & CO., NASSAU, N. Y.



Continued from page 58.

Names.	No. Certificate.	No. Shares.	Amount.	Names.	No. Certificate.	No. Shares.	Amount.	Names.	No. Certificate.	No. Shares.	Amount.
Hurlburt, Nathaniel.	71	5	12 50	Morrison, E. D.	204	4	10 00	Robinson, A.	641	8	7 50
Harris, H. I.	125	2	5 00	Marvin, Joseph.	210	1	2 50	Rector, W. H.	1508	8	20 00
Harris, Mrs. L.	127	2	5 00	Meyer, A.	1422	4	10 00	Ralston, George.	13	2	5 00
Hallett, E.	1538	10	25 00	Mathews, Peter.	264	4	10 00	Ralph, C. R.	1534	2	5 00
Hill, Wm McP.	980	40	100 00	Meffard, J. B.	270	2	5 00	Reed, J. T.	376	1	2 50
Hegler, John H.	985	5	12 50	March, James.	1146	5	12 50	Rhine, H. W.	1002	1	2 50
Hernon, G. W.	188	2	5 00	Moore, Samuel L.	1146	2	5 00	Reed, W. J.	802	1	2 50
Harding, J.	1497	10	25 00	Murphy, Thomas.	826	1	5 00	Richardson, C. W.	56	1	2 50
Hall, Samuel.	208	1	2 50	Martin, C. W.	345	2	5 00	Robinson, Joseph.	260	1	2 50
Hinkle, G. B.	233	1	2 50	Meyer, F. R.	395	1	2 50	Rose, Mrs Rebecca.	1013	2	5 00
Hicks, M. C.	1000	4	10 00	Maiter, John.	398	2	5 00	Roach, Frank.	513	1	2 50
Hogar, J. C.	1151	1	2 50	Matthew, Peter.	430	2	5 00	Romine, G. W.	1094	2	5 00
Hill, J. W.	1428	2	5 00	Matthew, Catharine.	431	2	5 00	Romine, Mrs E.	1095	2	5 00
Hlaw, R. A.	348	10	25 00	Maxwell, J. L.	444	1	2 50	Roberts, Emma.	1395	1	2 50
Holmes, John.	366	1	2 50	Matlock, Jonathan.	471	1	2 50	Roseburg, Allen.	664	4	10 00
Hatch, R. F.	387	2	5 00	Martin, S. M.	483	2	5 00	Rollins, Mrs N F.	1215	5	12 50
Haven, H. F.	417	2	5 00	Miller, Daniel E.	493	5	12 50	Rutledge, A. E.	742	2	5 00
Hawkins, T. S.	418	4	10 00	Moore, A. N.	1405	2	5 00	Rutherford, Mrs A. H.	967	4	10 00
Hanson, Hans N.	425	2	5 00	Mertes, Nicholas.	1413	2	5 00	Roudolph, C.	382	2	5 00
Hanum, W. H.	451	2	5 00	Murray, W. H.	1414	2	5 00	Robinson, C. L.	1427	5	12 50
Harris, W. C.	1304	2	5 00	Murray, L. H.	1415	2	5 00	Spencer, W. H.	67	1	2 50
Hixson, W. H.	1033	2	5 00	Musgrove, S. H.	515	2	5 00	Stewart, J. S.	83	5	12 50
Hudspeth, J. M.	517	10	25 00	Maston, Thomas.	516	1	2 50	Spear, A. C.	87	2	5 00
Hicks, E. A.	519	4	10 00	Maddocks, Winthrop.	520	4	10 00	Swin, Albert.	86	7	17 50
Hays, Mrs Wade.	1152	2	5 00	Marmen, H.	558	2	5 00	Stee, M.	122	1	2 50
Hays, Mrs Wade.	1383	3	7 50	Mansfield, J. M.	614	25	62 50	Stee, Mrs M.	126	1	2 50
Hart, H. G.	1325	4	10 00	Marshall, J. L.	1067	1	2 50	Stewart, J. S.	158	1	2 50
Hollenbeck, H. M.	1325	4	10 00	Marton, Owen.	1067	1	2 50	Stewart, J. S.	158	1	2 50
Hollenbeck, Mrs H. M.	1326	4	10 00	Manning, Andrew.	1264	5	12 50	Stewart, J. S.	158	1	2 50
Hickman, S. B.	1331	5	12 50	Mahler, Henry.	684	10	25 00	Stewart, J. S.	158	1	2 50
Hickman, Mrs S. B.	1297	2	5 00	Mart, Martin.	26	5	12 50	Stewart, J. S.	158	1	2 50
Hein, John.	1053	2	5 00	Mart, John.	27	5	12 50	Stewart, J. S.	158	1	2 50
Henry, Joseph.	1056	1	2 50	Mills, O.	722	2	5 00	Stewart, J. S.	158	1	2 50
Hunter, J.	1433	5	12 50	Miller, John.	1357	1	2 50	Stewart, J. S.	158	1	2 50
Haftsoek, J. M.	1067	1	2 50	Moe, H. M.	10	2	5 00	Stewart, J. S.	158	1	2 50
Haftsoek, A.	1068	1	2 50	Morrison, Willis.	857	1	2 50	Stewart, J. S.	158	1	2 50
Hudson, T. W.	1096	4	10 00	Morrison, Sarah M.	858	1	2 50	Stewart, J. S.	158	1	2 50
Harrell, J. A.	700	2	5 00	Marshall, C. K.	1313	4	10 00	Stewart, J. S.	158	1	2 50
Harrell, Mrs J. A.	701	2	5 00	Morrison, E. D.	934	4	10 00	Stewart, J. S.	158	1	2 50
Hanna, J. A.	714	4	10 00	Mayberry, Alexander.	933	4	10 00	Stewart, J. S.	158	1	2 50
Hanna, Mrs E. G.	715	1	2 50	Miller, Milton.	932	2	5 00	Stewart, J. S.	158	1	2 50
Hopkins, W. H.	25	4	10 00	Munson, A. B.	924	4	10 00	Stewart, J. S.	158	1	2 50
Hauanner, E.	728	1	2 50	Meyers, George.	927	2	5 00	Stewart, J. S.	158	1	2 50
Ilich, Charles.	9	1	2 50	Morrison, Mrs E. D.	939	2	5 00	Stewart, J. S.	158	1	2 50
Hawkins, A. C. Jr.	810	2	5 00	Meyer, Lizzie.	962	2	5 00	Stewart, J. S.	158	1	2 50
Harris, W. C.	811	5	12 50	Meyer, J. K.	963	2	5 00	Stewart, J. S.	158	1	2 50
Harris, Mrs W. C.	812	2	5 00	Mama, David.	964	2	5 00	Stewart, J. S.	158	1	2 50
Hutchingson, S. P.	859	1	2 50	Moore, David.	969	2	5 00	Stewart, J. S.	158	1	2 50
Hutchingson, S. P.	859	1	2 50	Moore, Sarah.	969	2	5 00	Stewart, J. S.	158	1	2 50
Hawley, H. S.	1212	2	5 00	Moore, Henry.	1487	2	5 00	Stewart, J. S.	158	1	2 50
Harslie, Miss Katie.	668	4	10 00	Maddaw, Gilbert.	1101	1	2 50	Stewart, J. S.	158	1	2 50
Hebberson, Jas. R.	266	4	10 00	Moody, J. T.	1105	1	2 50	Stewart, J. S.	158	1	2 50
Heintz, Mary.	977	4	10 00	Muney, William.	1353	1	2 50	Stewart, J. S.	158	1	2 50
Hakes, Rebecca.	1237	2	5 00	Merrifield, J. C.	1397	60	150 00	Stewart, J. S.	158	1	2 50
Hall, G. W.	1247	5	12 50	Meek, William.	1493	10	25 00	Stewart, J. S.	158	1	2 50
Harvey, John.	1496	3	7 50	McBride, Thomas.	1407	2	5 00	Stewart, J. S.	158	1	2 50
Harlan, J. C.	1598	6	15 00	McAllister, Charles.	724	2	5 00	Stewart, J. S.	158	1	2 50
Ink, T. H.	717	5	12 50	McDougal, A. L.	380	1	2 50	Stewart, J. S.	158	1	2 50
Inglalls, C. F.	1402	1	2 50	McDermid, Joseph.	1408	2	5 00	Stewart, J. S.	158	1	2 50
Ink, T. H.	716	5	12 50	McDermid, J. E.	557	6	15 00	Stewart, J. S.	158	1	2 50
Inglalls, C. B.	966	4	10 00	McClendon, W. J.	316	1	2 50	Stewart, J. S.	158	1	2 50
James, J. B.	152	1	2 50	McCray, George C.	677	2	5 00	Stewart, J. S.	158	1	2 50
Judd, D. W.	157	1	2 50	McClelland, J. H.	324	1	2 50	Stewart, J. S.	158	1	2 50
Johnson, Freeman.	267	2	5 00	McCune, H. E.	325	5	12 50	Stewart, J. S.	158	1	2 50
Justice, John D.	393	2	5 00	McCool, W.	383	1	2 50	Stewart, J. S.	158	1	2 50
Jones, H. S.	1005	1	2 50	McChristian, Sylvester.	1416	2	5 00	Stewart, J. S.	158	1	2 50
Jacksou, W. M.	449	4	10 00	McComas, C. L.	737	1	2 50	Stewart, J. S.	158	1	2 50
Jacobs, G. H.	1093	10	25 00	McCubbin, Robert.	756	4	10 00	Stewart, J. S.	158	1	2 50
Jacobs, Mrs Ann.	1092	4	10 00	McChristian, Owen.	886	4	10 00	Stewart, J. S.	158	1	2 50
Jamison, William.	863	4	10 00	McCall, Mrs Maria.	868	1	2 50	Stewart, J. S.	158	1	2 50
Jackson, E. N. B.	1084	5	12 50	McCall, Albia.	868	1	2 50	Stewart, J. S.	158	1	2 50
Jepson, W. L.	770	1	2 50	McCollough, C.	309	1	2 50	Stewart, J. S.	158	1	2 50
Johnson, Johnson.	800	1	2 50	McEntire, R. N.	1418	4	10 00	Stewart, J. S.	158	1	2 50
Jepson, W. L.	813	2	5 00	McEntire, Sarah L.	1419	5	12 50	Stewart, J. S.	158	1	2 50
Johnson, H. H.	1434	5	12 50	McIntire, Elizabeth.	121	1	2 50	Stewart, J. S.	158	1	2 50
Jackson, Asa M.	631	5	12 50	McIntire, J. J.	119	1	2 50	Stewart, J. S.	158	1	2 50
Jones, O. K.	187	1	2 50	McIntire, R. N.	310	1	2 50	Stewart, J. S.	158	1	2 50
Judson, Homer W.	793	2	5 00	McIntosh, A. M. D.	331	4	10 00	Stewart, J. S.	158	1	2 50
Jonsau, Jos.	1598	1	2 50	McIntosh, Mrs May L.	942	4	10 00	Stewart, J. S.	158	1	2 50
Johnson, Annie.	1435	2	5 00	McGreevey, Richard.	1260	3	7 50	Stewart, J. S.	158	1	2 50
Joyce, Michael.	1213	4	10 00	McGreevey, Richard.	1260	2	5 00	Stewart, J. S.	158	1	2 50
Joyce, Johanna.	1214	4	10 00	McHarry, James C.	1327	10	25 00	Stewart, J. S.	158	1	2 50
Judson, Homer.	1248	5	12 50	McMullen, George C.	1253	10	25 00	Stewart, J. S.	158	1	2 50
Jones, J. C.	1491	10	25 00	McPhee, Frank.	150	2	5 00	Stewart, J. S.	158	1	2 50
Keinstner, John.	66	2	5 00	Neher, A. D.	1412	2	5 00	Stewart, J. S.	158	1	2 50
Kneeland, G. B.	155	2	5 00	Nissen, Ludwig.	424	2	5 00	Stewart, J. S.	158	1	2 50
Kelsey, John.	160	1	2 50	Nickerson, J. K.	1506	2	5 00	Stewart, J. S.	158	1	2 50
Kuhle, William.	990	4	10 00	Olinger, John.	232	1	2 50	Stewart, J. S.	158	1	2 50
Kearney, J. W.	1134	5	12 50	Owen, William.	551	2	5 00	Stewart, J. S.	158	1	2 50
Kinney, William H.	241	5	12 50	O'Neill, James.	548	2	5 00	Stewart, J. S.	158	1	2 50
Kimbald, G. W.	253	8	20 00	Orton, William.	83	10	25 00	Stewart, J. S.	158	1	2 50
Kennedy, J.	322	2	5 00	Osgood, J. H.	1038	2	5 00	Stewart, J. S.	158	1	2 50
Kline, S. V. R.	318	1	2 50	Owens, J. R.	944	2	5 00	Stewart, J. S.	158	1	2 50
Kline, S. B.	319	1	2 50	Parker, G. F.	258	1	2 50	Stewart, J. S.	158	1	2 50
Kennedy, Stephen.	392	1	2 50	Parker, D. F.	231	1	2 50	Stewart, J. S.	158	1	2 50
Kelley, James.	1323	4	10 00	Parker, D. F.	605	8	20 00	Stewart, J. S.	158	1	2 50
Kelley, Maggie.	1329	2	5 00	Pierce, Frank E.	593	10	25 00	Stewart, J. S.	158	1	2 50
Kilgore, Mary.	1073	1	2 50	Pond, S. P.	453	4	10 00	Stewart, J. S.	158	1	2 50
Kilgore, Logan.	1074	2	5 00	Parker, O. E.	466	1	2 50	Stewart, J. S.	158	1	2 50
Kean, Edwin.	699	1	2 50	Parker, Mrs M. E.	468	1	2 50	Stewart, J. S.	158	1	2 50
Keith, C. W.	700	2	5 00	Powell, Thomas.	464	2	5 00	Stewart, J. S.	158	1	2 50
Keith, P. G.	759	4	10 00	Perkins, Ed E.	462	2	5 00	Stewart, J. S.	158	1	2 50
Kesselring, E. B.	1358	2	5 00	Parker, Catherine.	1223	1	2 50	Stewart, J. S.	158	1	2 50
Kingery, Samuel.	830	2	5 00	Parker, Miss Nellie.	1224	1	2 50	Stewart, J. S.	158	1	2 50
King, Charles S.	855	1	2 50	Parker, James.	1225	1	2 50	Stewart, J. S.	158	1	2 50
Knight, T. J.	882	2	5 00	Purine, A. S.	1226	2	5 00	Stewart, J. S.	158	1	2 50
Kingery, Mrs Jane C.	836	1	2 50	Purine, Mrs A. S.	127	2	5 00	Stewart, J. S.	158	1	2 50
Kern, J. J.	1301	2	5 00	Parker, John.	647	10	25 00	Stewart, J. S.	158	1	2 50
Kenyon, James M.	767	2	5 00	Parks, D. H.	780	20	50 00	Stewart, J. S.	158	1	2 50
Kincald, R. D.	624	1	2 50	Parks, D. H.	1244	10	25 00	Stewart, J. S.	158	1	2 50
Klippel, Phillip.	1099	1	2 50	Parks, B. F.	—	2	5 00	Stewart, J. S.	158	1	2 50
Kee, James.	1358	4	10 00	Page, Albert.	806	1	2 50	Stewart, J. S.	158	1	2 50
Kee, William.	311	8	20 00	Park, Geo. W.	1458	4	10 00	Stewart, J. S.	158	1	2 50



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Jan. 24, 1877.

The rains have had their effect on trade, as shown in prices. In all goods which the farmer will need to handle the crop which is now forthcoming there is a firmer feeling and a tendency to advance. In farm products, notably in Grains, coarse and ground Feeds, there is a corresponding decline of prices to nearly the limits which prevailed before the fears of drouth entered into men's minds. The feeling in all lines of trade is now quiet and the expectations are of fairly busy times in the near future.

The cable price for Wheat has remained absolutely at a standstill, as may be seen below:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	10s	10d	11s	—	11s	1d	11s	5d
Friday.....	10s	10d	11s	—	11s	1d	11s	5d
Saturday.....	10s	10d	11s	—	11s	1d	11s	5d
Monday.....	10s	10d	11s	—	11s	1d	11s	5d
Tuesday.....	10s	10d	11s	—	11s	1d	11s	5d
Wednesday.....	10s	10d	11s	—	11s	1d	11s	5d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	9s	3d	9s	7d	9s	7d	9s	11d
1876.....	10s	3d	10s	5d	10s	9d	11s	1d
1877.....	10s	10d	11s	—	11s	1d	11s	5d

## The Foreign Review.

LONDON, January 24th.—The *Mark Lane Express*, in its usual weekly review of the British corn trade, says: Mild weather has prevailed during the past week, but not until the water has gone off an opinion be formed regarding the condition of winter sown cereals. No improvement is noted in the condition or quantity of home grown grain, or offers in the London or country markets. Despite the general firmness of the Wheat trade, all except the driest samples have been neglected. There has been some change in quantity of American Wheat imported into London, the imports having reached 10,000 quarters during the week. Trade was not animated, although no decline in prices occurred. At the end of the week, however, under the influence of political news, Wheat advanced 6d. to a shilling, with an active demand. The week's requirements have been of the ordinary consumption character. The scarcity of English Wheat in good milling condition has frequently turned the demand upon foreign descriptions, which could be advantageously used as a substitute, such as Old Canada Club or Australian. There has been but little change in Oats or Maize, but Barley advanced one shilling. In the London and many of the Provincial markets, off-coast sales of arrived cargoes have progressed slowly, owing to a determination of owners to hold till political events are more developed. Maize was quiet, with an improved continental demand at the close of the week.

## Freights and Charters.

The *Commercial News* says that owing to the rains a better tone is observable in the freight market, and gives prospect that we may expect more activity, though perhaps no higher range of freights. The engagements for Wheat for the week have been insignificant and at previous rates, say £2 direct for wooden and £2 2s 6d for iron ships, with the usual advance for orders. The arrivals have been quite free, but there is still a large fleet fully due. At the close we have 25,945 tons in port under engagement for Wheat, 42,833 tons disengaged and 6,453 tons miscellaneous. The latest charters reported are: Ship Landseer, 1,419 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d; Continent, £2 7s 6d. Br ship Berkshire, 1,472 tons, Wheat to Liverpool, £2 2s 6d; Cork, U. K., £2 2s 6d. Br bark Shinn Lee, 674 tons, Wheat to Cork, U. K., £2; Continent, £2 5s; prior to arrival, chartered in England. Ship St. Paul, 1,834 tons, Wheat to Liverpool or Havre, £2; Antwerp, £2 3s 6d. Ship Reaper, 1,468 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d; Continent, £2 7s 6d. Ship Occidental, 1,533 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d.

## New York Grain Market.

NEW YORK, January 20th.—The Grain trade of the week has been uncommonly dull, which is not surprising when it is considered that prices are considerably higher here than in Europe. The chief elements of the buoyancy in Wheat consist in reduced stocks all over Europe, nearly every country there being in a dependent condition, an undoubted deficiency in the crops of our Northwestern States last season and the famine in India; all of which causes an indifference on the part of the holders to realize at current prices, which are \$1.30@1.50 for graded spring, and \$1.40@1.61 for winter grades. Corn firm at 60¢@62¢. Flour firm at 90¢@7.25 for shipping extras, and Rye unchanged.

## Chicago Grain Market.

CHICAGO, January 21st.—The events of the week in the produce market are the reports from California that copious rains have rendered the prospects of a good crop of Wheat more flattering, and that recent investigations show that the Northwest has a stock very much less than at the same time last year. The difference in favor of last year is so great that the millers of Minnesota are beginning to fear that their mills cannot be kept running with their present stock. Prices opened strong, receded somewhat, but closed rather firm. Wheat closed at \$1.35; Corn, 43¢; Oats, 35¢; Rye, 72¢; Barley, 63¢. Receipts for the week have been—Wheat, 110,000 bushels; Corn, 632,000; Oats, 96,000 bushels. Shipments—Wheat, 46,000; Corn, 123,000; Oats, 65,000 bushels. Receipts for the same period last year were—Wheat, 231,000; Corn, 498,000; Oats, 97,000. Shipments—Wheat, 78,000; Corn, 210,000; Oats, 30,000 bushels.

## Eastern Wool Markets.

NEW YORK, January 20th.—The increase in the demand for the better grades of manufactured goods has stimulated the inquiry for Wool, and during the past three days there has been quite a large business done in fine fleeces and Texas, but other kinds have ruled quiet. On the strength of this improved demand holders of Ohio X and XX have advanced their ideas a trifle, and now demand 47¢@49¢ for XX, and 44¢@45¢ for X. California attracts but little attention, but with the better business in other kinds, prices may be called a trifle firmer. Foreign stock continues very quiet, but holders are firm in their demands. The sales for the week are: 36 bales spring California at 25¢@27¢; 10,000 lbs fall do, 16¢@26¢; 5,000 lbs Eastern Texas, 25¢; 21,000 lbs scoured do, 59¢; 171,500 lbs No. 1 X and XX Ohio, 161,000 lbs No. 1 Wisconsin, 40¢@42¢; and 235 bales Donskoi, 3,000 lbs heavy fall California, 5,000 lbs mixed do, 100,000 lbs white Colorado, 5,000 lbs black do, 100,000 lbs Western Texas, 5,000 lbs Eastern do, 8,000 lbs black do, 5,000 lbs mixed do, 70,000 lbs combed pulled, 4,000 lbs super do, 1,000 lbs X do, 1,000 lbs black do, 8,000 lbs domestic noils, 10,000 lbs State fleece, and 2,500 lbs unwashed and unmerchantable Ohio, on private terms.

Boston, January 21st.—There has been a good demand for Wool during the past week, and all grades are selling more freely. Choice fine fleeces are held with considerable firmness, and desirable lots could not be purchased

except at full prices. Medium No. 1 and X fleeces were not quite so firm, and sales have been made at some concessions from extreme prices recently current. Some considerable sales of X Ohio fleeces have been made at 41¢@44¢; but a portion embraced lots not fully up in grade or condition, and the transaction can scarcely be called a fair test of the market. Holders of really desirable are still quite indifferent about selling. In Michigan fleeces there has not been a single transaction. Some small lots of X New Hampshire and Vermont were sold at 40¢, and 600,000 lbs No. 1 Milwaukee at 42¢. Transactions in Ohio and Pennsylvania fleeces have been 102,000 lbs, and included some lots of choice X and above at 45¢@46¢, and XX and above at 46¢@50¢. The demand for combed delaine has been more active, the sales comprising 139,000 lbs at 46¢@55¢ for washed, and 34¢@35¢ for unwashed; desirable lots of combed 53¢@55¢. Stocks of this description are fast disappearing. Full California has been in better request, but prices ruled comparatively low, about 500,000 lbs selling in the range of 12¢@13¢. A choice lot of about 70,000 lbs spring Wool sold at 33¢, and some desirable lots of fall as high as 26¢@27¢. There is also considerable fall on the market that could only be sold at comparatively low figures. Pulled Wools have been in fair demand, with sales of 156,000 lbs as to quality. The sales include good to choice Eastern super at 42¢@43¢; 31,000 lbs combed pulled at 45¢@47¢.

PHILADELPHIA, January 20th.—Wool is in demand; fine grades scarce; upward tendency. Medium firm, moderate supply; Colorado washed, 15¢@22¢; unwashed, 10¢@17¢; extra and Merino pulled, 35¢@38¢; No. 1 and superfine, pulled, 33¢@35¢; Texas, fine and medium, 22¢@25¢; coarse, 16¢@20¢; California, fine and medium, 12¢@28¢; coarse, 15¢@25¢.

## The Silk Market.

NEW YORK, January 19th.—Since the opening of the new year there has been a decided improvement in the demand for Silk. Seven hundred bales have been sold during the past fortnight, and manufacturers of twist and sewing, ribbons and piece goods, are preparing for the spring trade. Prices of re-reeled satins range from \$8.25 to \$9.25; hainings, from \$8.25 to \$9.50; re-reeled Lucklows, from \$9.75 for best extra fine down to \$6.75 for ordinary No. 3. Canton stock is not large, and for some months to come it is thought the receipts will be very moderate. Prices continue high, both on the Continent and in China, and the condition of the next crop is looked for with considerable interest.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Jan. 3.	WEEK Jan. 10.	WEEK Jan. 17.	WEEK Jan. 24.
Flour, quarter sacks.....	27,612	56,257	75,076	62,081
Wheat, centals.....	104,432	273,023	132,827	131,191
Barley, centals.....	22,220	6,788	13,788	10,439
Beans, sacks.....	1,383	1,084	401	2,219
Corn, centals.....	5,072	4,936	5,325	4,841
Oats, centals.....	3,119	3,687	1,345	6,723
Potatoes, sacks.....	13,529	14,349	11,338	11,910
Onions, sacks.....	1,200	802	588	936
Wool, bales.....	98	124	162	89
Hops, bales.....	40	32	66	17
Hay, bales.....	1,195	724	1,042	553

**Bags**—The improved chance of something to put in Bags has exerted an effect on the Bag market. Sales of Standard Wheat Bags have been made at 8½¢ cash, at wholesale; which dealers claim is equivalent to 8½¢@9¢ with credit. Jobbing lots are now selling at our quotations. The market for Wool Sacks is firm, and but little fluctuation is expected because the supply for the spring clip is believed to be within the requirements.

**Barley**—Barley prices showed a disposition to decline after the rain, and when the amount of the old was found to be larger than expected. There is still some demand for Barley for the East, but it is claimed that it cannot be used except at a reduction. We note sales during the past week of 10,000 cts fair Feed for Australia, private, 200 sks Bay Brewing, \$1.40 ½ cts, gold; 700 do light do, \$1.32 ½; 900 do dark Coast Feed, \$1.25, silver; 500 do choice do, \$1.27 ½, gold; 200 do good do, \$1.27 ½, half gold; 200 do choice Bay do, \$1.30, gold; 600 sks fair Bay Brewing at \$1.22 ½, gold; 400 do weevily Feed, \$1.20, silver; 300 sks good Coast Feed, for Arizona, \$1.35, silver; 400 do do, \$1.30, gold.

**Beans**—There are no changes in the prices, which may be found below.

**Buckwheat**—There have been sales of 200 sks at \$1.80 ½ cts.

**Corn**—Corn takes a lower average, the range now being from \$1.25 to \$1.30 ½ cts for large. We note sales: 200 sks small Yellow at \$1.32 ½ cts, gold; 300 sks large Yellow at \$1.25 ½ cts, silver.

**Dairy Produce**—The Dairy market is without new features. The supply of fresh roll is still abundant and top prices are hard to reach. Cheese shows no change.

**Eggs**—Eggs are weak at a point below last week's price. The extreme for choice fresh is now 30¢.

**Feed**—There has been a general tumble in the prices for ground Feeds: Bran falls to \$18; Corn meal to \$31; Middlings to \$30 per ton, and hay is weak at \$13@18. The extreme of \$20 noted last week was gained but for a few lots.

**Fruit**—Apples have been received in large supply and many have been of poor quality. The demand is, however, good and fine boxes sell readily to-day.

**Hops**—Buyers views are still very low on hops and there has been but little trade. Some do not quote the market higher than 21¢ for the best. Emmett Wells reports the New York market for the week ending January 12th as follows:

The market has tamed down considerably since our last, and what was last week believed to be a permanent improvement turns out, after all, only a temporary one. This brings us back again to 25¢ as the extreme figure paid for best Hops, and to which we now reduce our quotations. There are hops held here for more money than 25¢ same as in the country, but this does not constitute the market. We quote only actual transactions between dealers, shippers and those brewers who buy for cash. Only 515 bales go out for export this week; a poor show, indeed, compared with last week. We must do better than this, otherwise stocks will accumulate and prices recede. The writer begs to call the attention of the trade and shippers to a fresh arrival of choice California and Oregon Hops now coming into his store, some as fine in quality as the famous "Willow Grove" growth. These goods are especially suitable for export, being superior to anything now on the market. The "Willow Grove's" were recently bought in San Francisco by Mr. Robert Schroeder, (some 400 bales,) and have been shipped through to his London house. Quotations: New Yorks, good to choice, 20¢@25¢; New Yorks, low to fair, 13¢@18¢; Eastern, 18¢@23¢; Wisconsin, 12¢@17¢; Yearlings, 10¢@15¢; Olds, all growths, 4¢@8¢; Californians, 23¢@25¢; Oregon, 23¢@25¢.

**Oats**—Oats have declined a point, although preserving their standing better than Barley or Corn. We note sales during the week: 300 sks at \$2.10 per cts, silver; 400

do do, \$2.15, half and half, and 100 sks common Feed, \$1.90, half silver; 800 sks good Feed, \$2.25 per cts, silver; 400 do common do, \$2.02 ½, half silver.

**Onions**—Onions are in better demand. Good Onions of any kind now bring \$1.37 ½ per cts, and the tendency is apparently upward.

**Potatoes**—Potatoes are steady and there has been no change in general prices for a week.

**Provisions**—The market for Meats of all kinds is quiet and prices are without change.

**Poultry and Game**—A few fluctuations may be seen in our tables. Roosters have gained and Broilers have approached nearer the full grown prices. Turkeys are a cent better. Game of nearly all kinds is over-abundant. Quails are especially plenty and have sold as low as 50¢ per doz.

**Rye**—Rye is now quotable at \$2.05 per cts.

**Vegetables**—The only important change in Vegetables is a marked decline in Marrowfat Squash, which is now quotable at \$12.50 per ton. Carrots are more plenty and Cauliflower has sold lower.

**Wheat**—The crop outlook has aided shippers in forcing the Wheat market down a few points, and sales have been at lower prices than a week ago. We note sales: 9,000 cts Shipping, principally to complete cargoes, at \$2.12 ½@2.15 per cts, and 2,700 do choice Milling, in two lots, at \$2.15@2.17 ½; 8,800 sks Shipping at \$2.10; 5,900 do do, \$2.12 ½; 7,000 do do, \$2.15; 1,000 choice Milling at \$2.17 ½ per cts; 1,400 sks good Milling, \$2.15; 3,600 sks choice white Australia to a shipper, \$2.17 ½.

**Wool**—The dullness in the local trade continues. The activity in the Eastern markets, as shown in another column, does not seem to have much effect on our trade, although it doubtless will open the way for the spring clip. We have no sales to report and quotations are little more than nominal.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., January 24, 1877.

<b>BEANS.</b>			Chile Walnuts..... 11 @ 12		
Bayo, cts.....	2 75	@ 3 00	Pecans.....	17	@ 18
Butter.....	1 50	@ 1 75	Peanuts.....	4	@ 6
Pea.....	1 80	@ 2 00	Filberts.....	15	@ 16
Red.....	2 75	@ —			
Pink.....	2 62 1/2	@ 2 75	Union City, cts.....	1 37 1/2	@ —
Sm'l White.....	1 50	@ —	Stockton.....	1 37 1/2	@ —
Lima.....	2 75	@ 2 87 1/2			
<b>BROOM CORN.</b>			<b>POTATOES.</b>		
Common, lb.....	2	@ 2 1/2	Petaluma, cts.....	85	@ 1 00
Choice.....	3	@ 4	Salt Lake.....	1 50	@ —
			Humboldt.....	85	@ 1 00
<b>COTTON.</b>			Cuffey Cove.....	1 00	@ 1 10
Cotton, lb.....	15	@ 18	Early Rose, new.....	95	@ 1 00
<b>DAIRY PRODUCE, ETC.</b>			Sweet.....	75	@ 87 1/2
<b>BUTTER.</b>			<b>POULTRY &amp; GAME.</b>		
Cal. Fresh Roll, lb.....	27 1/2	@ 32	Hens, doz.....	7 00	@ 8 00
Point Reyes.....	32 1/2	@ —	Roosters.....	6 50	@ 7 75
Pickle Roll.....	27 1/2	@ 30	Broilers.....	5 00	@ 6 00
Firkin.....	22 1/2	@ 27 1/2	Ducks, pair.....	9 50	@ 11 00
Western Reserve.....	16	@ 25	Geese, tame.....	2 25	@ 2 75
New York.....	@ —	@ —	Wild Gray.....	2 50	@ —
			White.....	1 00	@ —
<b>CHEESE.</b>			Turkeys, Live, lb.....	18	@ 19
Cheese, Cal., lb.....	12 1/2	@ 15	Dressed.....	18	@ —
Old.....	12 1/2	@ —	Quail, doz.....	50	@ 75
Eastern.....	19	@ 20	Sulpe, Eng.....	2	@ 2 50
N. Y. State.....	19	@ 20			

## FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY M., January 24, 1877.

FRUIT MARKET.		Pears.....	7 @	8
Apples, bx.....	50 @	1 50	Plums.....	3 @ 4
Crah, lb.....	2 @	3	Pitted.....	12 1/2 @ 13 1/2
Bananas, buch.....	2 00 @	3 50	Prunes.....	12 1/2 @ 17
Cocoanuts, 100.....	5 00 @	6 00	Raisins, Cal, bx	1 50 @ 2 50
Figs, lb.....	4 @	5	Malaga.....	3 @ 4
Limes.....	2 50 @	10 00	Zante Currants.....	9 @ 10
Lemons, Cal.....	0 00 @	15 00	VEGETABLES.	
Sicily, hcs.....	9 00 @	—	Artichokes, doz.....	@
Oranges, Mex.....	30 00 @	35 00	Asparagus, lb.....	@
M.....	30 00 @	35 00	Beets, cts.....	60 @
Tahiti.....	10 00 @	30 00	Cabbage, 100 lbs.....	65 @ 75
Cal.....	10 00 @	30 00	Cal quality.....	50 @
Pears, bx.....	1 00 @	3 00	Cauliflower, doz.....	50 @ 75
Placapples, doz.....	6 00 @	8 00	Celery.....	15 @
Pomegranates.....	@	—	Garlic, lb.....	2 @ 2 1/2
DRIED FRUIT.		Lettuce, doz.....	10 @	—
Apples, lb.....	4 1/2 @	6	Wash ooms.....	@
Apricots.....	10 @	12 1/2	Arnsips, lb.....	1 @ 1 1/2
Citron.....	28 @	32	Squash, Marrow.....	12 @ 1
Figs, lb.....	5 @	8	fat, tin.....	12 50 @
White.....	10 @	—	Turnips, cts.....	60 @ 75
Peaches.....	7 @	10	White.....	1 00 @



## Nurserymen.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES,  
EVERGREENS,SHRUBS AND GREENHOUSE PLANTS,  
Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons,  
And Other Tropical Fruits.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and the public on the

Most Reasonable Terms.

FRUIT, EVERGREEN, NEW AND RARE  
TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Prichardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF  
ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

FRUIT AND ORNAMENTAL  
TREES,Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,

516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco.  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.TREES,  
TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG &amp; CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

200,000

Australian Gum Trees For Sale,

-AT-

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, planted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

SANTA BARBARA NURSERY,  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

PETALUMA NURSERIES.

Established - - - - - 1860.

We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per 31 up, according to size. We have also an over-stock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE,  
PEAR, PLUM, CHERRY, PEACH, APRICOT,  
ALMOND, QUINCE, OLIVE, FIG,  
GRAPEVINES, AND SMALL  
FRUITS.EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER,  
ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

## PEPPER'S NURSERIES

ESTABLISHED IN 1855.

The largest and most complete stock of Fruit Trees north of San Francisco Bay, also, a general assortment of Shade Trees, Evergreen Trees and Shrubs, Green House Plants, etc. Eucalyptus in variety. Prices low.

Catalogues and list of prices furnished on application. Address, W. H. PEPPER, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb Catalogue GRATIS, Address, F. K. PHOENIX, Bloomington Nursery, Ill.

## Seedsmen.

## R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application. "My 'Guide to the Vegetable and Flower Garden' will soon be ready, and will be sent FREE to all Customers. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.



My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refill the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. New Vegetables a specialty.

JAMES J. H. GREGORY,

Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

\$ ONE DOLLAR. \$

Spooner's Gardening Guide for 1877,

And Spooner's special collection, 30 varieties choice Flower Seeds, or 25 varieties selected Vegetable Seeds, mailed to any address on receipt of \$1.00; or the guide free to applicants.

WM. H. SPOONER, Boston, Mass.

## SEEDS. SEEDS. SEEDS.

MY CATALOGUE OF

Field, Flower and Garden Seeds, Etc.,

For 1877, will be mailed free to all applicants.

WILLIAM RENNIE, - - - TORONTO, CANADA.

## SEEDS.

## SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton  
Yellow Flint Corn.Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar  
Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.



A beautiful Quarterly Journal, finely illustrated, and containing an elegant colored Flower Plate with the first number. Price only 25 cents for the year. The first No. for 1877 just issued in German and English.

Vick's Flower &amp; Vegetable Garden, in paper 50 cents; with elegant cloth covers \$1.00.

Vick's Catalogue - 300 Illustrations, only 2 cents.

Address, JAMES VICK, Rochester, N. Y.



Box 50.

THIS CUT shows the form of the Sugar Trough Gourd. They hold from three to ten gallons each. Twenty-five cents pays for a package of the seed, and one of Pansy, Double Zinnia and Striped Petunia. Price list of seeds free. Address,

WALDO F. BROWN, Oxford, O.

SPANISH CHUFA

SEED FOR SALE.

Address

L. L. BEQUETTE,  
Dowoc City, Los Angeles  
County, Cal.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT).

FOR GRINDING BARLEY, ETC.,

Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.  
All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.



## THE SLUTHOUR PUMP

HAS NO EQUAL FOR

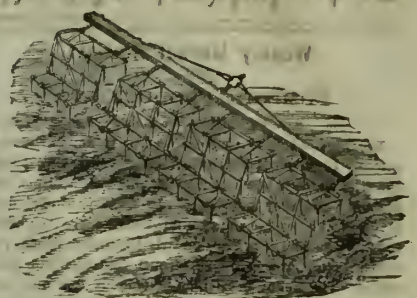
## IRRIGATION.

Send Your Orders to

J. M. KEELER &amp; CO., Agents,

330 Sansome Street, - - San Francisco

## IRON SECTIONAL HARROW.

This Harrow was Awarded the First  
Premium at the California  
State Fair in 1875.

The undersigned, having purchased the patent right of this Harrow for California, are now manufacturing them in Roseville, Placer County, and would call the attention of Farmers to the superior merits of this Harrow over all others now in use.

As its name indicates, it is made in sections of about three feet in width, each section having four bars, in which the teeth are inserted, and by connecting the sections with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do all kinds of work, he should purchase six sections, which would be suitable for four horses, and would cut 18 feet in width; by disconnecting two sections he will have a two or three-horse Harrow, cutting about 13 feet. One section alone is complete in itself, and suitable for garden work, with one horse. The Harrows are made of the best quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superiority for these Harrows over all others in use on this Coast:

First - By the lightness of the draft, taking into consideration the amount of work it does.

Second - By working uneven or rolling ground just as well and as evenly as if it was entirely level.

Third - They are made of Iron and Steel, and therefore are not affected at all by sun or rain, or by heat and cold; they are always tight, and ready for use; they are also durable. A farmer purchasing one has a Harrow that will last a life time.

Fourth - The teeth being fastened with a nut and screw into the cross bars, should one break, another can be inserted in a moment. We are making three sizes, all being the same in width, but different in depth and weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

BREWSTER &amp; CO.,

Roseville, Placer County,

Will be promptly attended to, and satisfaction guaranteed in all cases.

## CAUTION.

It has come to our notice that certain parties are now making this Harrow in this State, and that several of them have been sent here from the East. Now this is to caution all persons against making, selling or buying them, so made and offered for sale, as we shall enforce our rights in relation to the matter, and would call the attention of all persons infringing upon our patent, to the law in regard to it.

BREWSTER &amp; CO.

Roseville, July 15th, 1876.

## OAKLAND

Spring Balance

Gang Plow.



Patented and manufactured by H. N. Dalton, at the Pacheco Agricultural Implement Works, Pacheco, Cal. Established in 1855. Send for Circular and Price List.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON &amp; WILLIAMSON,

Stockton, Cal.

## WANTED AND FOR SALE.

I HAVE AT THE

Bull's Head Live & Let Live Stock Yards,  
Cor. 9th, 10th and Howard Streets,  
SAN FRANCISCO,

Two Thoroughbred Short-Horn Bulls, imported from Kentucky, and two years old; RED, and fine pedigrees. As I have quit importing I will sell one of the above at \$550 (has cost me over \$800,) and take it in fresh Milch Cows or good hay, at the market price. A good chance to get a fine bull cheap.

ROLLIN P. SAXE, Proprietor,  
Bull's Head Live and Let Live Stock Yards



GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). AMOS ADAMS, (SECRETARY). THOS. FLINT.  
R. C. HAILE, (VICE PRESIDENT). THOS. UPTON. G. P. KELLOGG.  
JOHN LEWELLING, (TREASURER). I. C. STEELE. W. L. OVERHISER.  
O. HUBBELL. D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

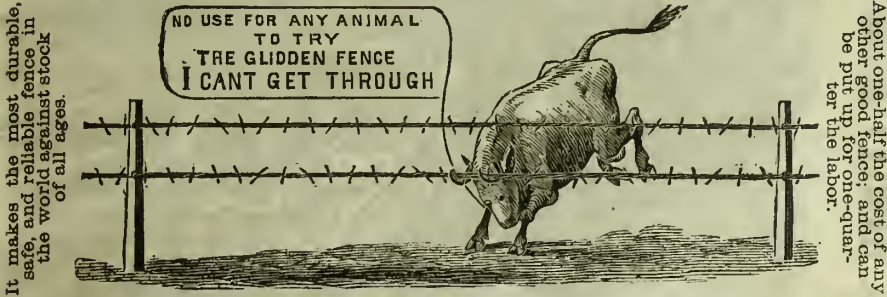
Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 50 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

PACIFIC OIL AND LEAD WORKS,  
SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliancy cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.  
KITTLE & CO., Agents.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal.

CHARLES MALBY, Secretary.

The Patron's Almanac for 1877.

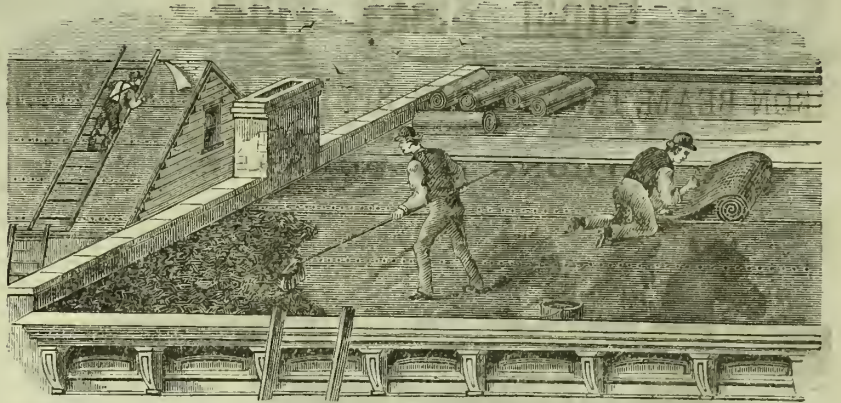
Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,  
Mechanicsville, Bucks Co., Pa.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

H. W. JOHNS' PATENT

ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS,  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

Winchester Repeating Rifle.

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 5-100 inches.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and cheek stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 108 Battery Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO.,

SACRAMENTO, CAL.



TRADE-MARK.

B. B. SCOTT, General Agent, - - - Sacramento, Cal.

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco,  
Taber, Barker & Co., San Francisco,  
Newton Bros. & Co., San Francisco,  
J. A. Folger & Co., San Francisco,

A. P. Whitney, Petaluma,  
Luther & Schroeder, San Jose,  
Chas. Jones, Oakland,  
J. H. Seymour, Los Angeles,

Adams, McNeil & Co., Sacramento.  
T. M. Lindley & Co., Sacramento.  
Booth & Co., Sacramento,  
H. S. Sargent, Stockton.

ALEX. BUSWELL,

BOOK BINDER, PAPER RULER

AND BLANK BOOK MANUFACTURER,

521 Clay Street, S. F.

Blank Books Ruled, Printed, and Bound to Order.

INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.



# FARMING IMPLEMENTS

FOR SALE BY MARCUS C. HAWLEY & CO.

## Gilpin Sulky Plow.

IRON BEAM, IRON FRAME, SIMPLE IN OPERATION,

**STRONG and DURABLE.**



### FIRST PREMIUM

Awarded it by the Illinois State Board of Agriculture, over NINE competitors, in a FIELD TRIAL at Peoria, Sept. 8th, 1874.

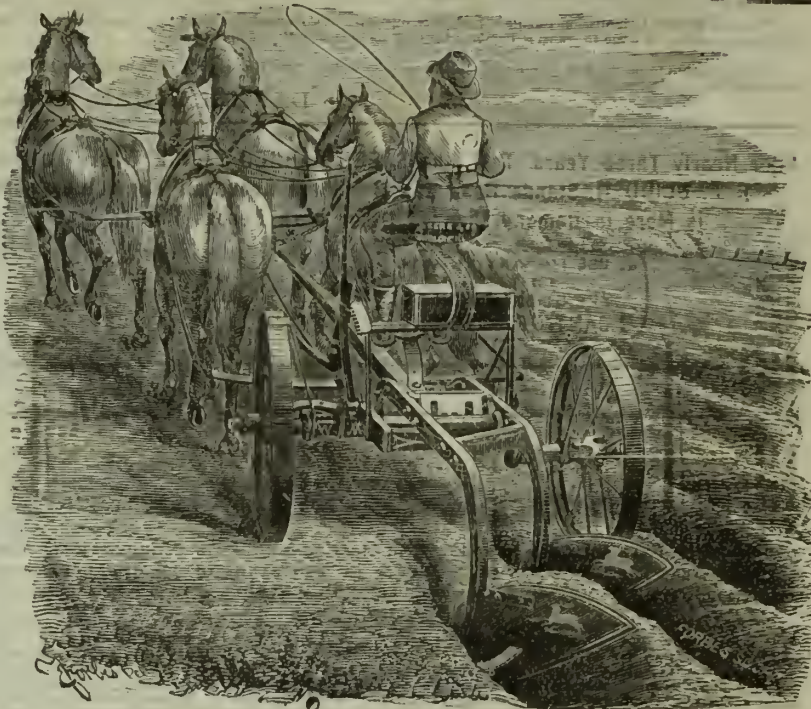
Cuts 16 inch, with Extra Point, Price, \$75.00, or \$67.50 Cash.

We offer to the trade a Sulky Plow which we pronounce superior in point of strength, durability, and ease of operation, to any of its competitors. It is locked in the ground by one lever, at various depths from two to nine inches, maintaining a level position at all depths; and is lifted clear of the ground with ease by the same lever. The draft is direct from the end of the beam; and the "land" is gauged by a clevis in the natural way, avoiding the usual side draft. It has no complication of levers or gearing.

**MARCUS C. HAWLEY & CO.,**

108 and 110 Front Street and 12 and 14 Pine Streets, San Francisco,  
COR. J & SECOND STREETS, SACRAMENTO.

## The Deere Gang Plow.



### LIGHTEST DRAFT GANG PLOW MADE.

Simple, Strong and Durable — Iron Beams, Iron Frame, Iron Wheels.

Price, 10 & 12-inch Cut, \$100, or \$90 Cash.

As proof of the superiority of the Deere Gang, 2,000 of them have been sold during this, the first year of its introduction, and are operating to the entire satisfaction of every purchaser. In every comparative test it has shown marked advantages over all other gangs. And in the great Illinois and Iowa State trials, 1874-5, it was awarded the FIRST PREMIUMS over all competitors, and pronounced perfect in all respects. The Deere Gang Plow is superior to all others. It was put to the severest tests at the County Fair, San Jose, in competition with the Moline, Santa Clara and Sweep-stake Plow Company's Plow, H. H. Eureka Gang Plow and others, and after two days' trial the committee awarded the Premium to the Deere Moline Gang Plow.

**MARCUS C. HAWLEY & CO.,**

108 & 110 Front Street and 12 and 14 Pine Streets, San Francisco,  
COR. J & SECOND STREETS, SACRAMENTO.

## Buckeye Broadcast Force Feed Seeder.

**BEST**

**Broadcast**

**SEEDER**

AND

**Cultivator**

IN THE

**MARKET.**

**FORCE FEED**

Without

**CHANGE OF GEARS.**



**THE  
Buckeye  
Seeder**

Stands at the Head of  
the Seeder Class.

NONE CAN COMPARE  
WITH IT.

Best Quality of

**MATERIAL,**

**HIGH WHEELS**

**IMPROVED  
SHOVELS.**

We are confident that we are offering a Broadcast Seeder which, for durability, good workmanship, neatness and efficiency, excels any machine of its kind in the market. There are many valuable improvements on the Buckeye not found on any other seeder.

**MARCUS C. HAWLEY & CO.,**

Sole Agents for the Pacific Coast. - - - **SAN FRANCISCO and SACRAMENTO.**





Volume XIII.]

SAN FRANCISCO, SATURDAY, FEBRUARY 3, 1877.

[Number 5.]

#### The "Packsaddle."

What a hardy, independent race of men the early backwoods pioneers of America were! The "pioneer" of to-day, as, seated upon his gang-plow, he turns over the loose soil of his San Joaquin valley ranch, while his wife chafers at the gate with the pedlar over the price of the vegetables and fruits she has just bought to furnish forth the family table, can scarcely realize how, 60 or 70 years ago, his grandfather could have spent years hewing and grubbing and burning out the scanty "clearing," from among whose stumps and rocks the old-fashioned single plow was to find sustenance for perhaps half-a-dozen hungry young mouths beside his own, aided by "mother's" hoe in the little vegetable patch behind the cabin. Nor does the settler upon the more rugged lands of Northern California and Oregon, who depends upon the "store" for his clothing, his bacon, his candles, his "canned goods" and a thousand other necessities, and who discusses with his neighbors the expediency of establishing a co-operative store to buy his goods at first hand "down at the bay"—seldom does he reflect that his ancestors in the backwoods of the East prided themselves upon the fact that all they needed they could produce themselves, if need be, and that their visits to town were made but once or twice a year.

Here has been a change indeed. But the chief factor in it is not far to seek; it is the mightiest agent in our modern civilization—the locomotive. Great as is the contrast between the rural life of to-day and of the earlier decades of the present century, it is as nothing when we think of the difference in the means of transit then and now. To-day the emigrant to Colorado or California rattles along over the iron road with the speed of the wind, and in a week's time has left behind him two or three thousand miles and finds himself safely landed, family and household effects, without any real exertion on his part, wherever he may have chosen to settle. Then it was a different matter. The farmer of the Atlantic slope who had resolved to emigrate to the then Great West, whether it be to the smiling banks of the beautiful Ohio, the rich Blue-grass region of Kentucky or the blooming prairies of the Hoosier State, had before him a long, tedious and arduous journey—one that would likely call all his powers of endurance into requisition. If he resolved to wagon it he must see to it that his wheels and whiffletrees were of the stoutest, and be prepared for all sorts of accidents and emergencies upon the rough mountain roads leading from the seaboard across to the valley of the Mississippi. If he chose to go by any of the few water-ways that had been sought out to lighten labor, he must carry with him a good stock of patience, steady nerves, and an arm ever ready to assist in getting over shallow or dangerous places.

The view upon this page represents a locality somewhat celebrated in those days of primitive travel. It is situated upon what was then, and is now, one of the favorite routes to the central West, being very much the same that is now followed by the Pennsylvania railroad; in those

days, however, the iron horse had not yet made his advent, and water was the means of transit. Leaving the valley of the Susquehanna, the traveler journeyed slowly and laboriously up the Juniata—first by keel-boat or canoe, afterwards by canal-boat—until its headwaters were reached. Here there was a portage of 20 or 30 miles across the Allegheny mountain summit to the waters of the Conemaugh, a bright little mountain stream which empties into the Allegheny some 30 miles above the junction of that river with the Ohio. Upon this Conemaugh river is situated the "Packsaddle," represented in our engraving. This was a point where the plucky little river, having forced its way through one of the outlying ranges of the great Allegheny chain, tossed and foamed down through the gorge it had made in a style that forbade all attempts to pass it with any save the lightest of crafts. Keel-boats and, later on, canal-boats, coming either way, were compelled to stop and unload their freight on to the backs of mules or horses, and in this way it was carried on a well-

#### The Mining Debris Trial.

The trial of a suit brought by a farmer against a mining company for damage done to his land by the deposition of mining debris has resulted in a verdict for the farmer, and damages have been awarded for the injury done. The trial was long and much testimony was taken on both sides. The result is a victory for the owner of agricultural land, and with this prestige of victory the farmer will enter upon the other suits which the beaten party will force upon him. Although the questions are not yet finally settled, because there are higher courts which must yet pass judgment upon them, it is still a point gained at which many of our readers will greatly rejoice.

We print elsewhere in full the positions taken by Judge Sexton concerning the law involved in the case and on which the jury based

#### D. M. Osborne & Co.

In our search for new and commendable things we found ourselves on Monday in the new establishment of D. M. Osborne & Co., at 254 and 256 Market street in this city. At this site a new building has been erected during the last year and a good part of its space is thus put to good service as the headquarters for this coast of a well known firm of makers of first-class agricultural implements. It is not necessary to allude at length to the large home establishment at Auburn, N. Y.; suffice it to say that the firm of D. M. Osborne & Co. is of 20 years' standing and has carried on trade in all parts of the world with success. At Auburn they have two of the largest factories in the United States. These are the result of the consolidation of the Wheeler, Kirby, Cayuga Chief, Dodge and other patents for reaping and mowing machinery.

The house on Market street, San Francisco, is a direct branch of the Eastern establishment. It is under the management of Mr. M. Ayers, who is a veteran with these machines. Mr. Ayers has just returned from an extended tour at the East, and has returned with his family for a residence here; so the San Francisco branch of D. M. Osborne & Co. is a permanent institution. As such we welcome it to the list of our thriving agricultural implement establishments.

We noticed especially during our call at the store on Monday, the Kirby mower, which we have known for years at the East as a successful machine, the Wheeler combined self-raking reaper and mower, which has been used last year in this State and the Territories and has high testimonials, and which with its admirable folding arrangement takes to itself most convenient form for movement. These, with a full line of extras of all parts of the machines, will constitute the specialties of the establishment.

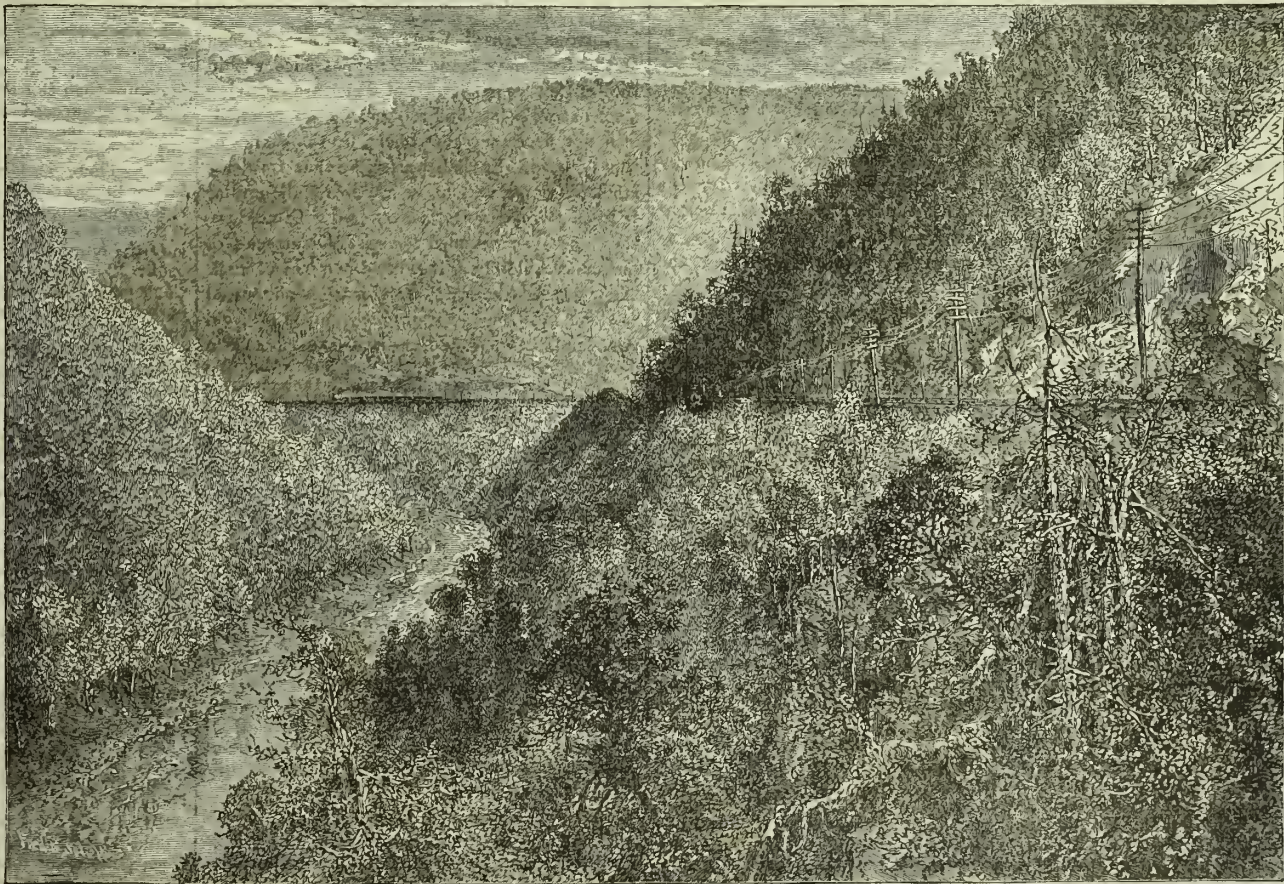
The new store will be fitted up with all the conveniences for the

display and sale of the machines, and will be worth a visit from purchasers of harvesting machinery.

**PLOWING TULE SODS.**—On Roberts island, we read in the *Stockton Independent*, they are using knives on the tule sods with good results. A revolving cutting machine with sharp knives is run over the sods in both directions, the result of which is to cut them into blocks about four inches square. A heavy harrow is then dragged over the land, pulverizing it as much as the roots will allow. A machine something of this character is now being used in extensive reclamation works in Scotland.

**LAWFUL HONEY.**—The San Bernardino *Argus* says: A monster beehive has been discovered in the cupola of the court house. It is supposed to contain several hundred pounds of honey.

**SLADE**, the American spiritualist, sentenced in London to three months' confinement at hard labor, had his sentence quashed on appeal, on a legal technicality.



THE "PACKSADDLE," CONEMAUGH RIVER, PENNSYLVANIA.

beaten trail over the steep mountains, past the obstruction to the clear water on the other side. This was the origin of the name "the Packsaddle," which still clings to the locality, though the railroad has long since done away with the old water-travel, and an old-fashioned packsaddle would now be looked on in the neighborhood as a curiosity.

The view will call to the minds of many of our readers similar ones among our own mountains, and probably scenes grander in proportions and more rugged in outline. It would be difficult, however, to find in California, such heavy and varied forest growths and such dense and closely matted underbrush as covers these Pennsylvania hills. The length of the Packsaddle gorge is some six or seven miles; the height of the mountains (Chestnut ridge,) through which the river has forced its way is from 700 to 900 feet above the river, but the sides are exceedingly rough and precipitous, and with the river roaring and foaming over the rocks in its bed below, a picture is formed that has few equals in the East for wildness and picturesque beauty.

The winter East is quite severe.

their award for the right of recovery for proven damages. The point seems clearly made that the workers in mines have no right to pursue their industry to the detriment of the property of others, and that the fact that they cannot work without doing this damage is no defense for their deeds. This it seems to us is a clear truth in connection with this question. Other points which were made by the court in answer to request from both parties, are interesting and will doubtless be closely studied by the many farmers to whom the questions now before the courts are of vital importance.

We have in hand for next week's *PRESS* an article from a well known Yuba county farmer, in answer to the showing which we recently copied from the *Mining Press*, to show what the miners thought about the question. The subject is one of the greatest moment and should be thoroughly understood by all.

**THE Port Gamble** (Washington Territory,) lumber mills are running to their fullest capacity. They have orders ahead from the Central Pacific Railroad Company for several million feet.





## CORRESPONDENCE.

## "Vulcan Coal Mine," Santa Cruz County.

EDITORS PRESS:—Having promised to keep your readers informed in regard to all developments of the Vulcan coal mine, I will hereto state to you all that I have been able to learn of the work since performed and of the character of the coal as the new shaft has been sunk lower and the new vein has been opened on the line of its lateral extension.

The new shaft run down on the vein has reached the distance of 18 feet from the surface. The dip of the vein, which was first at an angle of 50 degrees, soon began to assume more of a perpendicular direction, leaving the vein with but a slight inclination to the south in its continued descent. After reaching this depth in the shaft a tunnel from the outside, 18 feet in length, was run from the road, at the foot of the hill, at an elevation of about 20 feet above the bed of the creek. Having connected the shaft and tunnel, drifts were then run in either direction on the vein. The coal has improved in quality in the shaft as the depth increased, until now it is uniform in character, and free from extraneous substances. At this depth also the vein is well defined. The lower wall is now composed of solid sandstone, lined within with about 3½ feet of slate, then the vein of four feet eight inches of solid coal, afterwards the upper wall of sand rock, black and discolored, for one and a half feet outside the coal. The drift extension to the east of the shaft is about eight feet in length, seven feet in height and in width of the thickness of the vein. The drift running westwardly is the same in its dimensions as the other, except in the thickness of the vein, which has diminished to about three feet.

About 12 tons of good coal had been taken from all these excavations at the time of our visit. The coal is what the miners call "blind" coal, and is similar to anthracite in character.

The company having become satisfied as to the genuineness of this vein, determined to continue the workings in the old tunnel, running northward from their 160-foot shaft. They have secured its perfect ventilation and they can now work in it without hindrance or danger.

Mr. Wm. Muller, who, after graduating from both French and German scientific mining schools, and a large experience in the mines of the Old World, came to Mexico, and for four years superintended in some of the best copper and silver mines of the New World, has now the superintendence of this coal mine. Mr. M. informed me that by continuing the present tunnel for about 50 feet further, and 300 feet from the shaft, he expected to strike a coal vein well defined in its croppings at the surface, and dipping at an angle which would intersect the tunnel at this depth and distance. Having succeeded in striking the vein and opening it well, he then proposes to return to the shaft and there extend the tunnel southward to about 50 feet, where he expects to strike at a right angle the new vein already opened and described as above. Then, again, he proposes to run a drift eastward 160 feet, with a slight ascent on the vein, towards the excavations already made on the vein. Then from the end of this drift, he will run an incline upwards, at an angle of 45°, a distance of 230 feet, to the present opening tunnel near the road. On this incline he proposes to work both ways: upwards and downwards. The coal taken from the tunnel and lower drift will be hoisted, of course, up the 160-foot shaft until the incline is completed; when all the coal from every part of the mine will be drawn up this incline, and the shaft only used to drain the mine of water. Mr. Muller also expects to intersect and pass through this coal vein (in the southward extension of the tunnel as described), on whose croppings the deep shaft was first sunk. He informed me that this vein at the surface was inclined northward, at an angle of 35°. At the depth of 85 feet from the surface a tunnel was run from the shaft northward until the vein was intersected. At this point it was found to be broken and of about nine feet in thickness.

Leaving this tunnel and going back to the shaft again, it was continued down until the depth of 125 feet was reached, when another tunnel was run to the north, to again find the vein. But this time it was found with a dip to the south, and still broken in character. The work on the shaft being again resumed, it was continued down 25 feet further, when the 150-foot level was reached and the main tunnel commenced and run, as already described. But in sinking the shaft this last 25 feet the vein was intersected and cut entirely through, and found to be still broken, although not so much so as at the tunnel 25 feet above. Mr. M. is confident that when they strike it again, in the proposed extension south, that it will be beyond the break and in solid coal. Thus it will be seen that this company expects now to reach and work three veins of coal with but small labor comparatively.

These deep workings at the present time are being prosecuted with vigor, and the company hope to have all completed so as to commence shipping coal in the spring.

This company, besides securing by long lease the lands which their coal discoveries have invested with so much interest, have recently bought a tract of 300 acres lying on the east side and up the Corralitas creek, opposite the present town, and known as the "Rich" farm.

After reserving suitable sites for their own buildings and coal yards, they propose to lay out a large town. It is a beautiful location, with an unsurpassed climate. If the company should succeed in their plans this proposed town no doubt will become one of the finest in the county. There is also a coal vein indicated on this "Rich" tract, about a mile above Corralitas. I visited the spot a short time since, and found that a tunnel commencing in the bluff on the east side of the Corralitas creek has been run 150 feet directly into the hill. The vein as now worked is a black lustrous substance, looking at the dump like black clay, but in the vein, viewed by the miners' torches, it looks like solid coal. Wherever there is a breakage in the black mass, as well as where the pick has cleaved it, it has a polished surface. It has a sandstone wall on either side much harder than the substance of the vein. The miners informed me that they found occasional pieces of pure coal in the vein, but I did not see any of them. They are now running an incline to obtain the depth at which they think the solid coal exists.

Mr. Strader, the gentleman whom I have before mentioned as the discoverer and resident director of the coal mines, showed me coal which he recently discovered in a vein a half a mile or more below the present mines. This vein is shown running into the hill in a northerly direction, seven feet in thickness, and exposed by a land slide, which had broken from the side of the hill. About 100 lbs. had been mined and found to be good blacksmith coal; so good that the blacksmith in Corralitas is using it. What I saw seemed to be of good quality.

Your correspondent is not a coal expert, and does not assume any responsibility in regard to this whole coal matter, beyond giving the facts as he observed them; and yet from these observations he is constrained to believe that there is an abundance of coal here, and although much more may be required to be done to make it pay, yet pay it must ultimately. All honor to these men, who, notwithstanding every discouragement and continued opposition, have persevered for over two years in their purpose, until now success has not only promised to themselves large pecuniary reward, and justifies their superior capacity and fitness for their work, but has also opened up to the entire county such a source of wealth and prosperity as to entitle these men to be regarded as public benefactors. Watsonville, Jan. 19th, 1877. C. N. W.

## Ramie.

EDITORS PRESS:—I will do what I can at this time toward answering the inquiry of your Colima correspondent regarding ramie.

So far as I am aware, three machines for the preparation of ramie fiber have been brought out in this country. One, probably the first, is the ponderous roller apparatus exhibited at the Mechanics' fair, in this city, the year before last. The cardinal objection to this machine is that it reduces the fine, long ramie fiber to something resembling hemp tow much more than the silky product brought from China and Japan. Besides, its cost and weight are serious objections.

The machine next in order of time is that of Lefranc, of Louisiana, in which the principle of "breaking" so successfully applied to flax and hemp, but so ill-adapted to bringing out the most valuable qualities of ramie, is substituted by that of "decortication." It is not difficult to get the woody part of the stem out of the ramie fiber; the trouble lies in the gummy bark, which, in the hand process used in Asia, is scraped off with a dull knife, on account of the variable thickness of the stems. It is very difficult to perform this operation successfully by machines. In Lefranc's arrangement, the ramie stems, after being stripped of the leaves, are first flattened out into ribbons of uniform thickness between rollers, and then passed under a wheel bearing numerous cutters or scrapers, which "decorticate" these ribbons. After drying, a kind of "scotching" process frees the fiber ribbons from the woody parts of the stem. The fiber thus prepared, while not equal to that prepared by hand, yet approaches the former in quality much more nearly than the tow product of the ponderous roller machine. The working capacity of a single machine of the Lefranc pattern, however, seems to be rather small; and although claimed to have been measurably successful, my inquiries in Louisiana have elicited little beyond what is said on the subject in the report of the Department of Agriculture for 1873, pages 261 to 272. It seems that another machine has since been brought out, of which I inclose a photograph, and concerning the action of which I refer you to the inclosed letter from Mr. F. J. Knapp, of New Orleans. The machine is the invention of Messrs. Berthet & Labeyrie, of Louisiana, and while working on the same general idea as Lefranc's machine, it claims to do more and better work than the latter. I am now awaiting information regarding the last season's experience with the Berthet & Labeyrie apparatus in Louisiana. Whether or not such experience has been had or whether, if had, it can be readily gotten at, are questions which it would be idle to ask if any other State were concerned. But in poor, misgoverned Louisiana, it takes a stout heart and strong faith to persevere in any enterprise. The letter, you see, was written a year ago, and for aught I know all parties concerned may have been scattered to the winds, or bulldozed, or sum-

moned to Washington. If they have not, I will before long obtain the desired information.

E. W. HILGARD.

University of California, Jan. 17th, 1877.

## Description of the Machine.

The uncertainty as to whether the machine has proved valuable or not will not allow us to undertake the expense of making an engraving of it, but some idea may be had from the description in the letter to which Prof. Hilgard refers:

The process begins where a man stands and receives a handful of ramie stalks from a person who has the stalks all ready for him. These stalks he places in the opening between a wire rope, which passes around a five-and-a-half-foot wheel. This rope catches the stalks and binds them fast to said wheel, holding them securely. The same person with his left hand bends down the stalks so that their heads or tops are caught between corrugated rollers. The stalks are first pushed through said rollers, and then drawn out at the opposite end of the rollers (which are six feet long) by the revolving of said large wheel. The fiber then hangs on the wire rope, which continues to revolve, carrying the fiber in a direction opposite whence it started. At about eight or ten feet it is again caught by a smaller grooved wheel and held in the same manner; being drawn through another pair of rollers, clearing out the butts of stalks which were previously held by the large wheel.

A man stands to take off the ramie as fast as it comes out in a rough condition. It would require about four or five hands to operate this machine with rapidity to its full extent. If properly attended and worked, a continuous row of ramie could be kept on the rope all day.

As yet they have not cleaned sufficient ramie to learn the capacity of said machine. This machine, of course, could be worked by either steam or horse-power. I believe the patentees estimate its capacity at two tons per day, but, of course, it is only surmised, as they have not had any practical test; it may clean more or less.

## HORTICULTURE.

## New Gooseberries.

EDITORS PRESS:—A number of new varieties of this fruit have made their appearance within the last few years, several of which are receiving a cordial welcome, and are greatly appreciated. It is not necessary here to call up the shades of the departed English varieties that formerly afflicted our gardens, as we are nearly all familiar with their appearance, as, covered with mildew, they were accustomed to resist the attacks of man as completely as if clothed in a coat of mail. Their day has passed; our climate is not suited to them, and they are rapidly disappearing from our land. We would, perhaps, even mourn their departure, were it not that now other varieties of native origin have made their appearance—varieties that possess largely the good qualities without the defects of their English cousins. [These remarks do not all apply to California. The English varieties do well with us in some localities.—EDS. PRESS.]

## Smith's Improved

Will first claim our attention. It is a seedling that was raised in the neighboring State of Vermont, and seems to be possessed of the hardiness and thrifty habits of growth that we naturally expect to see in an offspring of the Green Mountain State. These are not its only merits, as in quality and size of fruit it is the equal if not the superior of any of the American varieties. The fruit is of a light green color, becoming a pale yellow as it ripens, and is free from the defect of mildew. When rich and careful cultivation is given, the plants will give bountiful crops of large-sized fruit.

## Downing's Seedling.

The name of this variety is probably better known to fruit-growers throughout the land than is the other. It is a variety of unquestioned merit, and does no dishonor to the veteran authority on fruit whose name it bears. The bushes seem to guard the berries as if they were very precious treasures, as thorns in great profusion may be seen hiding between the leaves, ready to repulse any who may unwarily approach them. However, a pair of thick gloves will prove more than a match in this kind of warfare, and the bristling thorns need not be feared. The fruit is of large size, of a pale green color, and will be well appreciated by nearly all lovers of the gooseberry. There are spurious plants of the kind frequently sold, and those desiring to try the Downing should use some care in obtaining the right kind. The fruit of the genuine plants will be found to be free from mildew. This fact, combined with its other merits, will cause this variety to be a great acquisition to every garden where not already planted.

The gooseberry stands transplanting very successfully, and may be sent many hundreds of miles through the mails in perfect safety. Lot a trial of these varieties be made, and those who hitherto have been most indifferent to the charms of this fruit will be well repaid by the valuable returns that they will make.

R. H. HAINES.

Malden-on-the-Hudson, N. Y.

## Fruit Growing.

EDITORS PRESS:—After 18 years of experience in fruit and ornamental tree culture in California, we feel at liberty to offer a few hints relative to the soil and climate best adapted to the same, as well as some suggestions as to the proper season and manner of planting.

## Planting.

Fall and spring planting have their advocates, but our California winters are so mild that we can plant at any time from the first rainfall in autumn until March, or even the first of April in some localities. We give early planting the preference, from the fact we have observed that young nursery trees will almost always commence a new growth of rootlets soon after the first rainfall, hence the advantage of early planting, that they may become firmly established in their new abode before the dry and hot weather of summer. This especially applies to the valleys of the interior; that part of our coast immediately facing the ocean may be said to be our exception. Trees may be planted there at an time until the first of April with perfect safety, if properly done.

## Location.

Trees should be selected with reference to the climate and soil where they are to be planted. Certain varieties of apples, pears and plums do well along the coast, if planted in localities sheltered from the bleak winds of the ocean. The peach, almond, apricot, nectarine and grape are absolute failures, so far as we have observed, in places bordering on our northern sea coast, except in sheltered localities. The warmer valleys of the interior may be said to be adapted to all the northern and many of the semi-tropical fruits, especially the orange, which is found to succeed in nearly all our warmer valleys, and only require protection from frost the first three or four years of its growth. So far as our observation goes, we have noticed the best orchards about the foothills, where the soil is made deep and rich by washings from the adjacent hills. The land must be moderately dry, and yet retentive of moisture when properly cultivated. Wet, spouty land will not do. The deep, loamy soils of our creek and river bottoms are also good.

The peach and plum require rather more moisture than the apple, pear or almond. The latter will succeed on very dry land, if properly cultivated, but has not proved profitable as a nut-bearing tree in localities subject to much frost. There is, however, a zone a thousand feet or more above our valleys, on the benches and coves of our coast mountains, where frost is seldom known. In such localities, the writer is of the opinion almonds might be raised with profit. In our southern counties, south of Point Concepcion, the almond has succeeded quite near the ocean, frost seldom injuring them there.

On heavy, clayey soils, the cherry should be worked on the Mahaleb stock. On their own stock, they should be planted in a deep rich sandy loam, thoroughly drained.

The quince requires a rich moist soil. The grape flourishes anywhere away from cold damp fogs of the ocean.

A dry, well drained soil is absolutely necessary to produce a first-class fruit. Our mountain vineyards are proving the best for all purposes.

The cherry currant succeeds well in most all localities; all varieties flourish near the ocean.

Houghton seedling gooseberry is the only variety that does not mildew if grown in the fogs and winds of the coast. The English varieties succeed anywhere inland.

The coast line is the home of the strawberry; inland they require irrigation.

## Preparation of the Soil

Rich virgin soil is the best for an orchard. On worn-out lands it is useless to plant trees without previous preparation. Our method would be to manure heavily and raise a crop of corn, potatoes or some crop that requires much cultivation, which will thoroughly incorporate the manure with the soil. The following autumn, if the season be favorable, we would plow the ground very deep, and if the least heavy, would follow with the subsoiler; after which we would lay off the ground the proper distance for the trees when we are ready for

## Planting.

Our method is to dig the holes circling some four feet in diameter, and three spades deep. The first thrown out on one side, the second on the other, the third to be left in the bottom of the hole. In refilling, throw in the surface soil first, that the young tree may have the benefit of the richest soil. Throw in this top soil so as to form a little mound to set the tree on; after which

## Prepare Your Trees

Before setting by paring off with a sharp knife the wounded parts of the roots to prevent decay, and to enable them to heal over by granulation. Also cut the branches back to a bud, within about six inches of the body, leaving them in proper shape for the formation of the top.

## Setting.

When all is in readiness, set the tree on the little mound in the hole, having it about the depth it was in the nursery, making allowance



for settling. Straighten out the roots, having them to slope downwards, then cover carefully with fine earth, pressing it closely about the roots, after which fill up the hole and the work is done. The tree should lean a little in the direction of the prevailing winds of spring and summer.

#### Cultivation and Care.

The ground should be well tilled, especially the first year. A crop of beans, carrots, beets and other hewed crops may be raised between the rows.

Manure should be spread broadcast and not immediately around the trunk of the tree, as is done by many. Wood ashes are invaluable for orchards on poor or worn-out lands.

Mulching is sometimes necessary; several inches of sand or old litter is useful.

Newly planted trees should be protected from the hot rays of the sun during the first summer of their existence in all the warmer valleys of the interior. This may be done by means of two boards set together, forming an angle and protecting the side exposed.

#### The Proper Distance Apart

For planting trees, according to our experience and observation, is as follows: Apples on rich land, 30 feet each way; apples on poor land, 24 feet; pears, 20 feet; heart cherries, 24 feet; ducks, 18 feet; almonds, plums, peaches and nectarines, 20 feet; apricots, 24 feet; gooseberries (English), 4x5 feet; Houghton's seedling, 5x7 feet; currants, 3x6 feet; blackberries, if cultivated both ways, 8x8 feet; one way, 5x8 feet; grapevines in vineyard, 7½x7½ feet.

#### Evergreens

May be set out at any time during the rainy season if taken up with a ball of earth and care taken not to expose the roots to the sun or air. In our dry valleys they should be protected from the hot sun until they are firmly established in the soil. It may be done in like manner as directed for fruit trees.

#### The Monterey Cypress

Is the most valuable ornamental tree on this coast; is hardy, adapted to all soils and will allow of any amount of pruning, hence can be wrought into any desired shape to suit the taste of the owner. They may be sheared at any time during the winter months.

#### The Lawson Cypress

Is another native of our coast; is a great favorite and requires no pruning. It stands matchless on our lawns, with such grace as to defy man with all his boasted skill in the art of ornamentation.

JOHN MAVITY.

St. Helena, Napa county, Cal.

## ARBORICULTURE.

### Trees for Fruit and Fuel.

EDITORS PRESS:—The gloom, uncertainty and forebodings which have so long hung over us on account of the unprecedented protracted drouth, have at length been dispelled by the falling of the long wished for and welcome rain. Let us all profit by its timely presence and leave nothing undone that will result in securing golden favors in the harvest to come. Let us plant trees. No home however small is furnished without its complement of trees. Twenty trees of assorted fruit, well chosen, will furnish sufficient for any ordinary family, and then the plot of small fruits, luscious strawberries, great glossy blackberries, with bright red clusters of tempting currants and the downy, delicious raspberry, all afford to the bright-eyed boys and girls employment as well as pleasure.

#### Money in Pears.

And now to those of a more practical turn and of larger means, and who desire to make money and save money, allow me to direct a few hints suggested to my mind at this moment. Pears for shipping East pay. If you have land suited to this class of fruit, plant it; you cannot go amiss. If you have land suitable for apples, plant good keeping sorts; they will pay. If you raise stone fruits, what you cannot dispose of green you can dry and there will be no loss. The whole matter requires a little study, labor and time, and will be sure to give a generous return by-and-by.

#### Fuel.

And now, as the subject of "fire-wood" is beginning to draw some attention on account of its scarcity, I want to tell you what a gentleman of large means said to me the other day about it, or I will rather tell you what he is doing, following out his own calculation. He estimates that five blue gum trees, eight years old, will make, when cut into stove length, one cord of wood. He has now planted around his farm a double row, consisting of 800 blue gum trees. After the eighth year he intends to cut 100 trees, which will give him 20 cords of wood. The places from where these trees were taken will at once be reset with 100 young trees. The following year the next 100 can be cut and the ground again be replanted, and so on for eight years. Then he again commences at the beginning, which by this time will be eight years old, thus keeping himself after the eighth year in an abundant supply of fuel for all time to come. Let others try it.

A. KAMP.

San Jose, Jan 19th, 1877.

## THE DAIRY.

### Heat in Cheese Making.

The mode of applying heat to the contents of the vat in cheese making has, perhaps, caused as much discussion as any other problem connected with that manufacture. This was the topic chiefly considered by Mr. A. L. Fish, in his paper read before the convention of the American Dairymen's Association at Ingersoll. We append an abstract of his paper from the *Utica Herald*:

The cheese maker has to bring the fluid mass, milk, to a temperature suited to an efficient and uniform action of rennet, as an accompanying agent, to effect a partial decomposition, which must not be carried to a complete separation of constituents, because part of the fluid portions of milk must be retained intact. If separated by the vaporizing influence of heat they will not again unite with the curd as a milk constituent or component of the cheese. If a thin slice of the closest worked curd, after being pressed into cheese, is dried, it breaks like glass, which proves that it is the retention of water that makes cheese plastic. The sugar of milk combined with salt gives cheese its aromatic flavor so much desired by the purchaser; the sugar decomposes freely with the whey at high heat. If a portion of milk or curd is exposed to higher heat than other portions of the mass, it is unfit for a perfect union. The office of rennet, with the aid of heat, is to bring the constituents of milk to a common unity. Heat must be discreetly suited to the rennet's action upon the milk and curd; if rennet is weak and slow, heat must be kept back to keep pace with its action; if strong and quick, heat may be raised faster. As neither will do the work alone, their action should be equipoised. Curd is a slow conductor of heat. There is danger in exposing it suddenly to higher heat, because the particles will become coated over with an impervious skin, through which the fluids within cannot pass freely, preventing the curd from cooking evenly, which results in a rough, loose-meated or swollen cheese.

#### A Case In Point.

To illustrate the point I wish to impress, I will relate an instance in my experience: I had marketed a dairy for several years made by an English lady of much experience in cheese making, and the quality of her cheese was not excelled. The following May the dairy, made by the same hand, was loose-meated, sour and unsalable. Searching for the cause, I stood by the tub till the curd was worked up, when two pails of whey, heated to 160 degrees, were brought to be poured into the curd. I prevented this and equalized a pan of the hot whey at a time with the surface whey before mingling it with the curd, taking an hour to raise the mass to blood heat, and no more. The result was a perfect cheese, and continued so after, from like application of heat. It is evident in this case that too sudden and partial exposure to high heat caused a lack of uniformity in the condition of the curd. And do we not now, in the present mode of heating, expose a portion of milk and curd to a degree of heat that subjects it to waste in the manipulating process and unfits it for perfect coherence in cheesing the curd? Mechanics have succeeded in distributing heat around the inner vat more evenly than formerly, yet there is much to be gained beyond the present modes of heating.

#### The Essentials.

The mechanic in constructing cheese vats should hold several essential points in view. First, that the tendency of heat in fluids is upwards; second, that the tendency of curd in the process of manipulation is downwards, toward the bottom of the vat; third, that the thinner the sheet of water or steam between the outer and the inner vat, into which heat is forced, the sharper will be the heat and hotter the heating surface of the inner vat; fourth, that the wider the space between the two vats, the milder and more even will be the effect of heat through that medium. The most perfect success I have ever achieved in 30 years of practical experience in cheese making, was wrought by keeping the heat between the vats at blood heat, and no more. Thereby the heating surface of the inner vat was not in contact with a particle of milk or curd above blood heat. Consequently no lack or excess of heat caused antagonism to prevent perfect union of cheese constituents. The surface of each lump of curd serves as a strainer through which the interior fluids must pass to be freed from the curd; therefore they should not be skimmed over by exposure to high heat. A moment's reflection will point to the result. Setting at 80 to 84 degrees till coagulation is perfectly formed, and an after exposure of not more than blood heat, will retard acidulation, and favor efficient action of rennet. To improve the present mode of heating, I would recommend widening of the heating space between vats, especially at the sides, to 10 or 12 inches, so that heat may be equalized before reaching the bottom of the inner vat, where the curd inclines to settle and rest. And instead of forcing currents of steam from pipes toward the inner vat, I would point them outward and downward near the outer vat at various points.

Having completed cooking the curd, the action of rennet is checked by suppressing heat, which

should not be done too suddenly. All changes in temperature should be made slowly to effect the mass evenly. We must not release ourselves from due restraint of heat while cheesing the curd after it is pressed. For in this process a continuous action of heat and rennet (with the new agent salt) must be kept steadily on with unvarying temperature, not exceeding 70°. If too cold, fermentation is checked, and the effect of acid predominates. A hard, crumbly texture of cheese is the result if too warm, fermentation is too rapid for a perfect union of constituents, and the cheese smells, forming cavities in which fluid becomes fetid (out of flavor) and imparts its noxious odor to the mass.

#### The Store Room.

Cheese, when sent to a special demand, like luscious fruit, should be placed in a temperature too low to admit of a continued action of the decomposing agents, heat and rennet. All cheese factories should have an adjacent room in which cheese can be held at a low temperature, and kept like canned fruit to meet a favorable demand. As most of our curing rooms are constructed and now used, it is impossible to preserve a well-made cheese in them from damage by external influences. Thus a large portion of the most profitable part of the dairy (it being made from spontaneous forage, grass, in the flush of feed) gets out of flavor, difficult to keep at home and much more so in foreign markets. This is crowded upon the market in bad condition to increase a demand proportionate to the increasing supply.

## THE APIARY.

### The Honey Resources of Southern California.

There is probably no district of country equal in extent on the face of the globe, that produces more and better honey than Southern California. Facts, we think, will bear us out in the assertion. The honey districts of Southern California are chiefly confined to the foothills and mountains where perennial flowers bloom. The leading honey plants bloom at different intervals, so that bees are enabled to gather honey about three-fourths of the year. Plants and flowers of less importance furnish honey and pollen for the remaining fourth, the mild climate enabling the bee to continue its labor the year round.

The honey producing plants are various, the most prominent of which we will name in the order in which they stand as to the grade of honey they produce. They begin with white sage and extend through the black sage, wild alfalfa, sumach, wild buckwheat, and alfilerilla. At the close of the working season of this year we made a tour of inspection among the apiaries of Los Angeles county, for the purpose of gathering statistics relative to the honey interests of the county, with the following result, which we regard as substantially correct: Number of apiaries, 200; colonies of bees, 12,000; honey produced, 615,670 lbs. The principal amount of honey produced was extracted. The average yield per colony was a little over 51 lbs. This may be regarded as very good when we take into consideration the fact that nearly three-fourths of the bee-keepers worked for an increase of bees, not for honey. Where increase of bees and honey together was the desired object, the results were equally astonishing.

We will here give the results of a few of the leading apiaries in the county: Messrs. Loop, Harmon & May, of San Fernando valley, began business last spring with 135 colonies in movable frame hives, which they increased to 350, and took 60,000 lbs. of extracted honey. E. E. Shattuck, in the spring of 1875, commenced with 46 colonies, and up to this time has increased 1,400 and taken over 50,000 lbs. of honey. J. W. Hazen began business last spring with 130 colonies; increased to 600, and took 16,000 lbs. of honey, and that mostly box honey. A. J. Davidson, an extensive bee-keeper, in one of his apiaries of 120 colonies, which he did not increase, took 40,000 lbs. of extracted honey. Mr. Parker, from 13 colonies, took 7,000 lbs. of extracted honey. In our own apiary we Italianized eight colonies of black bees, and increased them to 40 good colonies, and took 1,200 lbs. of extracted honey.

The above statements we guarantee to be strictly reliable, and they fully sustain the reputation of Southern California as a honey producing country, and demonstrate its peculiar adaptability to that branch of industry.

We are informed by Prof. Harbison, of San Diego, who is thoroughly posted on the honey interests of California, that the leading honey producing counties of the State are San Diego, Los Angeles, Ventura and San Bernardino, and that the probable honey crop in these four counties this season will exceed 2,000,000 lbs. There is a large quantity of honey produced outside of these counties.

But comparatively few of the mountains of Southern California are adapted to agricultural or to horticultural pursuits, while they are most admirably adapted to apicultural, as they are mostly covered with a dense growth of the honey producing plants.

General Fromont, in his report to Congress of his explorations of the Pacific coast, says that it is his opinion that the honey bee could not exist west of the Sierra Nevada. He has, no doubt, long since been convinced of his error. Bees were first introduced in this country about

18 years ago, and little or no attention was given to the honey interests until about three years ago. Since that time the progress of this industry has been most gratifying. Notwithstanding the attainment of its present marvelous proportions, it is, in my humble opinion, in its incipency. Twenty years since, apiculture was regarded throughout the country as a very insignificant occupation, since which time the introduction of the Italian bee, movable comb hives, honey and wax extractors, comb foundations and various other improvements, have given this branch of industry a national character. Its sudden and magical growth has found it with an unsystematized and unregulated market, which, like other branches of trade, will soon become permanent and reliable. The new uses that honey is being put to in preserving and canning fruits, making candies, etc., must soon increase the demand for the products of the apiary. The recent results in experiments made by Messrs. Curry & Jevne, confectioners of this city, as well as Leonard & Co., are most gratifying, and it is now no longer a question that an excellent quality of candy can be made of this pure and most healthful of sweets. This use must soon increase the home demand by supplementing, in a measure, the use of sugar, as it is cheaper and entirely free from all adulterations.—*Los Angeles Herald*.

## FLORICULTURE.

### Diurnal Opening of Plants.

At a recent meeting of the Academy of Natural Sciences of Philadelphia, Mr. Thomas Meehan, editor of the *Gardener's Monthly*, referred to observations he had made this season on the nocturnal and diurnal expansion of flowers, and said that, contrary to the popular impression, it was not probable that light or its absence alone determined the opening of the blossoms. There were some plants, as for instance *Anothera biennis*, the evening primrose; *Anagallis arvensis*, the pimpernel, and others which remained open or otherwise longer when the weather was humid or clear, and were looked on in consequence as kinds of floral barometers; but from other facts it was clear that it was not the weather merely, but some other incident accompanying the weather that governed the case.

For instance, though *Anothera biennis*, and other *Anotheras* opening at evening (and if the atmosphere be moist, would continue open the greater part of next day), many species opened only in the day time, and this they did regularly quite regardless of meteorological conditions. *E. serrata* of Colorado, was one of these. It was regular in opening about noon, and the blossoms were all closed long before sundown.

In other allied families we saw similar divergencies. In the cactus family, *Opuntia* and *Mammillaria* opened only about mid-day; while most of the cereus opened at night. The night-blooming cereus was a familiar example. But the chief interest was in the fact that many had their special hours of day or night for the expansion. The *Portulacca oleracea*, common purslane, opened about 8 A. M., and by 9 had performed all its functions; while a closely allied plant, the *Talinum teretifolium*, from the serpentine rocks of Chester county, opened at 1 P. M., and was closed by 3. The conditions of the weather did not seem to influence them.

There was the same attention to daily periods in the growth of the parts of plants, as well as in the expansion of the petals. In composite plants, the floral growth was generally in the morning, and was usually all over by 9 or 10 o'clock A. M. The elongation and expansion of the corolla was usually completed in an hour after sunrise; but the stamens grew for an hour more, and the pistil continued for still another. There was little if any growth in the floral parts after 9 o'clock in a very large portion of this order of plants. In grasses, *Cyperaceae*, and some rushes, the floral parts were very exact in their time of opening. In the plantains (plantago) the pistils appeared a day or more in advance of the stamens, and these last appeared at about a regular time in each day. In *Luzula campestris*, the wood form, he had by a series of observations timed it exactly. Before 9 the anthers were perfect, but by 10 the pollen had been all committed to the winds, and only dried membranous matter remained. So far as he could ascertain, meteorological conditions did not influence the time in the least in this case.

The popular impression of light and moisture, as agents in this behavior, had seemed to receive a tacit scientific assent. It was clear, he thought, there was a more powerful agency underlying these.

TESTING POISONOUS WAFERS.—Poisonous red wafers, which, more than 50 years ago, were detected as very injurious, seem still (according to *Stummer's Ingenieur*) to be in extensive use. A simple method of recognizing the poisonous character of such wafers has been suggested by M. Feldman, of Detmold. You stick a needle into a wafer, saturate the latter in a few drops of petroleum and light it. When the burning wafer has become a glowing mass, blow weakly on it. While you do so, the metallic constituent drops down, and may be caught on a porcelain plate or a piece of white paper. Even with the naked eye one may recognize the lead granules, and the better if one presses them first with some hard and smooth substance—e. g., a knife handle.—*English Mechanic*.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Worthy Lecturer's Visits.

#### Linden.

EDITORS PRESS:—With little time and less facilities to write up my visits to the several Granges, I still feel it to be a duty, as well as for the good of the Order, to state my whereabouts and progress in the lecture field. Leaving Stockton on the morning of the 8th of January for the Grange at Linden, I was accompanied by District Deputy Bro. Overhiser, who with visiting members in his family and in his comfortable family carriage we reached the Linden Grange in advance of the time set for the lecture. Meeting with several visiting members from other Granges, an interchange of views on the Grange work was freely indulged in, and after dinner at the Hotel De Linden, we all at once proceeded to their comfortable Grange hall, where we found a goodly number assembled. After some time spent in congratulations, etc., the meeting was called to order by the Master, Bro. Lewis, and the State Lecturer, by appropriate introduction, placed fully in charge of the meeting.

One prominent feature of all these meetings is good attention, and thus far the Granges have been well represented by numbers of both Grangers and outsiders. The subjects discussed by the Lecturer being unique and practical, call forth considerable comment, so that I have the constant assurance that the work is one of agitation and progress. After the lecture an opportunity, as usual, being given for remarks by others present, several embraced the opportunity and an hour or more was spent most agreeably in this way. Bro. Overhiser occupied considerable time in detailed statements of the Grange Union store at Stockton, which were listened to and responded to in a most cheering manner. So much interest was felt and shown on this occasion, that two of the ministers of the place indulged in quite a talk on the Grange as they saw and understood it. From Linden I went to

#### Lodi.

Where, on the 10th inst., I met, from Stockton Grange, the District Deputies Bros. Overhiser and Wolf, also Bros. Phelps and Gratton, the retiring and incoming Masters. Each and all having their wives with them, made our meeting doubly cheerful. Visitors were present at Lodi from numerous other Granges, and there having been announced an open meeting in the village church for installation of officers, address from State Lecturer and harvest feast at the hotel to follow, a full house was the result and a most interesting and profitable meeting secured, indicating that at least Lodi Grange is not dead nor dying, but in a most flourishing condition. The installation was conducted by District Deputies Overhiser and Wolf in a most impressive manner, and with that efficiency that these brothers are known to do this work. The lecture was listened to with rapt attention and I believe responded to by a live interest from every one present. The usual opportunity was given for remarks and the time occupied by prominent brothers present, after which the most bounteous feast was partaken of at the hotel dining rooms, when, the day being far spent, all separated with many warm personal leave-takings to their respective homes. The Lecturer was taken care of by Brother and Sister Allison, and by them, after a night of social cheer and rest, taken in their own carriage to

#### Galt.

A distance, by the road, of 11 miles, and against a hard-blowing north wind, so blinding us with dust as to make the trip anything but a pleasant one. Yet a true Granger's interest bore it all, and made of the journey a duty as well as a pleasure. So goes on the Grange work at Lodi. The meeting at Galt was set for Thursday night at 7 o'clock, and held in the Grange hall, but on account of the hard wind prevailing all day the attendance was not great, but a most interesting meeting was had, presided over by Bro. Fowler, Master of Galt Grange. After a personal introduction of the Lecturer to every one present, and a good time of social converse, the meeting was dismissed, and the Lecturer, after a night's rest, went on his way to Roseville. At

#### Roseville

The Grange meeting was called to meet at 11 o'clock A. M., Saturday, the 13th inst., for public installation, which duty was performed by the State Lecturer, assisted by District Deputy, Bro. Nehr. A recess was taken for dinner, and the lecture was announced for 1:30 P. M., at which time the hall was crowded by Grangers and outside visitors. After an address of nearly two hours, which was listened and responded

to with great interest, the usual salutations were indulged in and the Lecturer winged his way to

#### Grass Valley.

Where he arrived about 8 o'clock, P. M., and was met at the depot by a committee from Grass Valley Grange. The Grange was then in session, conducting initiations. A recess was ordered by Worthy Master Barker, at which time the State Lecturer was introduced; first, formally, to the Grange, and then personally to each member thereof. After recess and the initiations over, installation of officers for the year 1877 was attended to by the State Lecturer, assisted by the very efficient and well posted District Deputy, Bro. Hatch, which work, with the Past Master's and newly installed Master's addresses, kept the Grange in session till a late hour, but at which no one showed any weariness or hurry to get away. I was declared to be the guest of the retiring Master, Bro. Barker, under protest from the newly installed Master, Bro. Lewis, that I must divide my time with him and his family, all of which was got along with quite well, as I remained in Grass Valley till Tuesday morning.

My visit in Grass Valley was to me a most interesting and pleasant one. It is a beautiful mountain town, full of life and business, where the raising of fruits and hay form the farm interest; all products being needed and consumed in the adjoining mining country. At 5 A. M., Tuesday, the 16th inst., Bro. Barker had me on the narrow-gauge road for Colfax, and he, being on his way to Sacramento, accompanied me as far as

#### Newcastle.

Where I stopped off to fill my appointment for that day. I found the meeting was set for 11 o'clock, A. M., and, notwithstanding the heavy rains of the previous day and night, also the continued rain on Tuesday, there was a goodly meeting of Newcastle Grange of both Matrons and Patrons. Having the greater part of the day before us, I dwelt in detail on the work of co-operation for their place, adapting the Rochdale plan to their situation as fruit growers, and left them with a well understood plan of how to avail themselves of the new work. The newly installed Master, Bro. Brainard, presided at the meeting. At 4 o'clock, A. M., Wednesday morning, I took the train for Roseville, there to meet the freight train for

#### Wheatland.

Where I was expected to address the Grange that day. I reached Wheatland at 12 M., and found the Grange in session, engaged in the work of initiation. I was at once, upon entering, formally introduced to the Grange, and then a recess announced, and personally introduced to each of the members. Here was a full house of Grangers, and a live interest manifested. I found visiting members from Marysville, who were also a committee from Marysville Grange for the purpose of effecting with the Wheatland Grange a consolidation, which was at that meeting effected, so that the Wheatland Grange from this time forward makes its sure advances with the additional strength of the Marysville Grange. After the initiation, at the request of the Worthy Master, Bro. Keyes, I installed their officers for the ensuing year, assisted by a worthy and efficient brother, after which all partook of a most bounteous harvest feast in the Grange style. The tables then being cleared by the numerous and adept sisters in a manner that showed their efficiency for any kind of work, the hall was thrown open to the public, and the State Lecturer introduced by the Worthy Master.

The delivery of the lecture and consequent remarks from visiting members occupied our time to 4:30 P. M., when I was taken charge of by Bro. Hancock, Past Master of Sacramento Grange, as his guest. He had driven through rain and mud that day, 22 miles, to meet me and convey me to his home. Behind a \$1,000 roadster, Bro. Hancock and the Lecturer sped their way through rain and slush, as long as the last rays of daylight lasted, towards Sacramento county, at a rate of 10 miles per hour. Night coming on, made doubly dark by the great nimbus clouds, that continued to pour down most copious rains, we lost our way, and not till after we had driven some four miles out of our way did we discover our mistake. At this time, however, to our great relief, the clouds lifted up so as to show us a glimpse of the moon, which gave us a cue to our whereabouts, and once more addressing ourselves to the work behind our noble thoroughbred roadster, reached Bro. Hancock's home at 9 P. M., having driven not less than 26 miles. Husband and Lecturer were welcomed and most hospitably provided for by our true Grange sister, Sister Hancock, and the night, to a late hour, spent in genuine social cheer.

The next day I had promised (having no special appointment) to be at

#### South Sutter Grange.

And the weather continuing rainy, Bro. Hancock accompanied me six miles to their place of meeting, where, notwithstanding the muddy roads and continued heavy rains, we found a goodly number of the brother Grangers present. Missing as I did the Matron portion of our Order to make up a full meeting, some three hours were spent in the lecture and mutual greeting, when, with a promise to again visit them in the spring, we returned to the home and promising sheep ranch of Bro. Hancock, where I became greatly interested in his fine bands of thoroughbred and graded Spanish Merinos. Bro. Hancock most thoroughly understands

this business, as is shown by the condition of his entire lot of sheep, which to see as I saw and interviewed most thoroughly, repaid me for my visit.

After a second night spent with Bro. and Sister Hancock in most interesting and to me very profitable converse on the subject of our Grange work, our Grange future, etc., at four the next morning, Friday the 19th inst., I was again behind Bro. Hancock's noble roadster and on our way to Sacramento for me to take the 6:30 A. M. train for

#### Dixon.

Where I had an appointment for that day. The distance (12 miles) through mud and water in a spring wagon was made in just one and one-fourth hours; who among our Grangers has a roadster that can do likewise? It is the best time under such surroundings of darkness, rain, mud and water, I ever made in my life, though I have had considerable experience in such work.

At Sacramento I was handed aboard the Vallejo train by my good and kind brother, wishing me every success for the good of the Order. Does this kind of interest, self sacrifice and labor to get a brother on his way to fill his appointments shows that the Grange work is dead? So far from it, I feel truly revived and aroused to greater energy and usefulness myself in this our most noble calling and glorious undertaking. Arriving at Dixon quite early in the day, and finding the meeting of the Grange to hear the State Lecturer did not come off till 2 P. M., I called upon Bro. Mayer, near town, and after some considerable Grange talk, was taken by him behind a good livery team to see the Past Master, Bro. Dudley, some three miles distant. (It still raining—at which all felt rejoiced). We found that Bro. Dudley had been to town with his carriage to meet me, but hearing that I was with Bro. Mayer had returned home. After some time spent in discussing our Grange situation and the good of the Order generally with Brother and Sister Dudley, dinner was announced and partaken of promptly, so as to give us a chance to get back to the meeting in due time. Returning to town, we found found the new W. Master, Bro. Agee, our good District Deputy, Bro. Merryfield, and a goodly number of brothers and sisters awaiting us, and proceeding to the Grange hall, spent the time till 4 P. M. with hearing the State Lecturer and others discuss the present great work and true interests of the Grange.

At 4:27 P. M. I left for

#### Vallejo.

And being met at the depot by my old friend and Brother, G. C. Pearson, I became his guest till Sunday evening at 6 P. M., when I took the boat for San Francisco. On the following morning, Saturday, the 20th inst., Bro. Pearson accompanied me from his house in South Vallejo to the hall in Vallejo, where I found the W. Master, Bro. Demming, Bro. Wright, our esteemed and able Past Worthy State Lecturer, who for the first time I here had the pleasure of meeting, and a large number of the members of Vallejo Grange. Finding that this was the day also for the installation of officers for the year 1877, I pressed our Worthy Past Lecturer into the work of installation, which, with the assistance of Brother McKinnon, was performed most efficiently and impressively, Bro. Wright being perfection in this kind of Grange work.

After partaking of a most bounteous lunch, which showed how well the sisters of Vallejo Grange appreciated the occasion, an open meeting was announced, and the State Lecturer introduced by Bro. Demming with his characteristic ability and promptness.

Finding here an unusually intelligent Grange, all, from the Master to the Gate-keeper, as officers most thoroughly drilled and posted in their official work, and as members, both brothers and sisters, equally ready to discuss or analyze any proposition for discussion, and more than this, honored as I felt I was by the attendance of the Past State Lecturer and visiting members from Golden Gate Grange, I thought it a good time to introduce (which I did for the first time in my lectures) my opinions upon the finance question, as illustrative of the necessity of the Order of Grangers to carry out the work of co-operation. In a word, I ventured where all (even Grangers) are not yet ready to follow, but in my opinion, it is nevertheless true, and at no distant day will become the very groundwork of our Grange reform in political economy. In so doing, through inadvertence or otherwise, I drew out from three of the brothers a most virulent opposition, but which, as there is always given an opportunity for remarks after the lecture, was ventilated by Bros. Wright, Pearson and Earl, in favor of the Lecturer's standpoint. The subject created an agitation that is not at this time undesirable in our Grange's supine condition, for agitate we must if we are going to arrive at truth and become a power and an influence for good against the startling condition that surrounds the farmer and laborer in our present demoralized legislative enactments—and especially so with reference to finance. Hoping that in this misconstrued effort of the State Lecturer, good will come out of it, I close my labors for a time, on account of the rains and the greater necessity of attending to my personal business at home. I bid my brothers and sisters all God speed in our new work, promising at no distant day to be ready to again take the field as already promised to so many friends.

B. PILKINGTON,

Vallejo, Jan. 20th, 1877. State Lecturer.

## To the Stockholders in the Grangers' Business Association.

Many letters of inquiry from shareholders in the "Grangers' Business Association," have reached this office, making inquiries concerning its prospects, the necessity of the present assessment, and the advisability of paying it.

I have written many letters in reply to questions of similar import, and now hope through the columns of the RURAL PRESS to give such information as will induce members to pay the assessment levied and to sustain the association by giving to it their trade.

The report of the business manager, for the quarter ending December 31st, 1876, (which will be submitted to the stockholders at their annual meeting, to be held on the 21st day of February) will show a net profit over all expenses of more than \$6,300.

This result, and the amount of purchase and sales for six months past, considering that not to exceed one-third of the stockholders have done any business with the association, are certainly encouraging. It promises well for the future of our association. Now, if all stockholders would consign to and purchase through our house, its efficiency would be still more secured. Will not all stockholders unite in doing so hereafter?

We are frequently asked the question, "If you do a strictly commission business, why call in another assessment?"

It is a well-known custom among all commission merchants, and our association is no exception, to make advances to farmers on their produce. This is indispensable to enable us to handle their crops. The want of more ready cash for this purpose has, to a considerable degree, retarded our progress. Hence the necessity of having money, and the necessity of calling in an assessment.

You all understand that a certain amount of commission business must be done in San Francisco. Too little of this was done in the past with a proper regard for the interests of the producers until our association entered the field as a corrective of former abuses. Now, with the record of the many good results, direct and indirect, which we have already achieved by our co-operation, who can tell of the magnitude of our business, and the benefits to be derived from them, if the shareholders of the Grangers' Business Association are true to their own interests, and do business with the house they are interested in. The question of dividends will soon be solved, and shareholders will receive a return for disposing of their produce in this city.

Knowing more of the business prospects of our house than it is possible for shareholders who live at a distance to know, I advise them to pay up this assessment; continue your connection with the association; give it your business; attend the stockholders' meeting, where there will be a full detailed statement of the business of the past year, which I believe will not only be gratifying, but highly satisfactory to all interested.

AMOS ADAMS, Sec'y.

January 30th, 1877.

P. S.—The following names with amounts should be stricken out of the delinquent advertisement which appears in another column: T. J. Wright, J. A. Wilcox and J. Wynn.

### Election of Officers.

MONTEZUMA GRANGE, No. 158, SOLANO Co. Election, Dec. 30th: T. T. Hooper, M.; F. Unger, O.; J. Galbraith, L.; S. H. Deputy, S.; Daniel Cushman, A. S.; Mrs. G. Daniels, C.; C. K. Marchal, Sec'y; G. M. Daniel, T.; J. Calahan, G. K.; Mrs. J. Galbraith, Ceres; Mrs. H. Deputy, Pomona; Ada Daniels, Flora; Mrs. A. M. Hooper, L. A. S.

RIVERSIDE GRANGE, No. 128, SAN BERNARDINO Co.—E. Hart, M.; A. J. Twogood, O.; E. G. Brown, L.; C. Stewart, S.; T. Abbott, A. S.; G. D. Carlton, C.; W. A. Abbott, T.; John Hall, Sec'y; D. Coddington, G. K.; Mrs. V. V. Annabel, Ceres; Mrs. A. J. Twogood, Pomona; Mrs. C. Stewart, Flora; Mrs. A. Stewart, L. A. S.

SANTA MARIA GRANGE, No. 52, SANTA BARBARA Co.—J. J. Holloway, M.; Joel Miller, O.; M. H. Stephen, L.; N. H. Wood, S.; B. T. Wiley, A. S.; John Thornburgh, C.; Mrs. R. T. Holloway, T.; M. D. Miller, Sec'y; W. I. Moore, G. K.; Mrs. Elizabeth Harris, Ceres; Mrs. M. M. Thornburgh, Pomona; Mrs. M. E. Stephen, Flora; Mrs. Charlotte Miller, L. A. S.; R. D. Cook, Trustee.

### From the Granges.

#### Golden Gate Grange.

EDITORS PRESS:—Please give notice that installation of officers of Golden Gate Grange will take place at their new hall in Granger's building, corner of Davis and California streets, third floor, on Tuesday, February 6th, at 7 o'clock P. M.; also dedication of hall will take place Tuesday, February 13th, at 7 P. M. All members are respectfully invited to attend.

J. D. BLANCHARD, M.

GRANGE DIRECTORY.—We are still receiving quite a number of election reports from the Subordinate Granges, and we know there are a number more which should come to hand. In view of this fact we postpone the printing of our Grange Directory, and request Secretaries to favor us with the names as soon as convenient, so that our Directory may be full and correct.



## AGRICULTURAL NOTES.

## California.

## KERN.

**RABBIT POISONING.**—*Californian*, Jan. 27: Mr. W. H. Souther is furnishing his neighborhood with phosphorus without cost for poisoning rabbits, and many are engaged putting it out in soaked hominy, which the pests eat greedily. Mr. Hepburn advises us that he counted 60 dead rabbits on the road back of Captain Noble's farm. If the farmers would take some pains to destroy them while the feed is scarce it will be a great saving. Mr. Souther thinks if he had the grain now which was destroyed by them the past season it would be worth \$30,000. They literally devoured hundreds of acres of green and ripe grain. Mr. Souther gives the following mixture for poisoning rabbits: To 100 pounds of wheat take nine gallons of water and one pound of phosphorus, one pound of sugar and one ounce oil of rhodium. Heat the water to boiling point and let it stand all night. Next morning stir in flour sufficient to make a sort of paste. The rabbits eat it with avidity, and thousands are being killed on the island every week.

## LOS ANGELES.

**PROGRESS.**—*Express*, Jan. 27: We have heard that some of our farmers will plant wheat very extensively this year, the success at San Fernando last year having spurred them to experiment in this grain. We also learn that there will be a much larger area of wheat planted in San Fernando valley this year than last. Mr. Van Nuys has prepared a wider breadth of land, and parties from Ventura county have come into the valley and plowed several hundred acres of new soil, which they will sow to wheat. Instead of the 90,000 cents raised and exported from San Fernando last year, we may have to record 150,000 cents this year. In the southern portion of the county, especially in the Santa Ana region, the farmers are preparing to put in very large crops. Wheat will also, we are assured, be planted extensively in that section. In the Artesia district a great deal of grain will be raised, and the farmers on the Santa Gertrudes are preparing for a very busy season. The same may be said of the Ballona and the San Vicente ranches, both of which are being plowed very extensively. In the vicinity of Wilmington a great many new people have recently settled on the lands subdivided by Dr. McCollum and the Maxwell Bros., and large crops may be looked for. The farms in the vicinity of Compton and Florence will give a good report of themselves, and a great deal of new ground never before broken will be planted to grain everywhere this season. Indeed, from all parts of the county we hear the most cheering news. Ten days ago everybody was despondent; but the rain came, and now everybody is encouraged to look forward to the very best season in its agricultural results we have ever had in this county.

**MANY WELLS.**—The threatened dry season has had a very beneficial effect in stimulating our farmers to the sinking of artesian wells. Some of these experiments have resulted most satisfactorily and developed the fact that a great portion of our county is underlaid with water, which may be tapped at a convenient depth and with a very moderate outlay. Messrs. Dennis McGarvin and M. A. Groom, artesian well borers, made another lucky strike last week. While sinking a well on the lauds of Mr. Lyons, near Fountain valley, they obtained a flow of 14 inches, at a depth of less than 100 feet. Throughout that portion of the county a great number of wells have been sunk, there being six sets of tools now at work within sight of each other. Messrs. McGarvin and Groom have been busily employed for some time, and the number of wells sunk during the fall and winter is far in excess of that of any previous year.

**BEEKEEPERS' MEETING.**—*Herald*, Jan. 27: The Beekeepers' District Convention, which assembled on the 18th inst., was not as much of a success as we hoped for, owing to the exaggerated reports that had gone out relative to small-pox in Los Angeles, together with the heavy rain that fell at that time. The various counties composing the honey belt of southern California were not as fully represented as we would have been glad to have seen. There were, however, quite a number of earnest workers present, among whom were John S. Harbison, of San Diego, the bee king of the world, whose recent trip East has fully convinced him of the great necessity of a reform in the home trade by a more thorough, systematized plan, which can only be accomplished by a more united co-operation of all the beekeepers. In order to secure a better representation from the various counties, the convention (which was only temporarily organized) thought it most prudent to defer a permanent organization to an adjourned meeting on the second Thursday in February, in Los Angeles, when it is to be hoped that more favorable circumstances will insure a larger attendance. Let every beekeeper who feels an interest in creating a better market for his honey and more remunerative prices be present at the next meeting.

**BEES SWARMING IN JANUARY.**—Mr. Kimball, of the apiary of Lincoln & Kimball, informs us that on the 3d inst., while he was absent from the house, there were three natural swarms thrown off in his apiary, all of which were doctored by Mrs. Kimball in good apiarian style. They are working vigorously, building comb,

while the queens are making their rounds of inspection and depositing eggs. How is this for high, our Eastern friends?

## MENDOCINO.

**EDITORS PRESS.**—After a very long spell of dry weather the earth has been gladdened with copious rains, insuring crops for the farmers and feed for stock. The farmers are about through seeding, and now look forward to an ample harvest and remunerative prices. Our fellow-townsmen, Philip Upp, has just completed the new road from Long valley to the county line. When Humboldt county completes the remainder it will open a route of travel long needed from here to Humboldt bay. Heretofore the travel has all been done on horseback and the mails carried the same way.—A. P. MARTIN, Willits, Mendocino county.

## MONTEREY.

**RANCH RENTERS.**—*Democrat*, Jan. 27: We have had the curiosity to ascertain the number of renters on the Gonzalez and Chualar ranches, as an illustration of the system of tillage obtaining on the "big grants" in our valley. It, the system, is a very bad one, the very worst, perhaps, that could be devised, and we are sorry to say that there seems little prospect of change for the better. Of the Gonzalez rancho there will be seeded this year 11,385 acres, allotted as follows: Jno. O'Toole takes 2,000 acres; A. Stevens, 1,200; McKee & Kilburn, 1,200; James Beatty, 900; J. J. Long, 850; Parsons & Son, 800; M. H. Clark, 700; C. Carlton, 600; R. Smith, 500; M. Boin, 500; J. Brannen, 300; James Kennedy, 330; Wm. Withrow, 300; Fisher & McGaffrey, 205; M. Kavanaugh, 200; Wm. Rowe, 225; Dougherty, 200; M. Collins, 175; F. Rice, 150; John Rowe, 150. As a rule, the rental is in kind—one-fourth the yield and sacks; for a small proportion cash rental being paid, at \$3 the acre. Inquiring of the renters what their idea of the value of these lands might be, the response was that \$25 to \$30 the acre was their full worth, the estimate of the owners, however, putting the figures at \$40 to \$50. We were also told that the same land is assessed at \$10 the acre. Consequently, it is easy to see that the inducement to cut up the lands and sell them is small. We did not get the proportions of land occupied by the Chualar renters, but their number shows that they correspond nearly with the Gonzalez lots. The renters are as follows: Forbeck & Peel, J. Boisen, Peterson Bros., J. Iverson, H. Old, S. Parsons, Wm. Parsons, D. Harrigan, J. Joy, E. Lunt, Moon Bros., Hansen & Holman, M. Fanoe, J. Tarp, P. Lauretzeu, Wm. Quentel, Carrick & Blinn, J. Parsons, O. H. Perry, F. Roach, John Kalor, Bockenogen, J. Morton, N. Myland, Lavalle & McGrury—in all 31, and the land so rented being about 12,000 acres. The Chualar grant has upon it, for the use of the renters, good houses and barns—on the Gonzalez grant there being little or no accommodation of the kind.

**ARTESIAN FAILURE.**—Mr. W. Theuerkauf, who has a place east of Gonzalez, five or six miles distant, undertook about a year ago to bore an artesian well. During the time mentioned, two or three men have been at work on the well, sinking it to a depth of 300 odd feet. When 220 feet from the surface they struck water, but could not as they proceeded get it to rise higher. So, after having expended some \$2,500, Mr. T. concluded to give up his experiment of an artesian well in that locality. The failure is unfortunate, though, at any rate, he may boast he has the deepest well in Monterey county.

## NAPA.

**ST. HELENA WINE NOTES.**—*Star*, Jan. 26: Dr. Crane is just now engaged in an enterprise that is new to this part of the country: the building of a house especially for the manufacture of sherry wine. He proposes to go extensively into the making of sherry, by what is known as the "baking" process, that is, keeping, for instance, ordinary white wine subjected to a certain degree by heat, long enough to convert it into sherry. The building is of stone, 28x32, and 16-foot walls. It is made without windows and is, as nearly as practicable, air-tight. It is divided into two low stories for the storage of casks of wine, the second not having a regular floor, but merely joists and slats enough to keep the layers of casks in place. This is to admit free passage of heat. A furnace is provided, and around the room runs 224 feet of flues, to conduct heat. It takes a steady temperature of 150° of heat, day and night, for three months, to develop the full sherry flavor.

**SUPPLIES FROM PRODUCERS.**—Mr. Lewelling informed his brother vintners at the vine-growers' meeting last Saturday that he had received propositions from a Philadelphia firm to be supplied by him with all the wines they could sell. The parties are thought to be responsible and propose establishing a large and powerful company for the sale of pure California wines. To this end they are not willing to buy of San Francisco dealers, but want it direct from the vineyards, and are willing to pay more for it. Mr. Lewelling does not care to undertake this supply alone, but proposes to his brother vintners here the formation of a company for it. The market, if once properly opened, will probably dispose of a very large amount of our productions.

**PUTTING OUT MORE VINES.**—We are glad to say that the wine business has a cheerful enough outlook to induce many of our grape growers to make large additions to their vineyards. Charles Krug puts out this year 12,000 to 15,000 Riesling vines on his hill land, J. C. Weinberger

7,000 to 8,000 of the same, and Dr. Crane 16,000 to 18,000 Zinfandel. This looks as though those who ought to know best have an abiding faith in the future of our one great industry.

## SAN DIEGO.

**DESERT GROWTHS.**—*Sentinel*: "One characteristic of nearly all of these desert growths," says the writer, "is an armor of thorns. They grow sparsely, but gradually combining the mineral elements of the ground, with the carbon, oxygen and nitrogen of the air, in the course of centuries their decay forms a vegetable humus, ameliorates the soil, and paves the way for the growth of plants of a higher order, more useful to man, and more conducive to rainfall. They all consume very many years in arriving at maturity and to power of reproduction. Were they unprotected, some browsing ruminant cropping their succulent herbage, here and there, might in a few months desolate a province and leave it bare of verdure for ages. To the scientific botanist the flora of the desert affords a field rich in material and pregnant with discovery. The family of the *Cacti* alone, is one prolific in variety and wonderful enough to merit careful attention. Abundant juice is an attribute of them all and one to which we shall refer further on. King among them is the *Cactus giganteus* or monument cactus. Imagine a fluted column, round as a barrel, green as a rose-leaf, rising to a height of 30 or 40 feet and clad in a fur of transparent needles, and you have him before you. He is found, now standing alone like a monument over the grave of some chieftain of the races that occupied this soil before us, or again in groups, like the remaining pillars of some ruined temple of Flora. In an upright, parallel cluster of columns, similar in color and form to the one last described, though smaller, rising from a common trunk, like the reeds of some cathedral organ, we see the *Pitaya* or organ cactus, more commonly found along the neighboring state of Sonora. The bee-hive cactus, similar again in color and construction to our king, resembles in form an immense bee-hive of the shape so familiar in our boyhood's primers. It is saturated with juices, which flow freely from the slightest abrasion of its surface. Many a prospector, tortured with thirst, has quickened his faltering steps on sight of the *Viznaga* or bee-hive cactus; and crushing its shell with his pick, as Moses of old smote the rock, has quaffed the refreshing stream that gushed forth from his blow. The melon cactus takes its name from its striking resemblance to a huge green melon, with ribs strongly marked, set on end. (Remember, reader, that thorns encrust all these 'weeds,' even though we forget to mention it). A round ball of sinuous, particolored thorns, exposing to view no portion of their common center, is known as the 'nigger-head.' Nestled in some rocky crevice, a little bunch of pearl-gray, long, thread-like thorns, that might have been interwoven by some feathered songster of the solitude, is known as the bird's-nest cactus."

## SANTA CLARA.

**CANNED GOAT.**—*San Jose Argus*: The Angora Robe and Glove Company of this city have added another feature to their establishment. One of the great drawbacks to the cultivation of mohair on this coast was the fact that in grading up a herd of native goats the wethers were found to be useless and a dead loss to the breeder. There was a slight demand for the meat, but not enough to amount to anything. The organization of the robe and glove company created a market for the skins of the wethers and made goat breeding more profitable. But as parties came to slaughter their goats for the hides, they found another great waste in the carcass, which, although containing large quantities of healthful meat, they were compelled to throw away. To prevent this waste, Mr. C. P. Bailey, President of the company, has been experimenting this season in canning goat's flesh for the market. He has put up several thousands of cans and will find ready sale for it at remunerative prices. If the enterprise turns out as well as it now promises, works on an extensive scale will be erected, and the canning of goat's meat will be made a specialty. Thus we have a clear field in the raising of Angora goats, an industry which is bound to become a prominent feature in the resources of this State. We have no doubt that the heretofore useless wether can be made to pay all expenses of grading up a herd to the required standard of merchantable mohair.

## SANTA CRUZ.

**NURSERY.**—*Courier*, Jan. 26: A Mr. Emerson, from Maine, has bought the Kelly place, just north of Mr. Barson's, where he intends putting out a nursery. No doubt this new institution will pay well, as the fruit business is bound to become one of very great importance in this county, from this time forward, and orchardists are sure to reap handsome rewards.

## SAN JOAQUIN.

**THE WEST SIDE CANAL.**—*Cor. Modesto Herald*: On one side it is a conceded fact that an enormous tax is to be levied, amounting in most instances to about one-fourth the present cash value of the land sought to be irrigated. Should the mammoth scheme fail (which in my candid opinion never will) after having spent \$3,000,000 or \$4,000,000 of the farmers' money, they will be left with heavy mortgages on their lands and with no hope of ever ridding themselves of their burdens. On the other hand, at this critical moment, comes the cry, "Without water we are bankrupt anyhow, for we are not making

a living." The introduction of water upon these barren plains, where, for 100 miles, no sign of tree or shrub can be seen, will bring about an entire new system of agriculture. If there is water enough to irrigate a seventeenth part of a section on each farm, then the project is not a failure, in my opinion. Forty acres under irrigation is worth a section of dry land. Ten acres in alfalfa, which we all know can only be produced with water, in this section will keep—say a dozen cows, which will furnish milk and butter for family uses and besides many pounds to spare, and furnish pasture and hay for the necessary teams on the farm, which now must be procured at the expense of the scanty wheat crop. An acre in fruit trees will supply a family in fruit sufficient to last them the entire year. A large number of hogs can be fattened from the wastage of fruit and sour milk. The vegetables, such as potatoes, etc., instead of being purchased of the traveling vendors, can be raised on the farm, and the benefit thus gained will pay the interest on the bonds many times over. The water necessary for this class of products will be needed only after the cessation of the spring rains, and at a time when the lakes and streams are full to the brim with the water from the melting snow from the various chains of mountains, where the greater number of streams take their rise and flow. A large number of the farms would be irrigated for wheat in the fall, while others would depend on early spring irrigation, and in this way the process of watering would be carried on almost continuously the year round. The valley would then become densely populated. The difference then and now would be this. Now, on an average, there is a house on every 10,000 acres of land. In the future, under irrigation, there would be a permanent resident on every quarter-section of land, and even less than that; and instead of a dry and arid plain, as it is now, it would be continuously decorated from one end of the valley to the other. It would present a picturesque grandeur to the view of every beholder. As to the principal of the debt to be contracted, it is estimated by competent engineers that two-thirds of the entire outlay will be for labor of men and teams on the canal. The work, like all other stupendous enterprises, will be let to the lowest responsible bidders. Farmers living in the valley will, I am informed, get the first refusal, also all kinds of artisans. The commission proposes to let the canal out by short sections, and in this way the farmers of each subdivision can take a contract and get back two-thirds of their money in compensation for the use of their teams and their own services, which for six months out of the twelve, throughout the entire valley, are unemployed.

## SISKIYOU.

**Tobacco.**—*Butte Record*, Jan. 27: Jas. A. Luttrell, of Scott valley, Siskiyou county, has successfully raised between 400 and 500 tobacco plants. Those who have used it declare that it is just as good as any sent to California for sale. Now that it is shown that tobacco can be grown in this northern country, why don't some of the farmers in this vicinity try it? Perhaps a success may be made of it, and if so, as tobacco is a much more profitable crop than that of any of the cereals, it may be advisable for some farmer to try the experiment on a small scale at first to determine the result.

## SONOMA.

**THE POTATO ROT.**—*Petaluma Argus*, Jan. 26: The opinion is becoming quite general among our farmers and others who have given attention to the subject, that the potato rot which prevails in this county and Marin, was caused by the rains which fell early in the fall before the potatoes were ripe. As proof of this, the fact is cited that the rot has not appeared among potatoes that were ripe when the rain came, even though they were not dug for a month afterwards. Deep plowing and early planting are recommended. By plowing deep the tubers have a more healthful and vigorous growth than when the ground is plowed to the depth of only three or four inches; and besides this, the early rains have a much less injurious effect upon the unripe potatoes, because the water soon soaks away or dries up. By planting early the potatoes ripen before the rains come and are not, except in rare cases, attacked by the rot. These are the opinions expressed to us by a number of potato-growers of many years' experience in this vicinity, with whom we have recently conversed. They appear to us to be plausible and well founded.

## YOLO.

**NEW TOWN.**—*Democrat*, Jan. 27: Madison lies almost directly north of Winters, and about 10 miles distant; two miles southeasterly from Cottonwood, (which will probably share the fate of Buckeye—be moved over,) five miles southeasterly from Langville, and 10 miles due west of Woodland, on the main road to Capay valley and the quicksilver mines. This will also be the center of a fine region of country, and as Winters is the shipping point for Putah canyon, so will Madison be for Cache Creek canyon, as soon as the railroad reaches the new town. This is promised by May next, and as the right of way has been secured, the country being all the way a dead level, and no bridging of any consequence required, and as the iron and ties have been purchased to be ready before that time, we see no reason why the promise should not be fulfilled. The late rains give good promise of crops for next season, which will doubtless stimulate the managers to push the road along so as to secure the freighting.





### Address to Scottish Whisky.

Parent of want and woe and crime,  
Fell source of most the ills we dread;  
Waster of talents, strength and time,  
The poor man's deadliest enemy.  
The madd'ning pulse, the reeling brain,  
And burning hearts attest thy reign.

I see thy victims as they pass,  
With haggard cheek and blood-shot eye,  
Hurrying to drain another glass  
To drown that inward agony,  
Which in each bosom burns, a hell,  
A brute desire unquestionable!

I view thy favorite haunts, vile power,  
The ale-house, tap-room, low and mean,  
Where still to waste the precious hour  
Thy squalid votaries convene;  
Tobacco's scent infects the air,  
While through the smoke grim faces glare.

I hear the wild, delirious laugh,  
I see dark passion's withering frown,  
As still fierce drafts they madly quaff,  
In hopes their woe and care to drown.  
Vain hope! the never-dying worm  
Is reveling on each wasting form!

It hath come to a dreadful pass,  
With the poor wretch, whose nerves unstrung,  
Require both hands to lift the glass,  
Whose contents down his throat are flung:  
Reversed is God's and Nature's plan,  
The brute hath triumphed o'er the man!

Seductive poison! slaves to thee,  
When injured Reason leaves her throne,  
Say they were happy, blithe and free;  
But the false boasts their hearts disown.  
Fools that they are! they do not know  
The pleasure they for thee forego.

The fragrance of the woods and fields,  
The knowledge drawn from books and men—  
All that is useful they despise,  
For what is hurtful, false and vain!  
Fatal infatuation binds,  
Gross darkness envelops their minds.

Upon these scenes I need not dwell,  
Where thou presidest day by day.  
They're spread too widely, known too well—  
Thou makest, when beneath thy sway,  
The tenor of domestic life  
Perpetual heart-burning and strife.

Besotted slaves, for them I sigh,  
Oh, what can stop their mad career?  
Although an angel from the sky  
Were sent to warn them, would they hear?  
No! they would scoff, curse, and blaspheme  
This is no fabled poet's dream!

Vile drug, farewell! thy power shall fail  
To wreck, destroy the human race;  
Knowledge and virtue shall prevail,  
And all the arts that raise and bless—  
For oh! if men were good and wise,  
This earth were still a Paradise!

### Farm House Chat.

[Written for the RURAL PRESS by MARY MOUNTAIN.]

There was once a remarkably good and remarkably prosy old minister, who went off visiting every summer and left his pulpit to be supplied by the divinity students, and this change was so refreshing to his people they all felt nearly as good as though they had been off visiting themselves.

The faithful parson was also wonderfully refreshed by his recreations, yet always entered his pulpit again with a doleful face and a long, remorseful apology for the spiritual losses they had sustained while he was providentially detained from ministering unto them.

Now, I have been "providentially detained" from my usual corner in the RURAL, but not having been able to miss myself at all, it is easy to conclude that no apology is needed for staying away, but rather for coming back to claim again the corner so worthily filled by others. In following the "East and West" of Philmore I can sometimes say "amen" quite heartily, and none the less heartily growl a little as I question some of his assertions. In No. 9 his lament is eloquent, almost poetical, over this lack of fragrance in our

### California Wild Flowers.

Also the foliage of our forest trees, and the humble herbs that he really thinks are not as other herbs, "foot-crushed, and yielding fragrance unto death." Now I do wonder where his nose has been all these years. How I would like to test it with a few of our laurel leaves well rubbed up. If he did not "own up" with tears in his eyes then I am greatly mistaken. But perhaps 'tis not fair to remind him of a pungency that needs only a little rubbing up to be strong enough to knock you down. On the road in old Vermont that led to the district school was one favorite spot where our bare feet loved to linger as our delighted noses turned up sniffing toward the old balm-o'-Gilead tree. Just after a summer shower the air and the tree had a very sweet time indeed, and shared with everybody that came along. Right here on our farm, if you ride through a woody road after a rain, up will go your head, nostrils expanding, and you will say: "What! balm-o'-Gilead? bless my soul, that smells just like home! Is it possible?" And away you go, sailing on that sweet breath

straight to the road-side tree in old Vermont, where you loved to stand, "smelling" and squirming little bare toes in the warm mud.

Yes, we have all been down the old cart road and its pennyroyal is not one whit more "penny-trating" than the generous spicy patches now springing freshly in all our fields and pastures. And how plentiful is the wormwood, smelling like a doctor's office, and the lovely trailing yerba buena, that quickly fills a room with its aromatic perfume. Elderberry, yerba santa, sage brush, tarweed,

Lives there a nose with sense so dead,  
Tha' never to itself hath said—  
"There is no smell in field or wood  
To teach me what is bad or good?"

I wish I could give the name of a generous little herb (with blue flowers), that yields a most agreeable incense up through the dust of summer travel. "O, you mean skunkweed!" says a voice at my elbow. "No, indeed, it surely can't be that, for the fragrance, though strong, is really agreeable; but the weed you mention is another evidence that the soul of things was not left out when California was made." Often as we walk or ride in Santa Cruz woods we say to each other, "What a delicious woody smell, just like home!"

Of course we don't find exactly the old fragrances; but led by our noses we cull here and there among small posies, big trees and graceful bushes, making up a bunch to bring home for somebody to smell of—exactly as though we thought, yes, we do really think, that we smell the very breath of Nature's work.

And not alone in Santa Cruz. If Philmore could be led through the sugar-pine forests above Sonora some fine sunny day (and nearly all the days are sunny) it would be good fun to hear him again retract his errors, while inhaling with thankful nostrils the fine rich fragrance of the air. Consumptives go there to cheat grim death and heal sore lungs, simply by breathing the perfumed medicine that floats freely among the grand old trees. Then we might find for him, certainly in Stanislaus county and here in Santa Cruz, those pure white beds of wild flowers whose fragrance is so rich and sweet it becomes fairly oppressive if one is shut up too closely with it. The flower is not much larger than the violet, but its perfume is more generous than any Eastern wild flower I ever saw. Hereabout we have the wild azaleas, flowers of glorious beauty, showing rare tricks of coloring and fragrant enough to refresh the average nose. Also the wild rose or sweet eglantine, the blue lupine, the "Johnny-jump-up," the delicate pink shooting-star and several others whose gift of perfume I can take, but their names I cannot tell. The manzanita blossom has a delicate odor, similar to the first spring blossoms down East.

In venturing to speak up for the posies and noses of California, there has been no attempt to do botanical justice to our floral treasures, for it is now many years since I learned and forgot the amount of botany that was taught in our Eastern schools, and have enjoyed flowers without ever trying to remember their long names.

The simple, old-fashioned names we always remember, and the old-fashioned tastes, too; for when we began to eat checkerberry in the Pennsylvania woods this summer, nobody needed to tell what it was; yet the middle-aged appetite was not half so voracious for it, as one might expect who remembers the childhood greediness for such forage.

But it was a treat to pick the wild, sweet raspberries in old Vermont, and I think they are a little better than our cultivated ones.

But when the wild blackberries began to ripen, we were disappointed and forced to acknowledge that the Santa Cruz hillsides grew a juicier and better flavored berry. It was claimed, however, that the extremely dry, hot summer was to blame for the inferior quality of the fruit; and certainly that must be so, or else I have kept up all these years a very ideal standard of excellence in regard to the flavor of Eastern fruit. Our wild blackberries here in Santa Cruz are far superior in flavor to the tame ones, and especially nice for canning, only you must give them plenty of sugar.

Among the New England farmers fruit is not so abundant as when I was young. The old orchards look pitiful and neglected, the young ones seem to have a hard time of it to keep alive even, and with more tidy and exact farming the wild berries have not so many corners left to skulk in as formerly.

The "thrifty row of currant bushes" that was once almost a fixture in every farm garden, has nearly disappeared before the ravages of worms and bugs, that leave behind them a "beggary account of empty branches."

In southern New Hampshire the rocky pastures were doing a fine business in high-bush blueberries, and from the country station of Epson more than 3,000 bushels of the nice clean fruit had been shipped for city markets.

In California we have already the wild huckleberry, and with proper encouragement, our climate and soil would doubtless adopt and nurture other Eastern berries that seemed so delicious to childhood's appetite; even the wild grapes might keep close enough to nature to turn us out a few "sour grapes" on the sunny Pacific slope.

We do not harm by looking forward to pleasure, to joy—always keeping ourselves in check, so that we do not become softened by our hopes; but we are miserably silly when we lose the gladness of the present for the possible sorrow of the future, when we anticipate pains that may never come.

### Offices of Reason.

[Written for the RURAL PRESS by J. G. LEMMON.]

#### A Counselor of Conscience.

We often hear the remark in reference to the moral conduct of persons, "he thought he was right, so is not to blame," or, "she acted conscientiously in the matter and that is the best any one can do," or, "my conscience tells me I'm right and I'm going to obey it."

Generally these expressions are correct, and the pity is they are heard so seldom. So many there are who have no conscience, seemingly, are totally reprobate, crime-hardened, or the voice of whose conscience is drowned by the clamors of gain and pride, that a thoughtful, conscientious man is a blessing to any community. It is to such we must look for the development of the divine idea, the elevation of human character, the advancement of humanity towards the type of our species—the image of the Creator.

An individual is a positive reality, a family a relative one, a species is an idea, (in the platonic sense,) an idea implanted in nature, impressed upon matter by the Deity. Developing, it uses and discards materials. The perfected result is a type of being, a divine idea. Surely the good in man must be the idea of humanity; what else can approach its divine prototype?

The perception of right and wrong, good and evil, is purely a human attribute. Not an animal below us has the least conception of either. It goes with the upright form, the speaking voice, the ponderous brain of man. The brain of man well-nigh outweighs that of the elephant or monstrous whale. The chimpanzee and baboon have no top head, the seat of the moral faculties, and fossil skulls of pre-historic man show but little more. A man with a large round head, the upper story well filled, is of all men most fortunate, for he may be of most use in forwarding the species along towards its type. But there are few fully developed men yet, and most of us are so flat-headed that we are more or less under the influence of low, selfish motives, and the little conscience we have is under such bias and instruction from them that our moral conduct is far from good. This is becoming more and more perceived and admitted as the world revolves, but the reason why conscience may not always be relied upon as a safe guide is not generally understood. The object of this essay is to elucidate the matter—to present it as it lies in the mind of the writer.

The error lies in the misconception of the office of conscience. Many confound it with the instantly discerning faculty of the mind, but that is intuition, allied to instinct in animals, and relates to physical and mental affairs. Conscience is the spark of divinity in our souls, the gentle monitor for good, the still small voice in the ear, ever warning us to avoid the evil, ever praying us to choose the good, ever pleading for right over wrong.

But conscience does not determine what is right or what is wrong. That is the office of judgment, whose action precedes the exercise of conscience, and it is proverbial that nothing is more apt to be at fault than human judgment.

#### The Court of Conscience.

The mental operations preceding a conscientious act are analogous to the appointments of a court room. Judgment in robes of ermine occupies the bench, while Conscience, the sole juror, appointed by a higher court, sits silent and half concealed in the jury box. The record clerk is Memory, the counselors are Reason and Prejudice, each supplied with his favorite authors. The witnesses are the Perceptives, presenting Conduct for trial. The counselor Prejudice is the hasty, superficial, dogmatic pettifogger who declares the party on trial to be so and so, and moves his instant acquittal or commitment. The counselor Reason is the alert, thoughtful, patient, examining lawyer who carefully questions all the witnesses and compares their statements, often sending the sheriff Research out for other evidence and placing the Eye, the Ear and other witnesses again and again on the stand. If not cried down by the opposing counsel, Reason will exhaust every resource to get at all the facts, but often Prejudice will cut short the examination on some quibble, or make an inflammatory appeal to the passions occupying the court room, who clamor for instant decision; and thus the case is often submitted when but half worked up, or perchance not at all illuminated by Reason.

Now comes the decision of the judge: "From a consideration of the points presented, I declare these (enumerating them) to be in evidence and those are not. He then instructs the sole juror, the arbiter, to find a verdict if the evidence is sufficient, for or against. Notice the grand juror, Conscience, is not a lawyer nor a judge of the law, only a monitor. Whatever Judgment declares to be right, according to the law and the evidence, that Conscience instantly demands must be done. Judgment decides, "This is good." Conscience cries, "Do it!" Judgment insists, "That is evil." Conscience pleads, "Do it not!"

Now it is plain that in order to have good deeds commended and fostered, the Judgment must be well informed and free from bias. Every cool perception must be trained, every violent passion restrained. Prejudice, i. e.,

pre-judging, must be omitted, while all the fact-hunters, the observing powers of the mind, guided by Reason, should be employed before sending a case up for Judgment. Conscience always depends upon Judgment for determining what is right, and hence how important that the instruction shall be true!

The conscientious deeds of the ignorant, the passionate, the prejudiced, are often utterly wicked and criminal. The standard of Right is ever changing, ever advancing. What was admissible, even commendable in the early formative periods, is now condemned by the judgment of nations and punished as most heinous crime.

Eighteen hundred and forty-four years ago, Saul of Tarsus, afterward one of the best of men, was engaged in persecuting even to death Christian believers, and all "for conscience sake," he pleads, "by authority also of the chief priests." For eleven centuries afterward, Christian persecution continued to be the principal occupation of potentates, prelates and peoples. The heroic confession of the converted Saul is a compend of the motives characterizing the actors in this bloody history: "I verily thought with myself that I ought to do these things." The waking up of the nations, their emergence from the gloom of the dark ages, is also epitomized in Paul's next declaration: "But now the scales have fallen from my eyes; now I see."

Webber Lake, Jan. 15th, 1877.

### The Silver Bells.

In Eastern poetry they tell of a wondrous tree, on which grew golden apples and silver bells; and every time the breeze went by and tossed the fragrant branches, a shower of these golden apples fell, and the living bells chimed and tinkled forth their airy ravishment. On the gospel tree there grow melodious blossoms, sweeter bells than those which mingle with the pomegranates on Aaron's vest; holy feelings, heaven-taught joys; and when the wind bloweth where he listeth, the south wind waking, when the Holy Spirit breathes upon that soul, there is the shaking down of mellow fruits and the flow of healthy odors all around, and the gush of sweetest music, where gentle tones and joyful echoes are wafted through the recesses of the soul. Not easily explained to others, and too ethereal to define, these joys are, on that account, but the more delightful. The sweet sense of forgiveness; the conscious exercise of all the devout affections, and the grateful and adoring emotions Godward; the lull of sinful passions, itself ecstatic music; an exulting sense of the well-ordered covenant; the gladness of surety, righteousness, and the kind spirit of adoption, encouraging to say, "Abba, Father," all the delightful feelings which the Spirit of God increases or creates, and which are summed up in that comprehensive phrase, "Joy in the Holy Ghost."—Dr. James Hamilton.

ANGELS UNAWARES.—Miss Coates is described in Dr. Holland's "Nicholas Minturn" (Scribner for February), as "a member of that somewhat widely scattered sisterhood that report conversations which have never taken place. She was without culture, and had nothing to talk about but personalities, of which she was the center; and she had acquired the art, or the habit, of attributing to others the sentiments and opinions which she wished either to controvert or approve. She was, in this way, enabled to give a dramatic quality to her conversation, and to find suggestions for continuing it *ad infinitum*." The following is a specimen of her conversation: "How many times I've said to Mr. Coates, 'Mr. Coates,' says I, 'whatever you are, don't let it be laid to your door that you are greedy, and take advantage of your fellow-men. Entertain angels unawares,' says I, 'whenever you get a chance. Whatever you are, be hospitable,' says I. 'You are not required to be extravagant, and spend so much money on luxuries that you can't give the best advantages to your offspring; but you are required to entertain angels unawares, and furnish them the best that the market affords.' Often and often Jenny has said to me, 'Mother, you entertain more angels unawares than any woman I know of, and you are wearing yourself all out.' 'Jenny,' says I, 'I shall keep on doing so until I drop in my tracks, and open the best room to them, too.'"

NO ORGAN FOR OLD SI.—Some of the members were discussing the question of getting an organ for the church. Old Si remarked:

"When yer passes 'round de hat f'r dat 'musement, jes skip me!"

"Whaffer we do dat?"

"Kase I don't want none ob dis heah bellus music in de ehnrch dat I se 'pendin on fer sal-fashun!"

"What kin' of music do you want?"

"I wants de same ole music that de good Lawd wound up in de nigger's so'l, and dat biles out in streams of praise dat wakes de naborhood f'om solid slumbers."

"Jes plane singin', eh?"

"Plane singin', yer idgit; do yer call dat plane singin' when de kongregashun flings back its head and sings 'Send down de charyrut', f'om de bottom of bo'f lunges as onct?"

"I calls dat plane singin'."

"Den yer all better stick ter yer plane singin' too, 'kase I me tinkin' dat de only win' organ dat yer needs to look arter is de horn oh de Angil Gabril."

They concluded to drop the organ question.



## The Power of Music.

Music possesses a power peculiarly its own. It can excite the purely emotional portion of our nature to a degree without parallel in any other art in which a definite human feeling is not presented to us. In its vagueness lies concealed a readiness to adapt itself to the expression of combined thought and feeling with an intensity altogether transcending any other vehicle which our nature possesses. And the secret of this power I take to be this: Every man and woman who thinks and feels, except in the most commonplace and superficial fashion, is conscious, in some degree, of the inexplicable mysteriousness of the life we live and of the universe we live in. It is not a question of this or that theology, or of this or that philosophy, or of this or that mode of feeling. All of us are conscious of the same desire to escape from the bondage of our personal loneliness and ignorance into some sort of freer atmosphere, in which our faculties may range and expand in a new and more unhampered exercise, and our enjoyment of existence and our perceptions of truths may become more definite and real. And it is because it puts into a species of articulate voice this undying desire that music exercises its spell upon those who are sensitive to its charm.

As in all other matters, men are variously endowed in this respect, and this endowment does not necessarily accompany any other peculiarity of natural endowment. At the same time, the sensibility to music takes various forms, in exact accordance with the rest of man's nature. The man of shallow nature likes one kind of music, the man of thought and depth loves another. There is music which touches the weak and morbid, but which is repellent to all healthy and masculine minds. There is music which by no possibility can be understood and enjoyed by a fool; and there is music which is essentially low and vulgar. —*Cornhill Magazine*.

OUR NATIONAL PRIDE.—As a nation we have been accused of vanity and self-glorification, as all nations have been and are that abound with vitality and possess great resources. If America is more proud of herself than England or France, we fail to see it. The pride of the Englishman has been such that he can hardly recognize America as a nation at all, or as a nation that holds equal importance with his own. A Frenchman's national pride is almost unique in its intensity. To a Frenchman there is nothing outside of France that is worth notice. The nation is content with itself and its home, and comparatively few Frenchmen emigrate or wander. The German's "waterland" is the theme of his most inspiring song. The Swiss, the Swede, the Norwegian, all pet themselves. If Americans possess national pride and are somewhat abounding in its manifestations, they are not peculiar; and a survey of the subjects of their pride will show their sin, if sin it be, to be venial. —*Dr. J. G. Holland, in Scribner*.

A HAWK AMONG HENS.—Gilbert White tells a most dramatic story of a neighbor who had lost most of his chickens by a sparrow-hawk that came down between a faggot pile and the end of his house, to the place where his coops stood. The owner, vexed to see his flock diminishing, hung a net between the pile and the house, into which the bird dashed and was entangled. The gentleman's rashness suggested a fit retaliation; he therefore clipped the hawk's wings, cut off his talons, and, fixing a cork on his bill, threw him down among the brood-hens. "Imagination," says Mr. White, "cannot paint the scene that ensued; the expressions that fear, rage and revenge inspired were new, or at least such as had been unnoticed before; the exasperated matrons unbraided, they execrated, they insulted, they triumphed. In a word, they never desisted from buffeting their adversary till they had torn him in a hundred pieces." —*Scribner for February*.

A RAILWAY BURIAL.—All have been impressed with the thought of the solitary grave which meets the one who dies upon ship-board. The following is a burial in the desert: An invalid colored girl, daughter of poor parents, died early one morning on train No. 6, Central Pacific Railroad, bound west from Ogden. The conductor promptly telegraphed to Battle Mountain to have a coffin made, and all necessary preparations for burying the girl. On the arrival of the train at that station the body was placed in the coffin and borne from the cars by pall-bearers selected from among the passengers, all of whom marched to the cemetery, the friends of the deceased leading and the passengers following two by two. After the usual service at the grave, a collection was taken up to meet the expenses, the passengers returned to the train, and the engine started on after a delay of only half an hour.

BUTTONS VS. SMOKE.—The *Sun* says: The Rev. Dr. Tyng, Jr., recently told his congregation that if the ladies of his church would give up their three-button gloves and wear one-button gloves instead, enough money would be saved to support an orphan house; whereupon some of the ladies suggest to their rector the possibility of saving out of the cigar money of the male members of the church, from the rector down, enough to carry on one or two asylums. They suggest also that three-button gloves do not make a dirt or unsavory odor, and that they have no deleterious effect on the nerves of the ladies who wear them; while, on the other hand, the brethren would be cleaner, sweeter and healthier if they would quit the use of tobacco.

## Young Folks' Column.

## A Valentine.

If you will be my valentine,  
My charming little dear,  
The sun can never help but shine  
Throughout the coming year.

The lessons all will put themselves  
Into your little pate;  
The hardest sums you have, you'll see  
All answered on your slate

If you will be my valentine,  
You'll see in all your walks  
Fresh lemon-drops on every twig,  
And peanuts on the stalks;

While hot mince-pies, all hand in hand,  
Meet you at every stile;  
With raisins marching on in front,  
And figs in single file.

P. S.—But if from you I never hear,  
Nor even get a line,  
I'll ask some other nicer girl  
To be my valentine.

—*St. Nicholas for February*.

## A Real Doll's Wedding.

It is pretty generally admitted, says the *Baltimore American*, that the most interesting of winter parties are those given by the young folks, some of those of last winter having been most memorable occasions. One of a very novel character took place last evening at the residence of Mr. C. C. Fulton, No. 478 Eutaw place, to which nearly 100 cards of invitation were sent out, and few of the young folks invited failed to put in an appearance. The cards of invitation were on embossed paper, gilt-edged, neatly printed, and invoked the presence of guests to the following novel entertainment:

Miss Nettie and Elsie Agnus request the pleasure of your company at the Marriage Reception of their Dolls, on Wednesday, January 10th, from 7 to 12 o'clock P. M.

COL. CHARLIE LONG, COL. WILL GUEST,  
EMMA AGNUS, LOTTIE AGNUS,  
R. S. V. P. 478 Eutaw Place.

The invitation being only to the reception, there was folded inside a tiny ceremony card, inscribed, "Ceremony at 6 o'clock." Of course all the guests received the ceremony cards, and the novelty of the affair created quite a pleasurable sensation among the young folks in that section of the city. When the guests were all assembled, filling the spacious parlor with a bright and happy bevy of lads and lassies from four years of age to 12, the scene was one of unusual interest. Some of the youthful guests, literally carrying out the idea of the entertainment, sent bridal presents, consisting of doll jewelry, tiny fans, card receivers, etc., which were prominently arranged for the inspection of the guests. The dolls who were to be married were arranged on an elevated dais in front of the bay-window, which was decked with evergreens, flowers and marriage bells. They were concealed from view until the ceremony was about to commence, and great interest was manifested by the young people for a sight of them. When disclosed to view the bridal party was found to consist of the two brides and the expectant grooms, with the inevitable typical mothers-in-laws, two matronly-arranged figures, who were standing to the right and left of the party, "fair, fat and 40," looking their characters to the life. The toilet of the brides was very exquisite, Emma being dressed in blue satin, trimmed with lace and flowers, and Lottie in pink satin, similarly trimmed, both wearing wreaths and gossamer veils. Their dresses were trailed in the light of the fashion, and the mimic scene was that of a genuine fashionable wedding. It being customary for little girls of the present generation to christen their dolls as well as marry them, the two grooms were named, respectively, Col. Charlie Long and Col. Will Guest. There were arrayed in full regiments, with epaulets, the uniform being that of the Fifth Regiment, perfect in every detail. There were also four bridesmaids on the dais, and an old grandmother, who came to the wedding in a push carriage, with other visiting dolls, who were presented as witnesses of the ceremony.

At 6:30 o'clock music announced that the ceremony was about to commence, when Miss Nettie Agnus, who represented the officiating clergyman, arrayed in gown and surplice, came forward with solemn aspect and read, with fine effect, the service especially prepared for the occasion. The officiating clergyman then assisted the grooms to place the rings on the fingers of the blushing brides, and a tiny voice was heard to utter: "With this ring I thee wed and with my pocket-book I thee endow."

"Those whom Esther Agnus has directed to be joined together let no boy or girl put asunder, and I pronounce both couples are husband and wife, to live together like good little men and women; and the brides must now allow their mothers-in-law to discharge the cook and put mischief in their little heads. So be it."

The ceremony over, the "wedding march" was struck up, and the bridal party and their attendants having been critically examined by the little guests, the balance of the evening was spent in dancing, frolicking and partaking of the bountiful repast spread out for their enjoyment.

"SHE IS ONE OF OUR GIRLS."—Miss Melissa Wilson, a young lady 18 years of age, shot and killed a panther. The panther had been killing her father's sheep, and his dogs got after the animal and treed it, and the young lady killed it at the second shot. The panther weighed 150 pounds. —*Oregonian*.

## GOOD HEALTH.

## Medical Progress.

It is true, says the *Manufacturer*, that medical practice is still, in many respects, defective, empirical, tentative and even sometimes mere guess-work; hence the carefulness of those who know the deficiencies of the healing arts, while boldness in prescribing belongs especially to quacks, who act after the maxim, "kill or cure," and mostly kill; but, luckily for the quacks, the surviving relations of a diseased patient usually think that he would have died, notwithstanding the medicines he took, while, in fact, the patient who did not die, recovered, notwithstanding the drugs he swallowed.

In the meantime, with all the deficiencies of the medical art, and the little benefit enjoyed often by single individuals, the good done by the clearer insight of the causes of diseases, the study of preventatives and of the correct principles of hygiene has been an immense blessing to mankind in general.

In order to realize this fully, we have only to look at the death lists of large European cities two centuries ago, and we find that a large portion of the then mortal diseases have been deprived of their dangerous tendency, and several other diseases have become extinct. Many people then died of fever and ague. Cromwell died of it. At present it is no longer mortal in the temperate zone, and the reason is that improved drainage and cleanliness on the part of the people in general have caused the disappearance of the moist, foggy and unhealthy atmosphere which surrounded then the dwellings in every densely populated district. Dysentery, or bloody flux, formerly caused many deaths; now it is seldom fatal. Small-pox was the most terrible of all diseases, carrying off victims by the hundreds, and scarring or blinding others by the thousand. Spotted fever, scurvy and the plague prevailed every year somewhere, but now they all are diseases of the past, and this by reason of the more correct knowledge of their nature and the means applied, resulting either in a total prevention, or at least in giving the disease a more mild form and favorable result. Even cholera, which first appeared in Europe 45 years ago, has, by a better knowledge of its nature, lost some of its former infallible malignity. It is the same with scarlatina; and we enter upon the threshold of so much knowledge respecting the nature of phthisis, that we may justly hope to see this scourge of families become more and more rare, and this by preventative measures, to be applied when there is a tendency in that direction.

Preventative medicine is slowly attaining such a degree of perfection, that the time is not very distant when the occurrence of an epidemic will be a reproach to city governments, while the chief functions of the foremost physicians will be the preservation of the public health. This assuredly will be a most noble calling, and the present boards of health, established in our large cities, is a move in the right direction, and has already been a benefit to the inhabitants which they cannot value at too high a price.

## Eucalyptus Tea.

The editor of the *San Diego World* gives the following personal experience: Some months ago the writer read in an English paper of a discovery by some physicians in Europe of the value of the eucalyptus in early stages of cold and fever. Some weeks ago, being taken with a severe cold, we made a decoction of eucalyptus leaves and drank it on retiring to bed. The result was that it brought on a gentle perspiration and sleep, and in the morning all symptoms of the cold had disappeared. A fortnight ago a friend of ours was seized with cold and fever. He had aching pains all over his body and to every appearance bade fair to be confined to his room. We thought of the eucalyptus and told him of our experience. He went home and had a strong decoction made and drank freely on going to bed. It worked like a charm, for he was in perfect health the next morning, only a little weak from profuse perspiration. His wife was suffering from cold at the time and tried the remedy and found it a perfect and immediate cure. One instance more in our own case. Last night, just before retiring to bed, we were seized with a violent chill, accompanied with pains in the back and legs. This was followed by a little fever. These symptoms had presaged a very serious illness a year or two ago, and we thought ominously on the subject. We sent out to the street, had some leaves plucked and our favorite tea was made at once. We drank about a pint and soon fell asleep and to the credit of eucalyptus we say we are as well to-day as over we were in our life. Our opinion is that the tea is perfectly harmless to drink even a large quantity of. For a medicine tree we can recommend everybody to grow eucalyptus.

TARTARIC ACID IN COOKERY.—This acid is put up under the false name of fruitina, and is largely used to make tarts, pies, etc. It is not a rank poison, but cannot be used very extensively without harm, and is no substitute for fruit.

## DOMESTIC ECONOMY.

## Puddings.

## Batter Pudding.

One pint of sweet milk, four eggs, four tablespoonfuls of flour; beat the yolks of the eggs well and stir into the milk; mix the eggs and milk gradually with the flour; add a little salt; whisk the whites of the eggs very stiff and stir lightly through the mixture; butter a pudding-dish; pour in the batter and bake in a quick oven, or bake in cups; when done, send to the table hot, and eat with wine sauce, lemon sauce, or whipped cream.

## Lemon Pudding.

One pint of fine bread crumbs, one quart of sweet milk, one cup of sugar, yolks of four eggs, grated rind of one lemon; beat the yolks well; add the other ingredients, with a little salt; pour into a well buttered pudding-dish and bake until done. When the pudding is cold, beat the whites of the eggs to a stiff froth; add one teaspoonful of pulverized sugar and the juice of one lemon; spread this on the pudding; put it in the oven, until it is a delicate brown. To be eaten with cream.

## Potato Pudding.

Beat well together 14 ounces of mashed potatoes (free from lumps), four ounces of butter, four of sugar, five eggs, the grated rind of a small lemon, a pinch of salt; add a small teacup of sweet milk; pour the mixture into a well buttered pudding-dish; pour a little clarified butter on the top, and then sift plenty of white sugar over it. Bake in a moderate oven three-quarters of an hour.

## Vermicelli Pudding.

Into a pint and a half of boiling milk, drop four ounces of fresh vermicelli, and keep it simmering, and stirred gently ten minutes; when it will have become very thick, then mix with it three ounces and a half of sugar, two ounces of butter and a little salt. When the whole is well blended, pour it out; beat it for a few minutes to cool it; then add, by degrees, four well beaten eggs, the grated rind of a lemon, and, just before it goes into the oven, a small glass of brandy; pour a little clarified butter over the top; bake it from half to three-quarters of an hour.

## Graham Gems.

You are supposed to have the baking irons or "setting" for these gems; else we don't know what you will do. They are to be had of hardware dealers; at least no kitchen is furnished without them. These gems are displacing all other kinds of coarse bread on our table. They can be eaten with butter or without butter, hot or cold, morning, noon and night. They are as handy as crackers; are just what you want for children's lunch, and to fill in when you are making up a picnic basket. They are not only hygienic, but are good in the mouth. They have an almond-like sweetness, and their fiber is like that of nut-meats, giving the teeth just the exercise they crave. No taste of "emptyings." But to our recipe, which will not be half as long as this preamble. Put the irons in the oven, where they will get hot by the time you have mixed the gems. Then take milk and water, half and half, and stir in graham flour, No. 1, till you have a batter that will "drop from the spoon and not run." Stir very thoroughly, the more the better. Drop into the hot irons and bake immediately. (If you are quick you can take the irons out of the oven for better convenience in filling.) The oven is a grand point. It should have a solid heat and bake as fast as it can and not burn. "If at first you don't succeed, try, try again." Make the batter a little thicker or thinner, the oven a little slower or quicker (quicker more likely). There is a way, and you will find it, and then be able to repeat your success as often as you wish.

APPLE DUMPLINGS.—Make a paste of four teacupfuls of flour, half a teacupful of lard or butter, four even teaspoonfuls of baking powder, two teaspoonfuls of water and a little salt. Sift the flour and baking powder together, mix with the lard, then add the water and salt. If you use prepared flour it needs no baking powder. Roll out about as thick as for biscuit, and cut into 12 pieces. Peel and quarter nine apples, cut off the sharp corners and place three quarters in each piece of dough. Roll up carefully and boil for half an hour. For the sauce take a small half of a teacupful of butter, one teacupful of sugar and two teaspoonfuls of corn starch; then add the water in which the dumplings were boiled. Some prefer them baked. This requires a very hot fire.

COCOANUT PIES.—Open the eyes of a coconut with a pointed knife or a gimlet, and pour out the milk into a cup; then break the shell and take out the meat and grate it fine. Take the same weight of sugar and the grated nut and stir together; beat four eggs, the whites and yolks separately, to a stiff foam; mix one cup of cream, and the milk of the coconut with the sugar and nut, then add the eggs and a few drops of orange or lemon extract. Line deep pie-tins with a nice crust, fill them with the custard and bake carefully half an hour.

To a cup of very weak cold tea add the juice of half a lemon. It makes a pleasant beverage for old people who use tea. It is not desirable for the young.





DEWEY &amp; CO.

A. T. DEWEY. W. B. EWER. O. H. STRONO. J. L. BOONE.  
Principal Editor..... W. B. EWER, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.

Advertising Rates: 1 week. 1 month. 3 mos. 12 mos.

Per line..... .25 .80 \$ 2.00 \$ 5.00

Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00

One inch..... 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, February 3, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—The "Packsaddle;" The Mining Debris Trial; D. M. Osborne & Co.; Plowing Tule Sods; Lawful Honey, 65. The Week; Home Manufacture of Agricultural Implements; The Apple Root Plant Louse; Why Some Vines are not Killed by Phylloxera; Windmills; Santa Barbara Nursery and Floral Depot, 72. "California Coffee;" Out of the Rain; The Mantis; How to Sell Peppery Honey; Report of the State Board; Guns, 73. Patents and Inventions, 76.

**ILLUSTRATIONS.**—The "Packsaddle," Coneaugh River, Pennsylvania, 65. Out of the Rain; The Mantis, 73.

**CORRESPONDENCE.**—"Vulcan Coal Mine," Santa Cruz County; Ramie, 66.

**PATRONAGE OF HUSBANDRY.**—Worthy Lecturer's Visits; To the Stockholders in the Grangers' Business Association; From the Granges; Election of Officers, 68.

**AGRICULTURAL NOTES** from various counties in California, 69.

**HORTICULTURE.**—New Gooseberries, 68. Fruit Growing, 68-67.

**ARBORICULTURE.**—Trees for Fruit and Fuel, 67. THE DAIRY.—Heat in Cheese Making, 67.

**THE APIARY.**—The Honey Resources of Southern California, 67.

**FLORICULTURE.**—Diurnal Opening of Plants, 67. HOME CIRCLE.—Address to Scottish Whisky

(Poetry); Farin House Chat; Offices of Reason; The Silver Bells; Angels Unaware; No Organ for Old St.; The Power of Music; Our National Pride; A Hawk Among Hens; A Railway Burial; Buttons vs. Smoke, 70-71.

**YOUNG FOLKS' COLUMN.**—A Valentine (Poetry); A Real Doll's Wedding; "She is One of Our Girls," 71.

**GOOD HEALTH.**—Medical Progress; Eucalyptus Tea; Tartaric Acid in Cookery, 71.

**DOMESTIC ECONOMY.**—Puddings; Graham Gems; Apple Dumplings; Coconut Pie, 71.

**THE SWINE YARD.**—Cooked Food for Swine, 74. **QUERIES AND REPLIES.**—Fruit Growing; Mad Itch; Diabrotica Duodecempunctata, 72.

**MISCELLANEOUS.**—Testing Poisonous Wafers, 67. To Obtain the True Meridian, 74. The Mining Debris Decision; Annual Meeting of the State Agricultural Society, 76.

## NEW ADVERTISEMENTS.

Althouse and Raymond Windmills, Baker & Hamilton, S. F.; Garden Seeds, Peter Henderson, New York City; Central California Colony, M. Theo. Kearney, Manager, S. F.; Sheep Bath, H. P. Wakelee & Co., S. F.; One Hundred Days Tomato, J. A. Foote, Terre Haute, Ind.

## The Week.

This last rain is best of all. The showers at which we were all rejoiced two weeks ago were but declarations of intentions on the part of the elements. The realization comes at this later date. So slight were the effects of the former rains that there had already almost revived the farmer's fears; but this better, freer, more wide reaching. Already the figures of the season's rainfall in some localities are assuming respectable proportions. We note a few which are received by telegraph, giving the season's downfall at the places named up to Wednesday: Sacramento, 6.24 inches; Stockton, 5.67 inches; Ellis, San Joaquin Co., 3.06 inches; Niles, Alameda Co., 5.83; San Jose, 3.77 inches; Colusa, 7.15 inches; Oakland, 8.56 inches; Vallejo, 6.81 inches; San Francisco, 8.33. We have not the largest figures for they would come from Napa, Sonoma and other northern counties. The rain which has not yet cleared away has not done as great things as could be wished for the upper San Joaquin, and for some of the lower coast counties. But there is rain left to come down, and it may fall just where most desired.

This glorious rain gives the assurance of crops and assures the general prosperity of the State. Still may it fall.

ON FILE.—"Agriculture and Mining," G. O.; "Who are Responsible for the Hoodlums," E. B.; "Quack Advertisements," C. R.; "Deer Valley," J. W. D.; Correspondence, F. M. S.; "Napa County Grange Work, Past and Future," J. W. A. W.; Notes from "So. Sutter Grange," "Lodi Grange," "Little Lake Grange;" "In Memoriam," Tehichipa, San Jose, Sutter Mill, American River and Montezuma Granges; "Acacia Insect," A. B.

## Home Manufacture of Agricultural Implements.

The manufacturing industry of our young State is strong and promising. The great shops of our city build some of the most ponderous and intricate machinery which the mechanic has contrived. Scattered here and there throughout the State are the local manufactories, which furnish many valuable implements and tools. Here and there, too, are flour mills and woolen mills, either now in active operation or projected by enterprising men. All these things are marks of the State's progress, and we would have them multiplied until our State shall furnish altogether its own manufactured goods, and support a thriving manufacturing population, giving active home markets for our large agricultural production. There are indications that this advancement is being made, and we refer with pleasure to one outcropping of the progress which is announced from Sacramento. We learn that a few days since there were filed in the County Clerk's office articles of incorporation of the "Sacramento Manufacturing Company," with C. T. Wheeler, of Booth & Co.; R. S. Carey, ex-President of the State Agricultural Society; Robert Hamilton, of Baker & Hamilton; Christopher Green, of Green & Trainor; Albert Gallatin, of Huntington, Hopkins & Co.; E. B. Mott, Jr., formerly of Gillig, Mott & Co.; J. M. Keller, of Keller & Co., incorporators. The object of the company is to manufacture all kinds of agricultural implements used in this State and on the Pacific coast generally.

It is interesting to note some advantages which these enterprising men foresee in the competition which they will have to enter with Eastern manufacturers. A reporter who questioned Mr. Hamilton gained these among other points from him:

The dry climate of the interior region is the most favorable known for the manufacture of goods made in whole or in part of wood. The timber becomes so well seasoned by the atmosphere that if it is dry at all when it is made up, and it soon dries, it does not shrink after working, so that really articles of this class made here and from the same material and by the same workmen would be much more valuable, because more durable, than if manufactured in the moist climate of the East or anywhere on the sea coast. All our experience proves this, and the farming public are well acquainted with that fact.

The cost of freight on this class of goods from the East to California is a large item. On bulky articles, such as threshers, headers, cultivators, plows etc., the freight would amount to nearly or quite one-fourth the market value of the goods at this point—which would be equal to 25 per cent. in our favor. Again, a car load of manufactured goods such as we propose to make would cost for freight a given price, while a car load of unmanufactured goods would cost 25 to 40 per cent. less according to the class; and in addition, while it would be next to impossible to put ten tons weight of these manufactured goods into a car, it will readily contain full ten tons of the raw article. And if goods were to come by sea the proportion would be about the same. This is the law or the rule of all transportation companies, or, in other words, the law of trade. Then the manufactured goods, such as reapers, mowers and the like, have to be boxed at a cost of \$20, and often \$30, and we have to pay freight on the box, besides paying for its cost. This saving on freight and boxing alone would be a fine profit for any such establishment in California, and is sufficient in itself to exclude Eastern manufacturers from underselling us, however cheap their capital may be. And I may say in addition that we can procure the best of Oregon ash laid down here at \$30 per M—and this is just the material for heavy machinery. This ash and Oregon pine are the principal woods we require, and in fact all we require for threshers, headers, harrows, cultivators and the like. For wagons and many other things we would require imported timber—but the bulk of our timber would come from Oregon. There is also another advantage which is often overlooked, but which is in fact and ought to be considered a prominent factor by those who enter upon enterprises of this kind—it will give steady employment at good wages to hundreds of our people—to those who live among us. That is one thing that California much needs—for the wealth thus distributed returns in time in one mode or another, if not in whole, then in part at least, to those who distribute it.

We hear also that a movement for home manufacture is undertaken in San Jose. It is said by the Washington Independent that a number of leading mechanics propose to establish a manufactory for constructing all kinds of agricultural implements at the Alameda foundry. This is between San Jose and Santa Clara, on the line of the new narrow-gauge railroad from Dumbarton point to the Santa Cruz mountains, which will deliver iron, coal, lumber and all other material where needed, at low rates. The company aim to supply farmers with all the tools they need from a garden rake to an improved straw burning engine. About \$50,000 are already subscribed, and as much more is expected before starting the enterprise.

## The Apple Root Plant Louse.

EDITORS PRESS:—I send you a bottle containing specimens of some kind of an insect that infests the orchard of N. E. Hoak, at Prairie Camp, on the headwaters of the Albion river. As you see, it generally attacks small trees near the ground and works down, though it sometimes is found up the bodies of larger trees upon spots where fresh, tender bark can be had. Its effect is to induce slow growth and fruitfulness on large trees, and sometimes death of small ones. It also causes an enlargement wherever it attacks. Washing with a strong solution of sal-soda destroys them, and in most orchards would prove efficacious; but the one in question is located upon bottom land formerly covered with dense redwood forests, and the soil is so rich, light and damp that the roots are often so near the surface that the insects attack the roots at their angles, and are not discovered except when plowing.

C. Ukiak, Cal.

We had no trouble in recognizing an old enemy as our querist's specimens came beneath our microscope. The insect which deposits the woolly substance and causes the diseased excrescences on the roots is the "apple root plant louse," or, as it is frequently called, the "woolly aphid." It is a pest which we have persistently fought on Eastern trees and it is also ruinously abundant in this State. The insect, as we see it in the present root specimens, is in the active larva state and the angry proboscis, which is quite as long as the body of the insect, is ready for persistent destruction of all tender bark within its reach.

Our querist's observation on the working and effects of the insects is accurate. In addition we can but give surety in the following words of Professor Riley in one of his reports: "Although this insect usually confines itself to the roots of the tree, yet a few may occasionally be found on the suckers that spring up round the butt of the trunk, and even on the trunk and limbs, especially where a branch has been formerly amputated and nature is closing up the wound by a circle of new bark. Where it works upon the naked trunk, it often causes a mass of little granulations to sprout out about the size of cabbage seeds, thus producing, on a small scale, the same effect that it does upon the roots. Wherever the insect works, small as it is, it may be recognized by the peculiar bluish-white cottony matter which it secretes from its body, and which is never met with in the case of the common apple tree plant louse that inhabits the leaves and the tips of the twigs."

Our readers will have no trouble in recognizing this louse with a good hand lens, although a more satisfactory idea can be formed of its working capacity and efficient anatomy with a compound microscope. The young lice, as shown in these specimens, are of a light pinkish color. From this larva state it passes at length into a winged form, in which it appears as a tiny black fly with transparent wings.

In the struggle against this pest the fruit grower is aided by nature in the production of other insects which devour it. Professor Riley, in his first report, names three of them: first, a minute fly; second, a footless maggot, about half an inch long, and of a dirty yellow color; and third, a small species of lady-bird. Concerning artificial remedies Professor Riley says:

"The best mode to get rid of the apple root plant louse is to drench the roots of the infested tree with hot water. But to render this process effectual, the water must be applied in quantities large enough to penetrate to every part of the infested roots. There need be no fear of any injurious result from such an application of hot water; for it is a very general rule that vegetable organisms can for a short time stand a much higher temperature than animal organisms, without any injury to their tissues. In laying bare the roots for the better application of the water, a sharp eye should be kept for the friends above described, and when espied they should be tenderly laid aside till after the slaughter of the enemy. Mulching around the infested trees has been found, by Mr. E. A. Riehl and others, of Alton, Illinois, to have the effect of bringing the lice to the surface of the ground, where they can be more easily reached by the hot water."

WHY SOME VINES ARE NOT KILLED BY PHYLLOXERA.—The persistent Frenchmen have been endeavoring to ascertain why it is that some American vine-stocks are overcome by phylloxera and some are not. We read in the Popular Science Monthly that, in a communication to the Paris Academy of Sciences, M. Bontin gives an account of researches made by him to discover this fact. He has discovered in the resistant stocks a certain resinoid principle in proportion about a third greater than that in which it occurs in American non-resistant stocks, and in about double the proportion found in French stocks. M. Bontin considers it essential for resistance that the resinoid should occur in the proportion of 8 per cent. in the entire root and 14 to 15 per cent. in the bark alone. He says that the incision made by the insect, while producing nodosities in the root, is cicatrized by the exudation of the resinous product, and this prevents the escape of the sap of the plant. In non-resistant stocks, on the other hand, there is no cicatrization, as the resinous principle is not in sufficient quantity to produce this effect. If this claim of the Frenchman be true, we would advise the propagators of seedling grapes to judge the excellence of their novelties rather by the chemical analysis of the root than by the usual tests for the desirability of vines and clusters.

WINDMILLS.—Baker & Hamilton, the agents for the celebrated Althouse windmill, make a complete and comprehensive showing for their valuable apparatus, in our advertising pages. We can but direct attention to it. It tells its own story.

## QUERIES AND REPLIES.

## Fruit Growing.

EDITORS PRESS:—I think of emigrating to California in the spring, and should like to go into some business in which I could make a fair profit. I should like to know if fruit growing is a profitable business, and, if so, what part of the State would be best for that business, including the growth of orange and nut-bearing trees? What would suitable land be worth an acre, near market, and are such localities as healthy as other parts of the State? By answering these questions you will confer a favor upon me and many others. A. Donoz, Dodge Center, Dodge county, Minn.

To a question of this kind we cannot answer specifically. Money has been made in fruit growing and money will be made in it if the man who undertakes it have the skill in growing and wisdom in the disposition of the product which are requisite. As our production of fruit has so greatly increased there has arisen a necessity to find distant markets for it either in a green or preserved state. This is the chief problem which now meets our fruit producers. Concerning localities we cannot speak, from the fact that there are so many regions which are now doing praiseworthy things. We have seen splendid fruit from all parts, from the foothills of the Sierra westward to the valleys just inside the Coast range. The price per acre at which fruit land can be bought is nearly as wide in range as the regions producing it. To ascertain matters of the nature mentioned it is necessary to make personal inquiry, because the cheapness of any land must depend upon its situation and quality. Sometimes the cheapest priced land would be found the very dearest by the buyer. We can but advise our querist and his friends to read the articles on the subject of fruit growing which appear in the RURAL PRESS nearly every week, and from them he can secure data to pursue farther when he comes out here to make his examination. For example, this issue contains valuable correspondence on this subject. Further than this, we would recommend our readers who may have land such as Mr. Dodge desires, to write him concerning it. We advise him to come out here first with an idea of making a thorough personal examination of all points which have claim to his consideration. If he will favor us with a call on arrival we shall be pleased to aid him all in our power with information concerning reaching the different parts which he may wish to visit. We make these general comments for the benefit of all our Eastern readers who are now writing on matters like the above. If you have a disposition to emigrate, come first and take a look and we will aid you all we can in making your inspection thorough and satisfactory.

## Mad Itch.

EDITORS PRESS: I have read in your issue of the 27th inst. a letter copied from the Visalia Delta, from Mr. C. H. Robinson, giving an account of his loss of cattle from mad itch. I should not have felt called upon to trouble you with this communication, but for the conclusion of Mr. Robinson's letter, as follows: "First, that the cattle were diseased by eating corn fodder; second, that as long as they had a supply of pumpkins the fodder passed from the system, but as soon as I ceased to feed them the stomach became clogged, causing inflammation, etc.; third, that it was not the hogs entirely."

I have suffered some unpleasant experiences with this terrible disease, and my observations lead me to doubt the correctness of Mr. Robinson's conclusions, except the last, viz.: that the disease is incurable.

I have lost cattle by this disease at three different times; twice after I had fed them on corn fodder or green corn stalks, and once after they had been fed on pumpkins, but in each instance they had been fed where hogs had access to their feed and fed promiscuously with the cattle. I have known cattle to be attacked by this disease that had fed on peaches promiscuously with hogs.

I have often fed cattle on corn fodder, both green and dry, and have never known any bad results to follow, except where hogs were allowed to feed with them. I have always noticed cattle do well fed on corn fodder, green or dry, provided they get enough of it and the hogs are kept away from them.

And my conclusion is that the saliva of a hog is poisonous to the stomach of a cow. Who knows a remedy? Let him respond.—S. T. COULTER, Santa Rosa, Cal.

## Diabrotica Duodecempunctata.

EDITORS PRESS:—I see in the last number of the RURAL PRESS an inquiry in regard to the Diabrotica duodecempunctata. I will give you my experience with him. Some years ago I had a fine patch of German wax haws, and about the time they were ready to bloom this pest attacked them and were fast destroying them, eating out the buds. I had a barrel of air-slacked lime on hand, and not knowing what else to do, I dusted well with it when the dew was on, and the haws left and troubled them no more. I have tried the same remedy since with the same result.—H. J. RUDOLPH, Carpinteria, Cal.

SANTA BARBARA NURSERY AND FLORAL DEPOT.—We have received the descriptive catalogue issued by Messrs. J. & L. C. Sexton, of the above well known establishment. We find the catalogue particularly valuable for its accurate and brief notes of the character and origin of the many trees and plants offered for sale. The stock is large and varied, embracing hundreds of plants, trees and shrubs, valuable for fruit, shade, ornament and beauty. Joseph Sexton may be found at the nursery at Goleta, seven miles west of Santa Barbara, and L. C. Sexton at the floral depot, corner of Montecito and Castillo streets, Santa Barbara.

TO KEEP PLOWS FROM RUSTING.—These rains will keep many a plow from rusting, but after their work is done they may need attention. We read that coal tar applied with a brush to the bright surface of plows, when the work is done, will effectually keep them from rusting. A round or two is sufficient to scour it off, and the plow is saved fully one year's wear, besides considerable vexation.

The ship Young America has just completed another fine passage of 99 days from this port to New York.



### "California Coffee."

EDITORS PRESS:—Having accepted your offer for gathering enough of the coffee to enable Prof. Hilgard to make his analysis, I have made out to get the amount of seed and have sent it as per order by Wells-Fargo. The man I hired to get out the seed got out about a quarter of a pound, and gave up the job. He said he would not get it out for \$5 per pound. Well, I had got the ague and fever broke up, and as I had written I would get it out, I went at it myself. I picked in the cool of the day, and squeezed out the seed the remainder of the day. I could pick more in half an hour than I could squeeze out all day. I have worked faithfully eight days and a little over to get out this amount. Day before yesterday I was taken down with the ague again, and the few seed in the bag I had to put in to make out the amount. These were a few I tried to wash off the pulp and skin, but I see (as you can see) it was no go, and I had to squeeze out every seed with my thumb and forefinger. Now, I would say here, that I am not a man to make boy's bargains, but I have had a hard time of it. I would not do the job again for \$10.—S. B. HITCHCOCK, Brown's Valley, Yuba county, Cal.

EDITORS PRESS:—When one undertakes the investigation of any special subject, it generally turns out that, however simple it may have appeared at first sight, there are more things in it than have been dreamt of in our philosophy. The celebrated "California coffee" is no exception to the rule. However unpromising as the basis of a breakfast beverage, it belongs to a botanical family of varied uses and possibilities, especially in the way of coloring materials; and if I had abundant leisure and material I might go on a year or so following up the various points suggested in the course of this investigation. But so far as any practical question is concerned, the results so far developed are quite sufficient to settle it, and I shall not defer any longer giving them to an expectant public.

First, as regards the nature of the shrub, it is unquestionably the California buckthorn, *Rhamnus Californica*, not uncommon along watercourses in this neighborhood, but apparently more abundant on the foothills, where it also seems to bear a somewhat larger fruit. The latter resembles a small black grape, each berry growing singly. This renders the gathering rather tedious; and having taken a little turn at it myself, I can but subscribe to the sentiment of your correspondent who furnished the three pounds of seed, and whose letter is a part of the practical evidence on the subject. However, since California ingenuity might devise means to overcome the difficulty of harvesting, I applied myself to the determination of the intrinsic merits of the berry. It has a greenish-purple watery pulp, which could probably be separated from the seeds by the same appliances as those used in the treatment of true coffee. A small sample sent me yielded about 22 per cent. of the dried kernels. These, however, bear but a very superficial resemblance to coffee beans, but a very striking one to grape kernels—which is not surprising, since the grapevine and buckthorn are acknowledged to be very close relations. Unlike coffee, the two grains are not contained in a common hull, but are entirely separate. Unlike coffee, too, they do not readily split up into two halves; nor, when split, do they exhibit a horny texture. On the contrary, the hard hull is very thin, and inside is a very soft, white, fleshy kernel, which feels greasy between the fingers, and when crushed on paper at once leaves a grease spot. This is explained by the fact that the seed contains nearly one-third of its weight (32 per cent.) of a yellow oil, possessing the faintly aromatic odor of the freshly crushed seed, and a very slightly acrid taste. Unlike the oil of grape-seed, it does not dry. Since many seeds containing less than the above percentage of oil are cultivated for the purpose of oil-manufacture, that of the California buckthorn might take a fair stand among the oil seeds, were it cheaply obtainable. But when we compare it with the coffee bean, we find that the latter yields even to the chemist only about 10 per cent. of fat.

When the buckthorn seed is parched, it emits at a certain stage a very pungent smoke. But only a very lively imagination could discover in this smoke anything like the aroma of coffee, while the olfactories of a chemist at once recognize that something, viz., the body of the kernel, is being fried in grease. If you extract the oil previous to parching, the pungent odor is absent, and you might imagine that somebody was burning bean straw. It is far otherwise with true coffee, from which all the oil, tannin, caffeine, etc., may be extracted before parching without perceptibly influencing the formation of the volatile aroma which we chiefly prize in that beverage.

Again, coffee properly parched increases in bulk to the extent of 50 per cent. over its raw measurement. The buckthorn seed diminishes in bulk to the extent of 8.5 per cent. by roasting; at the same time it loses in weight about 9 per cent., while coffee parched to a chestnut brown loses 18.

As to the flavor of the infusion, while admitting that tastes may differ, it appears to me that the "Rye-oh" of Confederate times was neither better or worse than the article in question. Having diligently experimented, in those times, upon some coffee substitute that might temporarily deceive the palate, I do aver that broom corn or sorgho seed, peanuts, and even dried and roasted sweet potatoes, may be confidently recommended as cheaper and quite as good for the purpose as the seeds of *Rhamnus Californica*.

Again, the mineral matters contained in true coffee amount to nearly 7 per cent., and of these a large part dissolves in the coffee infusion, contributing essentially to the nutritive qualities of our breakfast drink. The rhamnus seed contains but 2 per cent. of mineral matter, of which only about one-fifth is soluble in water. True coffee contains a large amount (4 per

cent.) of tannin. The rhamnus seeds contain not a trace.

Raw coffee, on extraction with solvents, leaves about 34 per cent. of woody fiber. The buckthorn seed leaves about 50 per cent.

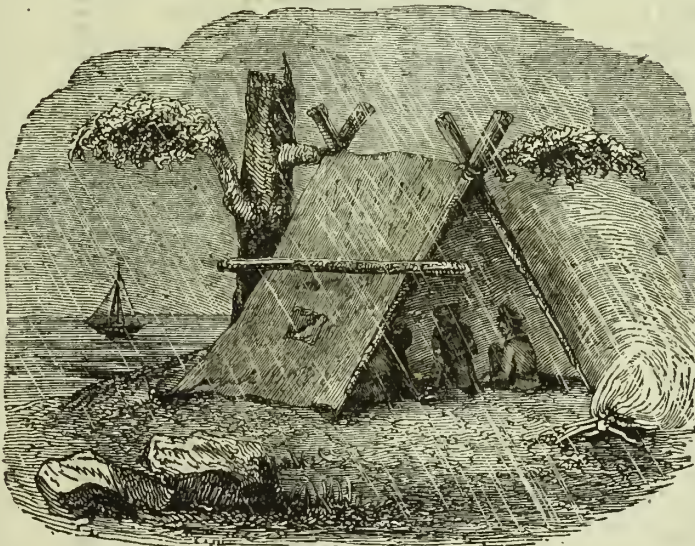
But a portion of the matter extracted by alcohol and water from the raw crushed seed possesses properties sufficiently interesting. At first the solution so obtained is colorless; but as the air acts on it, the liquid turns dark, and deposits a blackish-looking powder, which is henceforth insoluble in water and alcohol, but dissolves in lye or ammonia water with a beautiful purplish-red tint. From this solution, or from the original colorless extract, it can be brought down on cotton or linen with a pretty maroon tint, which may be varied, and fastened with different mordants. The seed contains probably about 2 per cent. of its weight of the pure dyestuff, whose coloring power is, however, very strong. At present these facts are, of course, a mere matter of curiosity, elicited in the course of the investigation for other purposes; yet they may as well go on record, for possibly future use. Should any one desire to test the qualities of the dye, it will not be necessary to separate the seeds from the pulp; both together may be mashed and used in the bath.

I trust, with you, Messrs. Editors, that the introduction of true coffee into Southern California will render the search for cheap substitutes unnecessary.

EUG. W. HILGARD.

University of California, January, 1877.

The thanks of all readers of the *RURAL PRESS* will be freely given to Professor Hilgard for his careful examination and explicit report upon this vexed subject. Many who have been waiting to know whether they might turn the plant to profit will be glad to have the matter settled, even though the chance for profit does



OUT OF THE RAIN.

not appear. Thanks are also due to Mr. Hitchcock, who pursued the seed-gathering in the face of many hardships.

### Out of the Rain.

On a very dark day, the darkest of the winter, we draw our chair to the window and turn the paper so that every ray of the scant daylight may show the wanderings of the pencil's point. The rain is pouring down as it has not poured before for a year. Notwithstanding the fact that a feeling of rejoicing is present because of the generous drenching which the waiting fields are receiving, there is also a sense of comfort produced by the thought of shelter from the storm. Thoughts running in the line of shelter suggest our engraving.

The shelter is a rude one which a party of hunters or campers have thrown up hastily to protect themselves from the storm. We have often reclined beneath such a sloping roof and looked out upon the descending floods and we have felt a comfort in it which surpasses all storm views from plate glass windows. In such a place one gets an acquaintance with the elements which more artificial habitations deny. There is also the tragic interest of a close escape. There is a sense of coziness which high walls do not impart.

It would not be difficult to induce imagination to weave a thread of romance around the inmates of the tent. They might be explorers of some vast unknown region looking for the first time upon scenes not known to civilization. They might be travelers escaping from brigands. If the foreground were different they might be a guard set upon a melon patch; or for that matter they might be melon thieves. The picture will give the fertile mind much chance for surmising. One thing, however, is certain, and with this sublime thought we close the description—they are out of the wet.

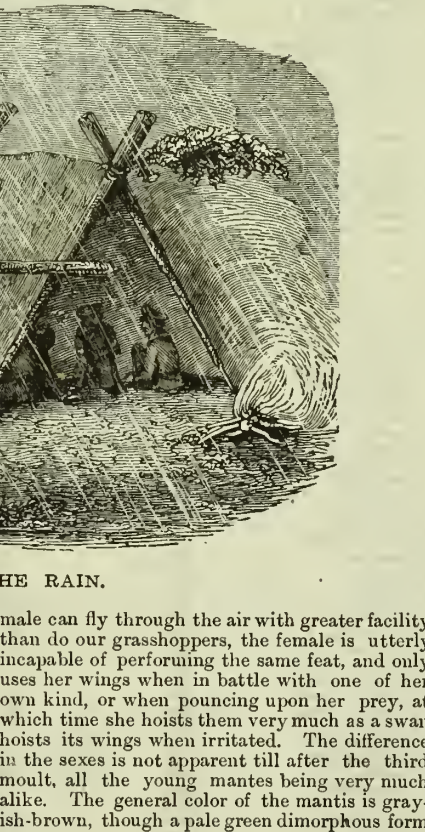
THE electoral compromise bill has passed both houses and has received the President's signature.

### The Mantis.

We had occasion last week, in answer to a correspondent, to mention the beneficial services performed by the ichneumon flies. We give a little illustration below of another very useful insect, and should any of our readers meet with it we would advise them not to harm it, for it is a friend. Prof. Riley notes that the insect is known by different names, as the "rear horse," the "camel cricket," and the "devil's riding horse." The proper name is "mantis," the family being known as *Orthoptera mantida*.

This peculiar and predatory insect is very fortunately quite common in the central and southern parts of Missouri, as well as in most of the Southern States. Its food consists mainly of flies, though it is a most voracious cannibal and will devour its own kind as well as any other insect that comes within its grasp. Prof. Riley has known it to attack various kinds of butterflies, including the male bag-worm, grasshoppers and caterpillars of various kinds, and in one instance a single female devoured 11 living Colorado potato beetles during one night, leaving only the wing-cases and parts of the legs. It disdains all dead food, and never makes chase after the living, but warily, patiently and motionless, it watches till its victim is within reach of its fore-arms, and then clutches it with a sudden and rapid motion. Its appearance is really formidable, and its attitude while watching for its prey quite menacing. And on this account it is held in very general and superstitious dread. It is, however, utterly incapable of harming any one and, as one of our best friends should be cherished and protected.

The female and male differ materially from each other, the male having a long slender body with long wings, while the female has a broad flat body with short wings. Hence, while the



THE MANTIS.

is quite common. The newly hatched larva is invariably light yellowish-brown, though Prof. Riley has seen green individuals after the first moult. The green form is almost entirely confined to the female sex, and seems to be the most common color of this sex when full grown; but it is found likewise, to some extent, among the males, as specimens with green legs and partly green bodies are to be met with, though he has never seen a male that was entirely green.

HOW TO SELL PEPPERY HONEY.—The following, which may be called a hot way to sell peppery honey, we find in the *Ventura Signal*: "Have all the conditions for a positive sale made with a proposed customer on condition that the taste of the honey suits him, and after it has been tasted close the contact at once, as it requires from five to fifteen minutes to discover the pepper in the honey."

### Report of the State Board.

At the recent meeting of the State Society at Sacramento, the State Board of Agriculture made a report which briefly reviewed some of the features of agricultural production in this State. Many of the statements made, namely concerning the amounts of production and the prices realized for certain crops, are things with which our readers are already familiar. Regret is expressed that the Legislature restricted the annual publication of the society to 100 pages, and the point is made that the need is great for practical and original information concerning agricultural operations. This we fully believe, and if besides printing the usual record, the society should undertake a wise series of original investigations into the adaptation of the State to improved agricultural practices, we believe the money necessary to conduct them would be far better expended than in some of the ventures which have cost the State most in connection with the society.

The State Board reads the farmers the following lesson: "The increase shown in the amount of our minor products, as well as in those great staples upon which the prosperity of the commonwealth has heretofore mainly depended, shows a wise movement in the direction of greater diversity in agricultural pursuits. It is to be regretted, though, that in many cases the increase of quantity has not been accompanied by a corresponding improvement in the quality of that which has been sent to market; and that, placed as we are at a certain disadvantage in disposing of our surplus products, by reason of distances and high cost in transportation, it has escaped close practical attention that quality is a matter of first consideration. Such want of care has been notable in wool and in fruit; and resulting low prices appear to have induced less rather than greater attention. A little well done is better than a great deal done badly. Close attention given to the producing capacity and quality of the products of a plot of land, limited in extent, will produce better net results than the same amount of labor partly vaporized over an area much more extended. It is worthy of serious comment, also, that we lack, as yet, a system of rotation in crops such as has been found necessary in other parts of the world to maintain fecundity in the soil, and is beyond question necessary in California. Exhaustion will surely follow the growth upon the same land of a similar crop year after year, even though the land possess the marvelous qualities in that respect of the richest adobe soil ever subjected to so severe a test. The practice, too, of taking everything from the soil and returning nothing to it is yet general amongst our farmers—almost universal. The bad effects of such husbandry will be felt in years to come. Fertilizers have been found essential in older settled lands, and will be in ours; and the chemistry of agriculture deserves greater attention than it has received here, even though our cultivated fields are for the most part new as yet, and give no signs of abatement of their freshness and vigor."

The future of the wheat crop of the State is thus defined: "The average quality of the wheat raised during the season was fair, taking our own production previously as the standard for comparison. It is true beyond question that our State will produce wheat in greater quantities year by year. A more varied culture is being given wide attention, but the fresh lands that are constantly being brought under cultivation will continue to enhance the yield of the most important cereal."

We quote also the following paragraph on wool, which claims that our greatest deeds in this product have not yet been done: "If improvement in quality kept fair pace with the production, there would be little left to ask for; but complaints are frequent that growers have been even less careful than usual to forward their wool to market in a merchantable condition. During the year wool shipments from different sections of the State have varied greatly in condition, and the range of prices has, in consequence, been wider than usual. Fully two-thirds of that which was graded was classed A 1; the remainder A 2 and B. This proportion is about the same as in former years, but, owing to the continued depression in the woolen manufacturing interests of the Eastern States, consumers have exercised greater scrutiny than usual in making selections, and the producers of the poorer qualities have naturally suffered in consequence of this and the additional fact that fine wools have been most in demand during the season. The rapidity, however, with which our stocks have moved off, and the increasing favor with which the California product is viewed by manufacturers, promise well for the future of the industry. Low prices during the season have disappointed wool growers and depreciated the value of flocks, but the industry has received no actual check, it being apparent that the stagnation in trade existing in most countries of the world was the general cause. The increase in wool producing in this State is great; the limit of production will not be reached for many years to come."

GUNS—Continued announcement is made in our advertising columns of the celebrated Winchester repeating rifle, which is sold on this coast by John Skinner, at 103 Battery street, San Francisco. This gun is known but to be praised, and those who have looked along its barrel under the most trying conditions are loudest in their praise of its truth to duty.



## THE SWINE YARD.

## Cooked Food for Swine.

We lately made note of the fact that some of our dairymen were experimenting with cooking feed for their dairy cows. While they are doing this it will be well to read of the results which some Eastern pork producers claim for cooked feed in the hog trough:

Mr. Middleton, of Union county, Ohio, a breeder of fine hogs, testifies that two-thirds of the corn cooked is very much better than the whole raw, particularly for pigs and young hogs. Mr. T. J. Edge, of Indiana, made the following experiment: First, shelled and fed whole; second, ground and made into slop, with cold water; and third, ground and thoroughly cooked. After a fair test with a litter of five pigs, feeding an equal length of time, giving each the same time and test, I found that five bushels of whole corn made 4 1/2 lbs. of pork; 5 bushels less toll of corn, ground and made into thick slop with cold water, made 5 1/2 lbs. of pork; the same amount of meal, well cooked and fed cold, made 8 1/2 lbs. The second experiment was with new corn in two forms, viz: On the ear and shelled and ground before boiling. Ten bushels on the cob made 29 1/2 lbs. of pork, fed in the usual way, on the ground. The same amount shelled, ground and cooked, made 64 lbs. From my own observation, says a correspondent of the *Ohio Farmer*, I find that farmers—in the localities where hog cholera prevails—who cook the feed, lose no hogs, and they assure me that if farmers would adopt it, and at the same time mix in salt, copperas and sulphur, hogs would be healthy.

Mr. J. M. Billingsly, of Spring Valley, Indiana, took 20 hogs, crosses of the Chester White, Poland and Berkshire. He divided them equally, to the best of his judgment, 10 in each lot. On the 1st of December the lot he intended feeding with cooked corn meal weighed 2,110 lbs., and the lot to be fed on corn in ear weighed 2,200 lbs. He gave them fair treatment, dealing alike as to quarters and feed, except that one lot was fed on cooked meal and the other corn in the ear. They were all fed as much as they would eat clean. Those fed with meal gained per day 1.29 pounds. Those fed with corn 1.46 per day. In 51 days the 10 hogs fed on cooked meal gained 670 pounds, and those fed on corn in the ear gained 700 pounds.

Mr. R. L. Bingham, of Bloomington, Grant county, Wisconsin, states that he commenced, February 15th, an experiment in feeding 19 pigs, about 19 weeks old, a cross of Berkshire with common stock. Prior to the experiment the pigs had the run of the farm, and had been fed as much raw corn as they would eat. Then for a period of 28 days they were fed as before, with corn in the ear, and all the water they could drink. At the close of this period their total gain in weight was 667 lbs., made from feeding 55 bushels of corn—a gain of 12 pounds for each bushel of corn. They were then fed with thick mush, made by bringing the water to a boiling heat, and then stirring in the meal ground fine, with the steam still on, allowing the meal to cook five to ten minutes, and adding salt; this was fed to them warm three times a day, as much as they would eat clean. At the end of 28 days they were again weighed, showing a gain of 676 pounds, made on 75 bushels of corn, less toll—a gain of nine pounds for each bushel of corn consumed. He then put 11 of the pigs on raw corn again, continuing to feed the others on cooked meal. May 25th, after a trial of six weeks, those on raw corn averaged a gain of 44 pounds each, and the others an average gain of 37 pounds.

And the following paragraph, which we clip from the *New England Farmer*, shows a similar result: According to a series of experiments, conducted through a term of six years, at the Maine State Agricultural College, it was proved that raw corn-meal for feeding swine is more economical than meal that is cooked. This accords with our own experience, although contrary to common opinion. The extra cost of labor and fuel required to cook food for swine is no small item in a small herd, and must require a considerable increase in the gross number of pounds of pork from the food consumed, to make the operation a paying one.

## To Obtain the True Meridian.

In all of recent works on surveying, it will be found that Alioth, the first star in the handle of the Dipper, is designated as being directly opposite the pole from Polaris, the north star.

The first published account of this method which we have been able to find is in a revised edition of Abel Flint's work on surveying, published in 1833, which states that this method was communicated to the compiler, with permission to publish, by Moses Warren, of Lyne, Conn. It appears that this mode of reckoning had been in use among surveyors for some time previously; but we have not been able to find by whom or when it originated.

In 1800 Alioth was opposite Polaris; but a retrograde movement of the latter, of about 20 seconds a year, has caused Alioth to be, at the present time, 25 minutes ahead, and brings Mizar, the second star in the handle, within five minutes of being opposite; so that, in 15 years more, Mizar will be exactly opposite. Polaris is on the meridian 25 minutes after Alioth has passed the perpendicular, and five minutes before Mizar reaches it.—*C., in Sci. Am.*

## Grangers' Business Association of California.

Location of principal place of business, No. 106 Davis street, San Francisco, Cal. Location of Secretary's office, Room 6, No. 40 California street, San Francisco, Cal.

NOTICE.—There are delinquent upon the following described stock, on account of assessment No. 1, levied on the thirty-first day of October, A. D. 1876, the several amounts set opposite the names of the respective shareholders, as follows:

No. Certificate.	No. Shares.	Amount.
Arbogast, H. W.	149	2 50
Archibald, P.	192	2 50
Ashley, W. D.	992	4 10 00
Allen, E. H.	1317	4 10 00
Archer, John	346	4 10 00
Andrews, G. W.	341	2 50
Anderson, A. F.	411	4 10 00
Armstrong, J. P.	434	2 50
Abbott, A. B.	437	2 50
Abbott, George	477	2 50
Aharr, Peter	1507	2 50
Aiston, John	1404	2 50
Allen, Otis	530	2 50
Alexander, L. P.	753	4 10 00
Anstlin, J. T.	826	1 25 00
Allen, Mrs. Dr. C. H.	1249	5 12 50
Ashley, Angeline	921	2 50
Austin, D. D.	943	4 10 00
Andrews, G. W.	946	2 50
Ashcraft, James	981	4 10 00
Bradley, W. T.	128	1 25 00
Bradley, H. C.	129	1 25 00
Bangs, A. S.	129	2 50
Bugbee, R. J.	65	2 50
Brackett, J. H.	1469	4 10 00
Bagee, C.	167	1 25 00
Babeock, Nellie G.	168	1 25 00
Beecher, J. S. Jr.	290	1 25 00
Brown, B. E.	219	4 10 00
Blanchard, G. B.	215	1 25 00
Boody, J. B.	1425	4 10 00
Boody, J. B.	224	4 10 00
Butler, C. F.	1235	4 10 00
Buckles, H. H.	293	5 12 50
Babeock, M. S.	295	10 25 00
Bell, Henry	317	2 50
Brookes, T. J.	320	1 25 00
Bower, J. W.	1354	4 10 00
Blunkall, J.	1355	1 25 00
Bliss, Geo. H.	354	100 250 00
Bryant, C. P.	381	4 10 00
Brown, John	390	1 25 00
Blankenship, J. A.	443	4 10 00
Bingham, Mrs. J. W.	1392	1 25 00
Badger Flat Grange	432	10 25 00
Brewster, N. T.	1406	1 25 00
Bosworth, Mrs. C. M.	1027	3 75 00
Bosworth, C. M.	1029	10 4 10 00
Barnes, A.	525	1 25 00
Brown, Geo.	584	1 25 00
Bassett, Albert	540	2 50
Baggie, Carl	542	1 25 00
Baggie, Miss Mary	541	1 25 00
Botislow, C.	559	2 50
Baggie, Carl	567	4 10 00
Bassett, Albert	568	10 25 00
Berry, Mrs. Geo. N.	570	1 25 00
Berry, G. M.	573	10 25 00
Benton, T. N.	591	20 50 00
Boss, Alexander	1431	20 50 00
Boss, Mrs.	1432	10 25 00
Barber, M. R.	1440	4 10 00
Barber, Orpha	1441	2 50
Barber, Elam	1442	2 50
Bicknell, Jas. W.	1337	1 25 00
Behrens, W. F.	1047	1 25 00
Beckwith, H. A.	637	1 25 00
Bean, Alex.	639	3 75 00
Brady, E.	1347	2 50
Barnett, J. P.	705	1 25 00
Boothe, C. A.	706	2 50
Boothe, J. R.	708	2 50
Boothe, J. R.	715	1 25 00
Brantstetter, M. F.	720	5 12 50
Bryan, J. W.	734	2 50
Billings, J. R.	738	1 25 00
Bubb, John P.	1108	4 10 00
Bingham, O.	1291	2 50
Byron, Geo.	743	4 10 00
Brown, T. E.	1205	2 50
Boynton, A. A.	773	2 50
Bell, Willis	861	1 25 00
Bubb, John P.	1103	4 10 00
Beardsley, E. A.	874	4 10 00
Brez, F.	1211	2 50
Barnes, Nathan	919	8 20 00
Bohrolew, Peter	972	2 50
Brownell, Fred.	1486	10 25 00
Bailey, S. P.	969	2 50
Brashears, J. W.	1089	1 25 00
Boyd, Stewart	1239	4 10 00
Burns, Owen	1243	10 25 00
Burns, J. H.	1352	1 25 00
Bernard, H. E.	1452	2 50
Brooke, T. J.	1484	30 75 00
Bailey, C. R.	1490	4 10 00
Bagee, Emily C.	172	1 25 00
Brooke, T. J.	170	10 25 00
Carson, Jennie	718	1 25 00
Clark, F. J.	162	2 50
Clarke, J. W.	583	5 12 50
Church, A. M.	1476	2 50
Campbell, W. N.	101	1 25 00
Clark, Mrs. Annetta	595	1 25 00
Cross, J. J.	949	4 10 00
Carr, Jeannie C.	164	1 25 00
Carr, E. S.	163	1 25 00
Clark, W. F.	186	10 25 00
Carson, W. M. K.	1421	10 25 00
Charlton, Edward	243	5 12 50
Carter, S. P.	265	4 10 00
Cooper, M. D.	230	2 50
Clark, Charles	315	2 50
Compton, James	367	4 10 00
Chandler, L.	367	2 50
Cory, Noah	378	1 25 00
Carter, S. P.	423	6 15 00
Cottle, Oliver	1250	4 10 00
Cottle, Stella	1172	4 10 00
Chipman, L. F.	1173	4 10 00
Cox, Alexander	506	1 25 00
Cate, T. H.	1014	1 25 00
Cate, Mrs. Elizabeth	1015	1 25 00
Crane, Mrs. Francis J.	38	5 12 50
Crane, G. B.	37	5 12 50
Caven, William	1049	4 10 00
Combs, Chas. M.	627	1 25 00
Carter, William	1062	4 10 00
Coles, Joseph	1339	2 50
Chapman, W. W.	1201	3 75 00
Chapman, Mrs. W. W.	1200	7 17 50
Coudon, James	1335	2 50
Cadwell, Mrs. A.	1457	5 00
Cushing, Charles S.	975	5 00
Crocker, James	687	5 12 50
Coulter, Rachel M.	1082	4 10 00
Cople, George	1259	6 15 00
Cole, H. J.	707	2 50
Criss, Jacob	723	2 50
Church, L. C.	730	4 10 00
Cook, James	751	2 50
Campbell, Benj.	752	4 10 00
Cantelow, William	774	2 50
Carpenter, W. H.	1207	2 50
Canfield, W. D.	787	10 25 00
Canfield, Mrs. W. D.	788	2 50
Carpenter, C. D.	789	1 25 00
Carpenter, Mrs. O. D.	790	1 25 00
Clark, Charles	834	2 50

Names.	No. Certificate.	No. Shares.	Amount.	Names.	No. Certificate.	No. Shares.	Amount.
Clark, Mrs. Mary J.	835	2	5 00	Harris, Mrs. L.	127	2	5 00
Cadwell, A.	853	7	17 50	Hallett, E.	1538	10	25 00
Cox, John	856	1	2 50	Hill, Wm. McP.	986	40	100 00
Cox, Maria	890	1	2 50	Hegler, John H.	985	5	12 50
Cox, William	893	4	10 00	Herdson, G. W.	1381	1	2 50
Chaplin, Samuel M.	875	4	10 00	Harding, J.	1407	10	25 00
Cowell, H. W.	922	4	10 00	Hall, Samuel	208	1	2 50
Cahlon, T. J.	923	5	12 50	Henkle, G. B.	233	1	2 50
Corcoran, Thomas	905	4	10 00	Hicks, M. C.	1000	4	10 00
Callender, C. R.	970	2	5 00	Hoag, J.	1151	1	2 50
Casey, Daniel	973	10	25 00	Hill, J. W.	1428	2	5 00
Casey, Wm. E.	974	4	10 00	Haw, R. A.	343	10	25 00
Casey, M. E.	975	2	5 00	Holmes, John	366	1	2 50
Casey, Margaret	976	4	10 00	Hatch, R. F.	387	2	5 00
Champlin, C. C.	1008	2	5 00	Haven, H. F.	417	2	5 00
Cunningham, John	1238	4	10 00	Hawkins, T. S.	418	4	10 00
Cullen, Joseph	1450	1	2 50	Hanson, Hans N.	425	2	5 00
Cook, L. H.	1451	1	2 50	Hanson, W. H.	451	2	5 00
Coles, James	1499	5	12 50	Harris, W. C.	1304	2	5 00
Cowden, A.	906	2	5 00	Hixson, W. H.	1033	2	5 00
Dickie, A. A.	1513	5	12 50	Hudspeth, J. M.	517	10	25 00
Davenport, F. W.	997	1	2 50	Hicks, E. A.	519	4	10 00
Davis, Howell	291	5	12 50	Hays, Mrs. Wade	1152	2	5 00
Dodge, David	347	4	10 00	Hays, Mrs. Wade	1303	3	7 50
Donnelly, Peter	419	2	5 00	Hart, H. G.	1252	4	10 00
Dobbins, J. H.	454	2	5 00	Hollenbeck, H. M.	1325	4	10 00
Doss, J. R.	484	4	10 00	Hollenbeck, Mrs. H. M.	1326	4	10 00
Davis & McClung	1400	4	10 00	Hickman, S. B.	1331	5	12 50
Dyer, John	1409	2	5 00	Hickman, Mrs. S. B.	1207	2	5 00
Dobbie, John	552	2	5 00	Hein, John	1053	2	5 00
Dick, William	1322	2	5 00	Henry, Joseph	1056	1	2 50
Dick, S.	1323	2	5 00	Hunter, J.	1433	6	12 50
Dick, D. Y.	1324	2	5 00	Haitcock, J. M.	1067	1	2 50
Dollarhide, A. J.	1209	4	10 00	Haitcock, A.	1068	1	2 50
Dollarhide, A. J.	607	2	5 00	Hudson, T. W.	1066	4	10 00
Dollarhide, Mrs. A. J.	608	2	5 00	Harrell, J. A.	700	2	5 00
Davenport, R. J.	711	1	2 50	Harrell, Mrs. J. A.	701	2	5 00
Davenport, Mrs. R. J.	712	1	2 50	Hanna, J. A.	714	4	10 00
Dunnigan, Mrs. C.	474	5	12 50	Hanna, Mrs. E. G.	715	1	2 50
Doss, John R.	77	6	15 00	Hopkins, W. H.	25	4	10 00
Denman, Andrew	72	2	5 00	Hammer, E.	728	1	2 50
Doak, David	115	1	2 50	Hugh, Charles	9	1	2 50
Daniels, H. S.	153	2	5 00	Hawkins, A. C. Jr.	810	2	5 00
Dyer, D. F.	159	1	2 50	Harris, W. C.	811	5	12 50
Downing, Patrick	174	1	2 50	Harris, W. C.	812	2	5 00
Dudley, G. G.	722	4	10 00	Hutchingson, S. P.	859	1	2 50
Dungan, G. A.	721	4	10 00	Heintz, Joseph	959	4	10 00
Dean, G.	720	4	10 00	Howland, H. S.	1212	2	5 00
Dutton, D. D.	764	10	25 00	Hardsie, Miss Katie	668	4	10 00
Decker, Solomon	766	2	5 00	Hebborn, Jas. R.	266	4	10 00
Daggett, George	796	1	2 50	Heintz, Mary	677	4	10 00
Durham, Geo. W.	908	2	5 00	Hakes, Rebecca	1237	2	5 00
Durham, John	958	4	10 00	Hall, G. W.	1247	2	5 00
Davis, T. C.	957	4	10 00	Harley, John	1496	3	7 50
Dunn, J. T.	961	2	5 00	Harlan, J. C.	1598	5	12 50
Decker, Mrs. Lottie	708	2	5 00	Ink, T. H.	717	5	12 50
Edgar, William	82	11	27 50	Ingalls, C. F.	1402	1	2 50
Eddington, L. T.	104	1	2 50	Ink, T. H.	716	5	12 50
Eddington, Mrs. J. S.	113	1	2 50	Ingalls, C. B.	966	4	10 00
Edmonds, Jefferson	4	2	5 00	James, J. W.	152	1	2 50
Elcus, E. H.	234	1	2 50	Judd, D. B.	157	1	2 50
Eddington, J. S.	107	1	2 50	Johnson, Freeman	267	2	5 00
Edwards, J. G.	1498	10	25 00	Justice, John D.	393	2	5 00
Edwards, H. W.	1443	4	10 00	Jones, H. S.	1005	1	2 50
Eby, L. W.	1637	2	5 00	Jackson, W. M.	449	4	10 00
Eddington, Wm.	1170	5	12 50	Jacobs, G. H.	1003	10	25 00
Eaton, Mrs. Lavina	1054	18	45 00	Jacobs, Mrs. Ann	1092	4	10 00
Eaton, Stephen	1055	5	12 50	Jamison, William	893	2	5 00
Elmore, Mrs. S. O.	1533	2	5 00	Jackson, E. N. B.	1084	5	12 50
Edwards, Ely	1445	1	2 50	Jepson, W. H.	770	1	2 50
Eddy, Mrs. Mary A.	1380	1	2 50	Johnson, Jamison	1090	1	2 50
Eddy, Miss Mary C.	1382	1	2 50	Jepson, W. H.	813	2	5 00
Field, Waterman	85	4	10 00	Johnson, H. H.	1434	5	12 50
Forbes, Alex.	89	5	12 50	Jackson, Asa M.	631	5	12 50
Foltz, Amos	151	1	2 50	Jones, O. K.	187	1	2 50
Fassett, F. R.	1255	5	12 50	Judson, Homer W.	708	2	5 00
French, E. B.	1316	3	7 50	Jonsan, Jes.	1508	1	2 50
Fitzpatrick, B.	190	2	5 00	Johnson, Annie	1435	2	5 00
Flourney, Thomas	1166	8	20 00	Joyce, Michael	1213	4	10 00
Fitzgerald, P.	1430	2	5 00	Joyce, Johanna	1214	4	10 00
Finney, S. P.	369	10	25 00	Judson, Homer	1248	5	12 50
Fowler, J. D.	400	4	10 00	Jones, J. C.	1491	10	25 00
Fisk, Rufus	1171	4	10 00	Keinstuer, John	66	2	5 00
Finley, Miss Mollie	598	1	2 50	Kneeland, G. B.	155	2	5 00
Frost, Mrs. S. L.	1030	1	2 50	Kelsey, John	166	1	2 50
Freeman	1193	2	5 00	Kuhle, William	990	4	10 00
Frazier, D. S.	1348	1	2 50	Kearney, J. W.	1134	5	12 50
Fruit, J. S.	28	10	25 00	Kinney, William H.	541	12	30 00
Fare, V.	760	2	5 00	Kimball, G. W.	253	8	20 00
Fleming, D. P.	1204	4	10 00	Kennedy, J. H.	823	2	5 00
Fields, E.	1203	2	5 00	Kline, S. V. R.	318	1	2 50
Flood, Isaac	837	4	10 00	Kline, S. B.	310	1	2 50
Flood, Betty	838	2	5 00	Kennedy, Stephen	392	1	2 50
Flood, J. A.	840	2	5 00	Kelley, James	1328	4	10 00
Flood, Geo. H.	833	2	5 00	Kelley, Mary	1329	2	5 00
Farwell, Jennie M.	862	1	2 50	Kilgore, Mary	1073	1	2 50
Foster, Lottie	50	1	2 50	Kilgore, Logan	1074	2	5 00
Forrester, Joseph	1210	10	25 00	Keane, Edwin	609	1	2 50
Foster, A. F.	61	3	7 50	Kelth, C. W.	790	2	5 00
Fruits, Geo. A.	884	2	5 00	Keith, P. G.	759	4	10 00
Ficas, Adam	887	5	12 50	Kesselring, E. B.	1353	2	5 00
Furnan, F. M.	936	4	10 00	Kingery, Samuel	830	2	5 00
Furnan, Mrs. F. M.	941	2	5 00	King, Charles S.	885	1	2 50
Fiari, Joseph	1223	2	5 00	Knight, T. J.	882	2	5 00
Ford, Erastus	1302	2	5 00	Kingery, Mrs. Jane C.	836	1	2 50
Ford, Mrs. Erastus	1375	2	5 00	Kerr, J.	1361	2	5 00
Fuller, R.	1536	2	5 00	Kenyon, James M.	787	2	5 00
Furnan, F. M.	211	2	5 00	Kincaid, R. D.	624	1	2 50
Gibbs, Charles	108	1	2 50	Klippel, Philip	1090	1	2 50
Grigaby, A. D.	1601	10	25 00	Kee, James	1388	4	10 00
Gienazzi, John	1234	2	5 00	Kee, William	1231	2	5 00
Gibbs, Mrs. Emma	100	1	2 50	Keer, John J.	311	8	20 00
Grigaby, A. D.	111	1	2 50	Lithgen, W.	69	1	2 50
Grigaby, Mrs. A. D.	112	1	2 50	Leighton, Joseph	205	4	10 00
Grigaby, A. F.	117	1	2 50	Lake, D. J.	1356	1	2 50
Grigaby, Mrs. M. E.	118	1	2 50	Leighton, E.	875	2	5 00
Gyte, Joseph	139	1	2 50	illard, David B.	421	1	2 50
Grigaby, A. T.	176	3	7 50	Little, Horace	1241	8	20 00
Grimes, Eli	1277	2	5 00	Lacque, Andrew	495	5	12 50
Gaston, Hamilton	302	2	5 00	Larrell, Mrs. M. J.	1110	1	2 50
Glass, Albert W.	1143	2	5 00	Larrell, William	1175	2	5 00
Glass, David	1145	2	5 00	Linekin, W.	540	4	10 00
Gould, Charles	1163	1	2 50	Longmire, Joseph	1034	6	15 00
Greenwood, H. A.	1169	4	10 00	Longmire, Joseph	1066	10	25 00
Gardner, Mrs. S. M.	850	1	2 50	Lawrence, Wm. H.	735	2	5 00
Goulson, John	874	1	2 50	Lapham, C. P.	758	4	10 00
Goff, W. K.	391	1	2 50	Long, S. W.	767	10	25 00
Goodwin, J. P.	463	2	5 00	Linebaugh, John	784	2	5 00
Guilling, Lawrence	1011	5	12 50	Looust, William	777	1	2 50
Gould, O. P.	1410	1	2 50	Lindner, Lucinda	899	2	5 00
Gallagher, John	531	4	10 00	Lindner, John D.	847	10	25 00
Grow, W. W.	577	1	2 50	Lombard, Jennie M.	923	2	5 00
Griffin, Thomas	1333	5	12 50	Lombard, David	999	4	10 00
Griffin, Alice	1334	5	12 50	Lunny, Philip	127	2	5 00
Gregson, James	518	5	12 50	Longmire, Joseph	1010	1	2 50
Goodrich, Miss Ida	1035	1	2 50	Laird, Alex.	1006	1	2 50
Goodrich, Mrs. H.	1036	1	2 50	Loyet, A. J.	1107	1	2 50
Goodrich, H.	1038	2	5 00	Loyst, James	900	1	2 50
Gridley, Daniel	1046	4	10 00	Lafesh, Peter	903	4	10 00
Gillaspay, R. C.	629	4	10 00	Leighton, Joseph	905	4	10 00
Grigaby, Mr. Em J.	1474	13	45 00	Leighton, Mrs. E. D.	939	2	5 00
Groche, A.	614	6	12 50	Litchfield, A.	953	4	10 00
Guldager, Hans	651	2	5 00	Litchfield, ———	954	4	10 00
Gaven, A. P.	1263	10	25 00	LeClert, Sebastian	971	2	5 00
Gibson, C. S.	1306	4	10 00	Low, W. W.	1102	1	2 50
Gaston, Hugh	663	4	10 00	Longmire, Joseph	983	3	7 50
Gibbs, Mrs. J.	1106	2	5 00	Lander, Israel	331	1	2 50
Gregory, Henry	1309	5	12 50	Lassell, H. L.	1385	4	10 00
Gibbs, Joseph	1198	2	5 00	Martin, S. M.	79	2	5 00
Gibbs, Henry	1123	10	25 00	Madden, J. W.	84	2	5 00
Garrigus, F.	732	1	2 50	Maybourn, C. J.	165	4	10 00
Gericke, ———	809	5	12 50	Merryfield, J. C.	1392	40	100 00
Gillis, Peter	43	1	2 50	Merryfield, J. C.	1392	10	25 00
Griffin, Mrs. E. E.	878	2	5 00	Merritt, Joseph	190	5	12 50
Giffard, J. P.	915	2	5 00	Merritt, A. P.	185	7	17 50
Gilbert, J. W.	930	4	10 00	Mullen, C. W.	184	10	25 00
Groves, J. E.	940	2	5 00	Murphy, J. S.	183	20	50 00
Glen, W. S.	1544	4	10 00	Muney, J. S.	209	1	2 50
Hacklin, S.	801	2	5 00	Morrison, E. D.	204	4	10 00
Haskell, H. W.	1058	2	5 00	Marvin, Joseph	210	1	2 50
Hurlbut, Nathaniel	71	6	12 50	Meyer, A.	1422	4	10 00
Harris, H. H.	125	2	5 00	Mathews, Peter	264	4	10 00



Names.	No. Certificate.	No. Shares.	Amount.	Names.	No. Certificate.	No. Shares.	Amount.
Meffard, J. B.	279	2	5 00	Reed, J. T.	376	1	2 50
March, James.	1346	5	12 50	Rhyne, H. W.	1002	1	2 50
Moore, Samuel L.	1146	2	5 00	Reed W. J.	802	1	2 50
Murphy, Thomas.	326	4	10 00	Richardson, G. W.	56	1	2 50
Martin, C. W.	345	2	5 00	Robinson, Joseph.	260	1	2 50
Meyer, F. R.	395	1	5 00	Rose, Mrs Rebecca.	1013	2	5 00
Manter, John.	396	2	5 00	Romine, G. W.	1094	1	2 50
Matthew, Peter.	430	2	5 00	Romine, Mrs E.	1095	2	5 00
Matthew, Catharine.	431	4	10 00	Roberts, Emma.	1395	1	2 50
Maxwell, J. L.	444	1	2 50	Roseburg, Allen.	664	4	10 00
Matlock, Jonathan.	471	1	2 50	Rollins, Mrs N. F.	1215	5	12 50
Martin, S. M.	433	2	5 00	Rutledge, A. E.	742	2	5 00
Miller, Daniel E.	493	5	12 50	Rutherford, Mrs A. H.	967	4	10 00
Moore, A. N.	1405	2	5 00	Roudolph, C.	382	2	5 00
Mertes, Nicholas.	1413	2	5 00	Robinson, C. L.	1427	5	12 50
Murray, W. H.	1414	1	2 50	Spencer, W. H.	67	1	2 50
Murray, L. H.	1415	2	5 00	Stewart, J. S.	88	5	12 50
Musgrove, S. H.	515	2	5 00	Stear, A. C.	87	2	5 00
Maston, Thomas.	516	1	2 50	Swain, Albert.	86	3	7 50
Maddocks, Winthrop.	520	4	10 00	Stice, M.	122	1	2 50
Marmen, H.	558	4	10 00	Stice, Mrs M.	126	1	2 50
Mansfield, J. M.	614	25	62 50	Sinclair, James.	153	1	2 50
Marshall, J. L.	1057	1	2 50	Strentzel, J.	1294	10	25 00
Marion, Owen.	652	2	5 00	Swain, Albert.	197	3	7 50
Manning, Andrew.	1264	5	12 50	Stanley, Frank.	214	2	5 00
Mahler, Henry.	684	10	25 00	Swain, Thomas.	1573	10	25 00
Martz, Martin.	26	5	12 50	Stone, W. W.	1236	4	10 00
Martz, John.	27	5	12 50	Smith, W. W.	1167	10	25 00
Mills, O.	722	1	2 50	Snow, W. H.	330	4	10 00
Miller, John.	1357	1	2 50	Strentzel, Mrs L. W.	333	1	2 50
Moe, H. M.	10	2	5 00	Shackford.	339	2	5 00
Morrison, Willis.	857	1	2 50	Shedd, E. D.	351	2	5 00
Morrison, Sarah M.	858	1	2 50	Sprague, H. B.	370	4	10 00
Marshall, C. K.	1313	4	10 00	Steele, R. E.	373	4	10 00
Morrison, E. D.	934	4	10 00	Stott, J. C.	422	4	10 00
Mayberry, Alexander.	933	4	10 00	Scott, Mary G.	437	2	5 00
Miller, Milton.	932	2	5 00	Sevier, W. D.	441	2	5 00
Munson, A. B.	924	4	10 00	Sturte, H. C.	1119	5	12 50
Meyers, George.	927	2	5 00	Selling, Peter.	459	2	5 00
Morrison, Mrs E. D.	930	2	5 00	Stephens, James M.	460	2	5 00
Meyer, Lizette.	962	2	5 00	Stephens, William A.	461	2	5 00
Meyer, J. K.	963	2	5 00	Sherman, Frank.	1468	4	10 00
Mama, David.	964	2	5 00	Stephenson, Daniel.	1399	1	2 50
Moore, Sarah.	960	2	5 00	Stiles, A. H.	1022	4	10 00
Moore, Henry.	1487	2	5 00	Schott, Adelia B.	1024	1	2 50
Maddaw, Gilbert.	1101	1	2 50	Schott, John.	1026	1	2 50
Moody, J. T.	1105	1	2 50	Stiles, Mrs Mattie.	1030	4	10 00
Muncey, William.	1353	1	2 50	Sullivan, Isaac W.	521	4	10 00
Merryfield, J. C.	1397	60	150 00	Schilling, Jacob.	554	4	10 00
Meck, William.	1493	10	25 00	Smith, John.	21	10	25 00
McBride, Thomas.	1407	2	5 00	Sheldon, B. N.	20	10	25 00
McAllister, Charles.	724	2	5 00	Stewart, James.	1330	10	25 00
McDougal, A. L.	388	1	2 50	Strentzel, L. E.	1295	5	12 50
McDermid, Joseph.	1466	2	5 00	Strentzel, L. W.	1296	5	12 50
McDermid, J. E.	557	6	15 00	Strentzel, F. John.	1297	10	25 00
McClendon, W. J.	316	1	2 50	Smith, F. M.	1335	3	7 50
McCray, George C.	677	2	5 00	Swift, Mrs H.	1042	1	2 50
McClelland, J. H.	324	1	2 50	Swift, Mrs J. J.	1043	4	10 00
McCune, H. E.	325	5	12 50	Steele, H.	621	1	2 50
McCool, W.	383	1	2 50	Seawell, Charles.	625	1	2 50
McChristian, Sylvester.	1416	2	5 00	Stafford, Malle.	630	2	5 00
McComas, C. L.	737	1	2 50	Stone, —	653	1	2 50
McCubbin, Robert.	756	4	10 00	Stone, Wel G.	658	1	2 50
McChristian, Owen.	886	4	10 00	Skilman, Theodore.	1122	5	12 50
McCall, Mrs Maria.	866	1	2 50	Symonds, Alfred.	1320	5	12 50
McCall, Abijah.	865	1	2 50	Steele, Mrs H.	670	1	2 50
McCollough, C.	399	1	2 50	Stearns, W.	682	5	12 50
McEntire, R. N.	1418	4	10 00	Silvester, T. G.	683	5	12 50
McEntire, Sarah L.	1419	5	12 50	Stearns, Mary J.	685	3	7 50
McEntire, Elizabeth.	121	1	2 50	Skinner, Oliver C.	1098	5	12 50
McEntire, J. J.	119	1	2 50	Swoope, William H.	739	2	5 00
McEntire, R. N.	310	1	2 50	Southerland, James.	755	4	10 00
McIntosh, A. M. D.	331	4	10 00	Smith, J. B.	797	2	5 00
McIntosh, Mrs May L.	942	4	10 00	Swan, T. H.	803	2	5 00
McGreevey, Richard.	1200	3	7 50	Sherman, John.	798	4	10 00
McGreevey, Richard.	1200	2	5 00	Smith, E. H.	1387	2	5 00
McHarry, James C.	1327	10	25 00	Shawver, C. V.	827	1	2 50
McMullen, George C.	1353	10	25 00	Sears, Charles B.	849	4	10 00
McPhee, Frank.	1159	2	5 00	Scott, William W.	854	1	2 50
Nicher, A. D.	1412	2	5 00	Stone, M. B.	871	1	2 50
Nickson, Ludwig.	424	2	5 00	Sitton, S. P.	54	1	2 50
Nickerson, J. R.	1506	2	5 00	Sitton, Minerva.	55	1	2 50
Ollinger, John.	232	1	2 50	Stice, Moses.	880	3	7 50
Owen, William.	551	2	5 00	Shoemaker, Mrs Elizabeth.	1097	10	25 00
O'Neill, James.	543	2	5 00	Service, John.	890	2	5 00
Orton, William.	83	10	25 00	St Clair, F. C.	1470	2	5 00
Osgood, J. H.	1088	2	5 00	Sary, S. A.	925	2	5 00
Owens, J. R.	944	2	5 00	Strickland, Mrs E. M.	1351	2	5 00
Parker, G. L.	258	1	2 50	Snow, Mrs W. H.	937	4	10 00
Parker, D. F.	281	1	2 50	Stockdale, D. T.	1104	1	2 50
Parker, D. F.	605	3	7 50	Stone, Wm G.	1366	1	2 50
Pierce, Frank E.	593	10	25 00	Sydnor, Miss Fannie J.	1379	1	2 50
Pond, S. P.	453	4	10 00	Smith, W. C.	1594	2	5 00
Parker, O. E.	466	1	2 50	Scott, D. P. H.	1595	5	12 50
Parker, Mrs M. E.	468	1	2 50	Stone, J. M.	1136	8	20 00
Powell, Thomas.	464	2	5 00	Sowash, J.	154	1	2 50
Perkins, Ed E.	462	2	5 00	Smith, W. C.	1350	2	5 00
Parker, Catherine.	1223	1	2 50	Shields, Wm.	978	4	10 00
Parker, Miss Nellie.	1224	1	2 50	Taylor, J. F.	394	1	2 50
Parker, James.	1225	1	2 50	Taylor, William.	726	2	5 00
Purrie, A. S.	1226	2	5 00	Thomas, T. J.	1510	5	12 50
Purrie, Mrs A. S.	127	2	5 00	Turner, W. H.	1509	2	5 00
Parker, John.	647	10	25 00	Tindall, Calvin.	510	1	2 50
Parks, D. H.	780	20	50 00	Thompson, J. A. C.	674	2	5 00
Parks, D. H.	1244	10	25 00	Tunnehan, Wm J.	1371	1	2 50
Parks, B. F.	—	2	5 00	Torrey, James.	191	2	5 00
Page, Albert.	806	1	2 50	Truebody, Wm P.	142	2	5 00
Park, Geo W.	1458	4	10 00	Trafton, John E.	235	4	10 00
Pangburn, G. Henry.	244	10	25 00	Trout, Elizabeth W.	1018	2	5 00
Patterson, R.	951	4	10 00	Truebody, H. A.	1041	5	12 50
Patterson, John.	1002	4	10 00	Tracey, James.	817	1	2 50
Parker, Isaac.	1478	5	12 50	Triplett, H. A.	1132	2	5 00
Pearson, G. C.	1495	20	50 00	Tucker, Ira.	203	1	2 50
Pepper, Sarah R.	478	1	2 50	Tuley, William.	1100	1	2 50
Pepper, James M.	607	2	5 00	Tynan, T. E.	888	8	20 00
Peterson, Jane L.	35	4	10 00	Teber, G. R.	189	2	5 00
Pennimam, Mrs H. S.	1273	2	5 00	Utt, Mrs Jane.	223	1	2 50
Pennimam, A. C.	1272	2	5 00	Utley, L.	844	4	10 00
Pennebaker, G. F.	1404	4	10 00	Vance, Edwin P.	95	2	5 00
Percival, S. C.	1261	10	25 00	Vaughn, P.	429	1	2 50
Plank, Mrs F. A.	1262	2	5 00	Vobesk, Fritz.	426	2	5 00
Percival, Walter C.	796	2	5 00	Van Warren, Peter.	1403	2	5 00
Philbrick, J. S.	511	2	5 00	Van Aisdale, J. A.	695	4	10 00
Popple, Carey.	746	4	10 00	Van Aisdale, Mrs J. A.	696	4	10 00
Popple, D.	1083	4	10 00	Vanwort, George.	305	10	25 00
Phillips, W. P.	1449	2	5 00	Wren, John.	196	1	2 50
Proctor, Geo W.	845	3	7 50	Wooden, Joseph.	203	4	10 00
Phillips, Travis.	1521	8	20 00	Ward, John.	206	4	10 00
Pixley, Theron.	901	4	10 00	Williams, T.	747	2	5 00
Plass, C. W.	1060	10	25 00	Willit, J.	741	4	10 00
Plank, F. A.	650	2	5 00	Wright, William.	754	4	10 00
Poole, H. J.	322	4	10 00	Walters, G. W.	763	2	5 00
Poynor, J. B.	212	2	5 00	Waldron, M.	1016	5	12 50
Pratt, J. H.	156	1	2 50	Waid, Robert.	1401	2	5 00
Prewett, John T.	380	1	2 50	Williams, J. D.	1411	1	2 50
Pressy, J. B.	786	3	7 50	Ward, Thomas D.	523	4	10 00
Pfeffer, William.	864	1	2 50	Ward, John T.	1178	2	5 00
Purvis, J. M.	207	2	5 00	Walker, Samuel.	1045	6	15 00
Putman, J. C.	667	5	12 50	Ward, C. H. A.	1181	2	5 00
Park, G. W.	443	4	10 00	Watson, R. D.	1052	1	2 50
Quart, F. J.	1279	2	5 00	Westover, O. F.	1307	4	10 00
Quentel, William.	432	10	25 00	Westover, Minnie.	1308	1	2 50
Roberts, Charles.	1394	10	25 00	Warner, P.	692	11	27 50
Ragsdale, J. F.	101	1	2 50	Wilkins, J. C.	1069	1	2 50
Ragsdale, Mrs J. F.	143	1	2 50	West, C. K.	355	1	2 50
Ramsey, J. F.	1141	1	2 50	Whitecombe, C. S.	349	4	10 00
Ramsey, W. F.	263	4	10 00	Wasley, John.	1460	4	10 00
Ramsey, W. F.	1109	4	10 00	Wakefield, W. N.	791	10	25 00
Raap, H.	1436	2	5 00	Ward, Mary A.	940	2	5 00
Rogers, William St John.	335	4	10 00	Warneke, Therese.	1229	2	5 00
Rowens, J.	340	2	5 00	Warneke, Christian.	1230	2	5 00
Ray, Baizilla.	529	2	5 00	Watson, John.	1232	2	5 00
Rasmussen, Niles.	553	2	5 00	Watson, Amelia.	1233	2	5 00
Raap, Mrs H.	1437	2	5 00	West, John.	1515	10	25 00
Raap, H.	1436	4	10 00	West, C. K.	294	1	2 50
Raven, H. S.	1048	2	5 00	Weeks, B. V.	372	4	10 00
Raven, Christian.	636	1	2 50	Weidersheim, H.	1028	2	5 00
Robinson, A.	641	3	7 50	Wicklain, Albert.	1031	5	12 50
Rector, W. H.	1508	8	20 00	Welch, William.	1259	2	5 00
Ralston, George.	13	2	5 00	Witten, Miss Ellen.	650	2	5 00
Ralph, C. R.	1524	2	5 00				

Names.	No. Certificate.	No. Shares.	Amount.
Wentz, C.	420	1	2 50
Wells, Mrs J C.	609	1	2 50
Wells, William.	1282	4	10 00
White, H M.	321	1	2 50
Williams, T L.	1003	2	5 00
Whisman, John S.	407	2	5 00
White, W H.	779	5	12 50
Whaley, Samuel.	785	1	2 50
Wilkins, Edward.	114	1	2 50
Wilcox, J A.	1298	4	10 00
Whisman, H.	269	2	5 00
Wilcox, J A.	1298	6	15 00
Willard, Ai.	322	5	12 50
Williams, Mrs Emma S.	1293	1	2 50
William, M.	423	4	10 00
Wilks, George W.	497	2	5 00
Williams, G A.	1118	4	10 00
Woley, Joseph.	1161	3	7 50
Woods, James.	385	1	2 50
Wright, W T.	52	1	2 50
Wright, Phoebe G.	53	1	2 50
Wynn, Jess.	833	2	5 00
White, W H.	1246	10	25 00
Young, J G.	45	1	2 50
Young, Johnson.	1343	5	12 50
Young, Mrs Johnson.	1344	5	12 50
Young, Mrs E G.	1044	10	25 00
Young, L G.	743	2	5 00
Young, L W.	815	1	2 50
Young, Lucy.	57	1	2 50
Zink, Jacob.	1012	2	5 00
Zimmerman, F.	1197	2	5 00
Zumwalt, G B.	1070	4	10 00



### The Mining Debris Decision.

We print in full below the decision of the jury in the mining debris case (Atkinson vs. Sacramento and Amador Canal Co.,) and Judge Sexton's

#### Instructions to the Jury.

*Gentlemen of the Jury:* The attorneys for the plaintiff and defendant have presented so many special instructions, that but little has been left for the Court in general instructions.

And first we will endeavor to clear the case of some of the clouds which have been attempted to be thrown around it.

Upon the question of title, which has been so largely dwelt upon, the Court instructs you that with the question of title, in its purely legal sense, you have nothing to do. If the plaintiff was in the actual possession of the land described in the complaint under claim of title, then he has sufficient right to maintain this action.

Again, it is a matter of no moment in this action that some person other than the defendant would probably have flowed tailings and sand and gravel upon the land of the plaintiff, for the reason that it cannot in any wise be a justification to defendant, nor can it be urged as an excuse, or in mitigation of damages. A prospect of what others might have done in committing a trespass is no excuse or justification of a trespass committed by defendant.

#### Instructions Asked by Plaintiff.

The following instructions asked by plaintiff were given:

First.—If the jury should be satisfied from the evidence that the plaintiff's lands were damaged from the deposit thereon by the defendant of the gravel, sand, mud and other debris known by the general name of tailings, they must find a verdict for the plaintiff for the amount of damage which the plaintiff has sustained thereby, notwithstanding the defendant may have worked its mine after the manner customary among miners; and notwithstanding the fact, if it should be so, that the mine could not be worked at all without doing much damage to the lands of plaintiff.

Second.—The defendant has questioned the legal title of plaintiff to certain portions of the land in his possession claimed to have been damaged by the deposit from defendant's mine, but has not connected itself with the title to any such portions; as it is not disputed that defendant has ever since 1870 been in the actual possession, by inclosures, of all the land claimed to have been damaged (except a small fraction thereof) under claims of title thereto, it is not necessary to inquire into such disputed title; and the amount of damage to which plaintiff may be entitled will not be affected thereby.

Third.—If you find for the plaintiff, then in estimating his damages you will calculate the difference between the value of the land in issue on the 30th day of March, 1875, in its then condition, and its value as it would have been on that day if uninjured as alleged in the complaint. In this connection the value of the land includes the value of fences, ditches, dams and the improvements upon the land; and in estimating the injury done to the land, you can include the injury done to such improvements.

Fourth.—To acquire a right by prescription to overflow the lands of another with water, sand, mud or tailings, there must have been an actual occupation by such overflowing under a claim of right for five years, and such occupation must have caused damage to the knowledge of the injured party, and there must have been during a period of five years such an occupation and damage as will raise a presumption that the injured party would not have submitted to it unless the other party had acquired a right to use it.

Fifth.—Preponderance of evidence is the result which is produced upon the mind, not merely by the number of witnesses testifying upon one side or other a disputed state of facts, but by the weight of conviction produced by such testimony, having regard to the intelligence, impartiality and acquaintance of the witnesses with the subject matter testified about; so that preponderance of evidence may be, and often is, effected by a few witnesses against many witnesses.

Sixth.—Defendant has not acquired the right by prescription to use plaintiff's land as a place of deposit for tailings, nor has defendant acquired such right under any act of Congress.

Seventh.—To acquire a right by prescription to do acts injurious to another's property, the injured party must have assented to a commission of such acts by the party committing them, continuously for five years. By assent, you may understand an implied or actual assent, an avowed or a tacit one—a knowledge of the acts done, without objection to their being done.

Eighth.—In weighing the evidence you should consider the manner of the witnesses upon the stand, their probable motives in giving their testimony, and their opportunities for obtaining accurate information as to the matters concerning which they testify; and if the testimony of two unimpeachable witnesses as to any particular is in conflict, then the testimony of the witnesses who appear to you as the most intelligent, and whose means of observation have been the most favorable, and who have made the most careful examination of the subject of the testimony, is entitled to credit, when it ac-

cords with the other facts and circumstances of the case.

#### Instructions for the Defendant.

The defendant asked, and the Court gave the following instructions:

First.—The plaintiff is not entitled in this action in any event to recover the rents and profits of the land.

Second.—The plaintiff must prove the facts necessary to his recovery herein by a preponderance of evidence. If the evidence is evenly balanced, or preponderates in favor of the defendant on the material issues, your verdict in that event must be for the defendant.

Third.—The burden of proving what would have been the value of the land had it not been covered up is upon the plaintiff. If the evidence leaves the matter evenly balanced as to whether the land was more valuable before the deposit upon it than after, then you must find upon that point for defendant.

Fourth.—If the plaintiff's land has been improved instead of injured by the deposit, then you cannot find more than nominal damages in favor of plaintiff. By nominal damage is meant some small sum, such as \$1. By being improved means, in this connection, that its actual cash market value is greater now than before the deposits were placed upon it.

Fifth.—If a person destroys an acre of land belonging to another, the owner of the land can recover the value of the land at the time of the destruction, with legal interest from the time of the destruction. He cannot recover the value of the use and occupation of the land.

Sixth.—If persons other than the defendant, and having no connection whatever with the defendant, have caused any portion of the injury to the plaintiff's land, the defendant is not responsible for the portion of injury so caused by such other persons.

Seventh.—The jury, in estimating the damages, cannot take into consideration any depreciation in the value of any part of the plaintiff's land not damaged by the act or acts of the defendant, but in estimating the value of the valley land, you should fix its value in connection with the adjoining lands, both prior to the placing of the deposits upon it and after.

Eighth.—(Modified by the Court from an instruction asked by defendant.) If the defendant discharged in the usual and ordinary working of mines, water, tailings, earthy and other matter upon the banks of Arkansas creek, at places remote from plaintiff's land, and such matter, in the course of nature and from the effect of natural floods, flowing in and down said creek, found its way down the creek and was deposited, portions of it, upon plaintiff's land, the defendant would not be liable to damages—but if the deposit of sand and gravel and sediment was carried directly upon the lands by the water used in the mine; or, if the deposit of sand, gravel and sediment was deposited in such close proximity to the land that it must of necessity pass upon the land of plaintiff, the defendant would be liable for all damage done by defendants.

After an absence of three hours, the jury returned into court with a verdict for plaintiff and damages assessed at \$4,000.

A stay of proceedings for 60 days was granted.

**NEW VINELAND COLONY.**—In our advertising columns may be found the prospectus of the New Vineland temperance Colony of Santa Barbara county. The gentlemen who are the head of the enterprise are well known to us, and the following from the *Sacramento Record-Union* has our endorsement: "Elder J. W. Webb, president of the New Vineland temperance colony, who is a gentleman upon whose statements implicit reliance may be had, has sent out a circular prospectus of the colony. In a note announcing the prospectus he says: 'The design of the projectors—all noted temperance men—is to colonize purely temperance people, enforcing what every true temperance man and woman desires, prohibition of the sale of intoxicating liquors as a beverage. Under our laws and license system, there is no immunity from the ever-present curse for ourselves and families, except it be in the establishment of communities upon purely temperance principles. Vineland, New Jersey and Lompoc, California, the two most noted temperance communities in America, demonstrate the wisdom and feasibility of founding temperance colonies. None but shareholders in the colony company will be permitted to purchase homes, and none but temperance people are solicited to become members of the company, as will be observed from reading the prospectus, and which are sent postpaid to all wishing full particulars concerning this new colony. Names forwarded or applications made for further information will receive prompt attention. For the present the office of the company is located in Lompoc, Santa Barbara county, California, where all communications must be directed to reach either the president or secretary of the company.'"

We call the attention of those of our readers who contemplate purchasing seeds or plants, to the advertisement of Peter Henderson & Co., of New York. The greenhouse establishment of this firm covers two acres of greenhouses, and employs upward of 50 hands. Millions of plants are shipped by express and mail every year, to every State and Territory in the Union. Their seed warehouse is the most extensive in the city of New York, and every order received is certain to be filled promptly with the very best quality of seeds or plants, and as they are producers as well as dealers, everything for garden will be sold at low rates.

### Annual Meeting of the State Agricultural Society.

The annual meeting of the State Agricultural Society was held according to announcement in Sacramento, on Thursday afternoon, January 25th. We are indebted to the *Record-Union* for the following report of the proceedings:

There was a large attendance, the largest for four years, and noticeably very many prominent gentlemen from the various sections of the State. A very earnest interest was taken and an active canvass made for Directors and for President.

The chief business was the election for a President for one year, and six Directors. One to fill the place of Fred. Cox, resigned, with two years to serve; one to fill the place of J. J. Green, whose resignation last year caused a vacancy, filled by R. C. Sargent to date, one year to serve, he filling out the vacancy occasioned by the resignation of Colonel Younger; one to fill the place of Marion Biggs, resigned, two years to serve; three to fill the places of T. L. Chamberlain, L. U. Shippee and E. B. Mott, Jr., terms expired, three years to serve. The hold-over Directors are Chris. Green, Robert Hamilton and M. D. Boruck.

The meeting was called to order by R. S. Carey, President of the Society.

Chris. Green then presented the annual report of the Directors of the Society. The report was read in part and then ordered not further read, as it would be published.

The financial report of the Directors was referred to a committee of three named by the chair—Messrs. Thomas Clunie, R. T. Brown, James I. Ferrer.

The election of President of the Society was next declared in order.

Grove L. Johnson, of Sacramento, with eulogistic remarks, nominated Jerome C. Davis, of Sacramento.

I. N. Hoag, of Yolo, nominated Marion Biggs, of Butte, and reviewed his record as a Director. T. J. Clunie endorsed Major Biggs.

J. C. Goods spoke in favor of Davis.

Colonel Younger, of Santa Clara, endorsed Major Biggs.

Major Biggs tendered his resignation as a Director, as he had become a candidate for the Presidency.

Considerable debate then ensued as to the best manner of voting, and was engaged in by Messrs. Carey, Poorman, General Evans, Clunie, Domingos and Hopper.

It was finally resolved to form an alley way in front of the stand, and as all in the room had been admitted only on exhibition of a certificate of membership, they should pass through the alley and deposit their ballots.

Albert Gallatin E. K. Alsip and Samuel Deal were appointed tellers and the vote was taken in the manner described.

The result was as follows: Total vote cast, 304. Biggs, 187; Davis, 116; blank, 1.

Major Biggs was declared elected, and, on motion of Samuel Poorman, the choice was made unanimous.

Major Biggs, being called for, appeared and was received with applause. He thanked the members for the compliment paid him. He said he would work night and day for the State Society, should fear no man's frown and court no man's favor. His opponent was his bosom friend, and he knew him to be a friend of the society, who would work with him for its advancement. His sole aim should be to make the society an honor and profit to the State, and second to none in the Union.

The election of three directors for the long or full term was then proceeded with. Judge Denson nominated Wm. P. Coleman, of Sacramento; General Evans nominated L. U. Shippee, of San Joaquin; R. O. Cravens nominated W. Dana Perkins, of Placer; J. T. Carey nominated G. W. Hancock, of Sutter; Colonel Younger nominated C. E. Singleterry, of Santa Clara, but subsequently withdrew his name. The vote cast, resulted as follows: Whole vote cast, 242; necessary for a choice, 122; Shippee, 198, Coleman, 183; Perkins, 148; Hancock, 111; scattering, 5; and the first three were declared elected.

The election of two directors for the two terms of two years each, was then declared in order.

C. E. Singleterry, of Santa Clara, was elected by acclamation, the Secretary casting the vote.

The second was for the place made vacant by the resignation of Fred Cox, superintendent of the park.

Grove L. Johnson nominated Daniel Flint, and I. N. Hoag nominated Mike Bryte, both of Sacramento.

The vote resulted as follows: Whole vote, 111; necessary to a choice, 56; Bryte received 76 votes and Flint 33, with 2 scattering, and Mr. Bryte was declared elected. His election was made unanimous.

For the short term of one year Captain G. A. Johnson, of San Diego, was elected by acclamation, the Secretary casting the vote.

Grove L. Johnson offered the following resolutions, which were adopted:

*Resolved*, That the President and Directors be, and they hereby are, requested and instructed to examine into the feasibility of

First—The removal of the stables from their present position at the park to the eastern addition to the park.

Second—The remodeling of the ground at the park now appropriated to stables, and the erection thereon of buildings for sheep, cattle

and other stock, and for agricultural implements.

Third—The placing of suitable walks in and upon the park, and the protection of the same from use for any other purpose.

And that said President and Directors report fully to the next meeting of the society in reference thereto, with suitable recommendations.

The thanks of the society, on motion of John F. Sheehan, were tendered to the retiring officers.

The society then adjourned.

The financial report of the society shows the receipts for 1876 to have been \$51,044.75, and the disbursements \$50,591.88.

### PATENTS AND INVENTIONS.

#### A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING JANUARY 23D, 1877.  
QUICKSILVER FURNACES.—Sylvester Charles, Healdsburg, Cal.  
COMBINED CARPET BEATER AND SWEEPER.—Charles Elssasser, S. F.  
HARNESS BUCKLES.—Manuel Huerta, The Dalles, Ogn.  
PORTABLE DERRICKS.—Byron Jackson, Woodland, Cal.  
ICE MACHINES.—Robert H. Lucas, S. F.  
CULTIVATORS.—Elijah H. Perkins and Solomon D. Perkins, Visalia, Cal.  
BOTTLE PROTECTORS.—William C. Stokes, Grass Valley, Cal.  
HORSE COLLARS.—Adam Rutherford, Walla Walla, W. T.  
The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.  
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

NOTICE.—Wm. J. Lawrie is no longer agent for us in this State. DEWEY & CO.  
Jan. 31st, 1877.

Foolishly spent—money paid for children's shoes not protected by SILVER TIPS. Two weeks is about the time it takes a smart, active child to ventilate the toe of a shoe. SILVER TIPS the only preventive.  
Also try Wire Quilted Soles.

SALINAS CITY, CAL., Jan. 23d, 1877.  
MESSRS. DEWEY & CO.—Gentlemen: I received to-day my patent papers for my improved feed-boxes, which you have so kindly worked through for me, and I wish to add my testimony to that of your many other patrons as to your promptness and fair dealing in every respect. Thanking you for prompt attention to business in my case, I heartily recommend you to those in need of a patent solicitor, in preference to the many Eastern firms who flood this coast with their circulars and representations of cheap fees, etc. Again thanking you, I remain respectfully yours,  
J. O. JOHNSON.

### CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

#### THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

#### The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

#### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

#### RANCH FOR SALE.

\$8,000. Splendid dairy or hog ranch; 800 acres in Lake county; all fenced substantially; 100 acres in cultivation; permanent water; title perfect; terms easy; no failure of crops; healthy climate. For further information write to

"W." Middletown, Lake Co., Cal.

#### BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old sows, several of them with pig. These are all from Pigs I imported from Kentucky.

PETER SAXE, Importer.  
Commercial Hotel, San Francisco.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Jan. 31, 1877.

The rearing of the rains and the wider assurance of good harvests has accomplished a further reduction in some lines of farm produce. Grain is generally easier and with a lower tendency. The rain has been so heavy that receipts of Produce are interfered with, the amounts scored to-day being less than during any trade day for a year. Trade and delivery of merchandise is also somewhat restricted, and though the feeling is strong and hopeful, there is a temporary dullness noticeable.

In Wheat we have to note a lower figure as prevailing in shipper's offers. There is also a lower figure in the foreign advices, as appears in the

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday.....	10s 10d@11s	—	11s 1d@11s	5d
Friday.....	10s 8d@10s 11d	—	11s 1d@11s	4d
Saturday.....	10s 8d@10s 11d	—	11s —@11s	4d
Monday.....	10s 8d@10s 11d	—	11s —@11s	4d
Tuesday.....	10s 8d@10s 11d	—	11s —@11s	4d
Wednesday.....	10s 7d@10s 10d	—	11s —@11s	4d

Te-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1875.....	9s 3d@9s 7d	—	9s 8d@9s 10d	—
1876.....	10s —@10s 3d	—	10s 6d@11s —	—
1877.....	10s 7d@10s 10d	—	11s —@11s 4d	—

## The Foreign Review.

LONDON, January 29th.—The *Mark Lane Express*, in its weekly review of the British corn trade, says: Farmers are taking advantage of the drier weather to resume agricultural operations, but the long continuance of rain has delayed field work and probably planting will be late this spring. In the highlands the condition of the Wheat plant is favorable, but it is feared that the floods have damaged that plant in the low districts. With a continuance of the present weather the damage perhaps is remediable, but with prolonged rain the results would be disastrous. Late sown Wheat has suffered most from the floods, which in some localities swept the plant and seed from the ground. In other localities the wet weather rotted Grain so that it will be necessary to redill or plant with barley. Reports from Scotland and Ireland are more favorable. The inferiority, condition and diminished quantity of the home-grown Grain is still noticeable in the Mark Lane and country markets, if anything sales being more difficult than during the present week. The present status of English Wheat is 7s to 8s per quarter higher than at this time last year. This increase is due, firstly, to the disappointing results of the yield; secondly, to the effect of politics on trade; and, thirdly, to the unusual weather; but now possibly we may see some decline in value respecting foreign Wheat. The diminished imports of the past five months, resulting in a diminution of stocks throughout Great Britain, confirm the opinion that the present state of trade and range of prices are sound and capable of being maintained. Inactivity characterizes business in Wheat during the past week, but this was caused by buyers who are tolerably well stocked ceasing operations temporarily to scrutinize previous transactions. Fine Red Wheat is held firmly. Upon this variety alone are changes noted. Russian descriptions have improved 6d to 1s per quarter on the week. Floating cargoes off the coast have been held firmly, but with inactive demand. Values have slightly declined.

## Freights and Charters.

There has been, says the *Commercial News*, far more activity in Wheat freights during the week than for some time past. The demand appears, however, to have been largely speculative, from a feeling among exporters that freights had touched their lowest point. The impression has been general that a reaction was about to set in and that a slight advance was probable. We continue our quotations of last week, say £2 direct for wooden, and £2 2s 6d to £2 5s for iron ships to Liverpool. At the close we have 30,217 tons in port under engagement to load Wheat, and 23,732 tons disengaged, the bulk of which is held for higher figures than those ruling, under instructions from owners. Outside business continues dull. The latest charters reported for wheat are: ship *Voyager*, 1,356 tons, wheat to Cork, U. K. £2 2s 6d; ship *Big Bonanza*, 1,473 tons, wheat and merchandise to Liverpool, £2; ship *Albic*, 1,425 tons, wheat to Liverpool, £2, Cork, U. K. £2 2s 6d; Continent, £2 7s 6d; ship *St. Paul*, 1,894 tons, wheat to Liverpool or Havre, £2, Antwerp, £2 2s 6d; ship *Reaper*, 1,468 tons, wheat to Liverpool, £2, Cork, U. K. £2 2s 6d; Continent, £2 7s 6d; ship *Occidental*, 1,533 tons, wheat to Liverpool, £2, Cork, U. K. £2 2s 6d; Continent, £2 7s 6d; Br ship *Montgomery Castle*, 886 tons, wheat to Liverpool, £2 3s 6d.

## New York Grain Market.

New York, January 29th.—The Grain trade of the week has been the dullest for a long period, and Wheat has declined a little, but not sufficient to permit of its exportation with profit. Liverpool continues largely below New York, and the latter below Chicago. Graded Spring Wheat here ranges from \$1.35 to \$1.50, and Winter \$1.32 to \$1.65. Corn is also a trifle cheaper at 59¢@61¢; Barley, 70¢ to \$1.12; a lot of 5,000 bushels California brought 95¢.

## Chicago Grain Market.

CHICAGO, January 28th.—The week's trading in Breadstuffs has been unusually light, though prices have been tolerably well maintained. Toward the close of the week, however, a decided break occurred in Wheat, and other Produce markets followed in the wake. Yesterday there was a partial reaction. Wheat, after selling at 26½¢, closed at 26½¢. Corn ranged from 42¢ to 43¢, and closed at 42¢. Oats were exceptionally firm, closing at 35¢. Receipts for the week were—Wheat 53,000, Corn 497,000, Oats 106,000 bushels; shipments—Wheat 42,000, Corn 236,000, Oats 100,000. Receipts for same time last year—Wheat 250,000, Corn 407,000, Oats 93,000; shipments—Wheat 100,000, Corn 237,000, Oats 56,000. There is little apparently in the near future to indicate any violent changes, but lower prices are still confidently looked for by many of the heaviest operators.

## Eastern Wool Markets.

NEW YORK, January 29th.—There has been a fairly active trade in Wool during the week, and sales in most cases have been for manufacturers' account, speculators operating very meagerly. There is still a firm feeling exhibited for the better descriptions, X and XX Ohio particularly; but short fall Wools are dull, with no disposition manifested to accept lower prices. The Liverpool sales of miscellaneous carpet stock opened on the 23d inst., and the cable reports a decline of 5¢ on Indias. Sales for the week are: 210 bales spring California at 25¢@30¢; 61,000 lbs fall do, 16¢@24¢; 21,000 lbs scoured do, 58¢@60¢; 7,000 lbs Colorado, 18¢; 1,500 lbs Utah, 31¢; 800 lbs Western Texas, 25¢@26¢; 4,000 lbs coarse do, 16¢; 9,600 lbs Eastern, 25¢; 6,000 lbs burry Georgia and Lake, 15¢@20¢; 3,500 lbs X and XX Ohio, 43¢@47¢; 25,000 lbs medium No. 1 do, 41¢@44¢; 10,000 lbs unwashed do, 29¢@31¢; 40,000 lbs Michigan, 40¢@41¢; 5,000 lbs Wisconsin, 42¢; 20,000 lbs unwashed Missouri and Indiana, 27¢; and 13,000 lbs Australian, 12,000 lbs Utah, 20,000 lbs Oregon, 33,000 lbs Western Texas, 4,000 lbs black do, 50 bags No. 1 pulled,

20 super do, 10 do X do, 25 do combing do, and 20,000 lbs X and XX Ohio, on private terms.  
BOSTON, January 31st.—Wool unchanged; fine held firm, Ohio and Pennsylvania XXX and choice, 43¢@50¢; Michigan, Wisconsin and New Hampshire, 39¢@42¢; mostly 40¢@41¢; combing and delaine, 40¢@55¢; pulled in fair demand; super XX, 35¢@36¢; good choice, 40¢@46¢. California dull, and market well supplied with fall, but very little inquiry; sales, 18¢@26¢ as to quality.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Jan. 10.	WEEK Jan. 17.	WEEK Jan. 24.	WEEK Jan. 31.
Flour, quarter sacks.....	56,257	75,076	62,081	23,226
Wheat, centals.....	273,023	132,827	131,191	159,181
Barley, centals.....	6,788	13,788	10,439	11,136
Beans, sacks.....	1,084	401	2,219	1,391
Corn, centals.....	4,936	5,325	4,841	2,027
Oats, centals.....	3,687	1,345	6,723	1,852
Potatoes, sacks.....	14,349	11,338	11,910	12,984
Onions, sacks.....	802	588	936	1,064
Wool, bales.....	124	162	89	63
Hops, bales.....	32	66	17	2
Hay, bales.....	724	1,042	553	826

**Bags**—There are no changes in ruling rates for grain bags, although a stronger feeling is prevalent. Merchants tell us there is more inquiry from farmers, but they have no transactions as yet to report.

**Barley**—Barley takes another step downward and to-day is reported not salable at prices which were gained earlier in the week. The prospect of an abundant seeding and production of this grain doubtless effects present trade. We report sales of the week as follows: 400 sks good coast Feed, \$1.25, silver; 3,000 sks coast Feed, \$1.35 per ctt, hf and hf; 3,000 do do, \$1.25, gold; 2,000 do do, \$1.30, silver; 300 do coast Chevalier, \$1.25 gold; 300 do do, \$1.30, silver; 300 do do, \$1.30, gold; 400 do choice coast Feed, \$1.27½, gold; 200 do coast Brewing, \$1.30, silver; 10,000 cts coast Feed, \$1.20 per ctt, gold; 300 sks do, \$1.27½, silver, and 550 do choice Bay Brewing, \$1.35 per ctt, gold; 1,200 sks coast Chevalier, \$1.10@1.12½, gold, and 1,500 sks choice bright Feed, \$1.25, silver; 3,000 sks coast Brewing, \$1.35, half silver; 3,000 do do, \$1.25, gold; 2,500 do coast Feed, \$1.30, silver; 2,000 do dark do, \$1.25, silver; 500 do coast Chevalier, \$1.25, gold; 280 sks Bay Feed, \$1.32½, silver; 500 do do, \$1.25, gold; 300 do do, \$1.30, silver; 1,000 do coast Feed, \$1.27½, silver; 10,000 sks coast Feed, \$1.20, gold; 10,000 do fair to choice Feed, \$1.25@1.35, silver; 800 do coast Feed, \$1.30, silver.

**Beans**—The only change in quotations is a lowering of one point on the outside price for Limas.

**Buckwheat**—The latest sales have been at \$1.80 per ctt, silver.

**Corn**—Corn has sold during the week within the former range. We note sales: 300 sks at \$1.27½, silver; 300 sks large Yellow, \$1.25, silver; 100 do large White, \$1.30 per ctt, silver; 75 sks large Yellow, \$1.30 per ctt, silver; 200 sks mixed, \$1.25 per ctt, silver; 200 sks small Bay, \$1.40, silver.

**Dairy Produce**—There is no relief in Butter from the low rates which have long prevailed. The receipts are still large and it is now difficult to get 30¢ for the finest selections. Other lines sell at 25¢@27½¢, according to quality. Cheese is still plenty on the shelves and no better prices can be quoted.

**Feed**—Oil-cake Meal drops to 85¢ per ton, in sympathy with the decline in other ground Feeds which occurred last week. This week Hay is quotable lower. We note Hay sales: 11 tons good Barley, \$15.25; 50 do good Volunteer Wheat and Oat, \$15.50; 23 do choice do, \$16.50; 12 do choice Wheat, \$18.50; 43 tons good Volunteer Wheat and Oat, \$16.50; 46 tons good Volunteer Wheat and Oat, \$15; 330 bales mixed, \$11.50 per ton.

**Eggs**—Eggs are selling at 20¢@28¢ for fresh California.

**Fruit**—Los Angeles Oranges are now coming in in good supply. An improvement in quality warrants the increase in our quotation for the best to 35¢ per M. Poorer lots sell as low as \$10 per M. Sicily Lemons have advanced to \$10 per box for the finest. In Dried Fruit there is a decline noted in white and black Figs. Prices for all fruit now in market may be found in our regular table below.

**Hops**—Prices now offered are very unsatisfactory; some dealers quote 20¢ as the top of the market. There are no sales except in small lots to local brewers. The New York market is quoted by Emmet Wells, for the week ending Jan. 19th, as follows:

The market this week has been fairly active. Exporters have taken some 1,600 bales for London. An occasional small order comes in from Germany for "small, green, flakey, seedless, rich, clearly-picked, fine-flavored Hops." Business with that country doubtless would be largely increased could Hops answering the above description be found in larger quantities. English buyers are less particular; anything with or without "seeds," if choice in every other respect, suits them. Some 600 bales of California Hops have changed hands this week at prices within range of our quotations. Exporters now find this class of goods the most desirable of any on offer for shipment to London. Low grades of State Hops have been in demand at 12¢@16¢. Quotations: New Yorks, good to choice, 20¢@25¢; New Yorks, low to fair, 12¢@18¢; Eastern, 18¢@23¢; Wisconsin, 12¢@17¢; Yearlings, 10¢@15¢; Olds, all growths, 4¢@8¢; Californians, 23¢@25¢; Oregon, 23¢@25¢.

**Oats**—Oats have dropped in sympathy with the lower rates at which Feed Barley can be bought. We note sales as follows: 223 sks Feed at \$2.25, gold; 125 do, \$2.25, half and half.

**Onions**—Onions have advanced; a good article from any locality will bring to-day \$1.50 per ctt. Lower grades are selling at \$1.37½.

**Potatoes**—Potatoes are lower to-day, as may be seen in our quotations. There have been large lots held on the wharves to realize \$1 per ctt, but the point seems to have been yielded, for there is nothing now quotable above 90¢. Poorer qualities are proportionately lower.

**Provisions**—The trade is inactive and no changes in prices are reported.

**Poultry and Game**—Roosters are leading Hens this week, and advance \$1@1.25 per dozen over last week's prices. Broilers are still in demand at quotations given below. Quail are not so plenty and have improved in price. Turkeys are a point cheaper.

**Rye**—Sales of 500 sks good Rye from the store-houses is reported at \$2.05.

**Vegetables**—The rain has started the Mushrooms in abundance. They are worth to-day 8¢@15¢ per lb. Asparagus is now in the market in small lots, selling at 50¢ per lb. Garlic has been received in excess and sales have been made as low as 1½¢ per lb.

**Wheat**—As noted above, the Wheat market reports itself weaker and bids are at a lower figure. We note sales during the week as follows: 300 tons poor at \$2, and 150 tons fair at \$2.05; 300 tons at \$2.10; 120 tons at \$2.12½; 20 tons at \$2.17½; 2,000 cts Shipping at \$2.05; 300 sks choice Milling, \$2.20; 7,000 cts Shipping, \$2.15; 2,000 sks choice Shipping at \$2.15 per ctt; 1,000 do Milling, in two lots at \$2.12 and \$2.17½, as to quality, and 500 do good Shipping at \$2.10; 3,000 cts good Milling at \$2.16, and 7,000 cts good Shipping at \$2.15; 7,000 sks good Shipping, \$2.15; 300 do good Milling, \$2.16; 400 cts choice Milling at \$2.17½; 500 sks Shipping at \$2.10; and 800 do do at \$2.12½ per ctt.

**Wool**—There is exceeding slight movement in Wool. There are occasional shipments by growers to the Eastern markets, and a few small purchases by local manufacturers. Prices are still nominal.

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., January 31, 1877.

**BAGS**—Jobbing.  
Eng Standard Wheat, 8¢@9¢  
Neville & Co's  
Hand Sewed, 22x36, 8¢@9¢  
24x36, 9¢@10¢  
24x40, 10¢@11¢  
Machine Swn, 22x36, 9¢  
Flour Sacks, halves, 9¢@11¢  
Quarters, 4¢@5¢  
Eighths, 4¢@5¢  
Hessian, 60 inch, 11¢@12¢  
45 inch, 8¢@9¢  
40 inch, 7¢@8¢  
Wool Sacks, 34 lb, 50¢  
4 lb, 55¢  
Standard Gunnies, 11¢@12¢  
Bean Bags, 17¢@18¢

**CANNED GOODS.**  
Assorted Fruit Cakes, 2¢  
2 lb cans, 2¢75  
Table do, 3¢  
Jams and Jellies, 4¢25  
Pickles, hf gal, 3¢50  
Sardines, q box, 1¢65  
Hf Boxes, 3¢00  
**COAL**—Jobbing.  
Australian, ton, 8¢25  
Coos Bay, 8¢00  
Belmont Bay, 8¢00  
Seattle, 9¢00  
Cumberland, 14¢00  
Mt Diablo, 5¢75  
Lehigh, 22¢00  
Liverpool, 8¢50  
West Hartley, 14¢00  
Schoon, 8¢50  
Scranton, 13¢00  
Vancouver Id., 10¢00  
Cancoal, sack, 75¢  
Coke, bbl, 60¢

**COFFEE.**  
Sandwich Id, lb, 21¢  
Souchica Rica, 21¢  
Guatemala, 20¢  
Java, 23¢  
Manila, 20¢  
Ground, in cs, 25¢  
Chicory, 27¢  
**FISH.**  
Sac'to Dry Cod, 5¢  
Eastern Cod, 8¢  
Salmon, bbls, 6¢50  
Hf bbls, 3¢75  
2 lb cans, 2¢65  
1 lb cans, 1¢80  
Col Riv, hf bbl 4¢25  
Pkd Cod, bbls, 22¢00  
Crabs, 11¢00  
Mackerel, No. 1, 11¢  
Hf Bbls, 12¢00  
Extra, 12¢00  
In Kits, 1¢25  
Ex Mess, hf bl, 12¢00  
Pkd Herring, box 3¢00  
Boston Mils, 40¢  
**EGGS.**  
Lime, Sta Cruz, bbl, 2¢00  
Cement, Rosen-dale, 2¢75  
Portland, 4¢75  
Plaster, Golden Gate Mills, 3¢00  
Land Plaster, in 100, 12¢50  
**EGGS.**  
Ass'ted sizes, keg 3¢25

**COFFEE.**  
Cal. Bay, ton, 16¢00  
Common, 5¢00  
Carmen Id., 16¢00  
Liverpool fine, 25¢00  
**SOAP.**  
Castile, lb, 10¢  
Common brands, 4¢  
Fancy brands, 7¢  
**SPICES.**  
Cloves, lb, 45¢  
Cassia, 25¢  
Nutmegs, 32¢  
Pepper Grain, 15¢  
Pimento, 15¢  
Mustard, Cal., 1 lb glass, 1¢50  
Cub. Cube, lb, 13¢  
Crushed, 13¢  
Powdered, 13¢  
Fine crushed, 13¢  
Granulated, 12¢  
Golden C., 10¢  
Hawaiian, 10¢  
Cal. Syrup, kgs, 72¢  
Hawaiian Molasses, 25¢  
**TEA.**  
Young Hyon, 35¢  
Country pckd Gunpowder & Imperial, 50¢  
Hyson, 30¢  
Fool Chow O., 35¢  
Japan, 1st quality, 40¢  
2d quality, 25¢

**TEA.**  
Young Hyon, 35¢  
Country pckd Gunpowder & Imperial, 50¢  
Hyson, 30¢  
Fool Chow O., 35¢  
Japan, 1st quality, 40¢  
2d quality, 25¢  
**TEA.**  
Young Hyon, 35¢  
Country pckd Gunpowder & Imperial, 50¢  
Hyson, 30¢  
Fool Chow O., 35¢  
Japan, 1st quality, 40¢  
2d quality, 25¢  
**TEA.**  
Young Hyon, 35¢  
Country pckd Gunpowder & Imperial, 50¢  
Hyson, 30¢  
Fool Chow O., 35¢  
Japan, 1st quality, 40¢  
2d quality, 25¢

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY, M., January 31, 1877.

**FRUIT MARKET.**  
Apples, bx, 50¢  
Bananas, buch, 2¢  
Cocoanuts, 100, 5¢00  
Cranberries, 15¢00  
Figs, lb, 4¢  
Limes, 10¢00  
Lemons, Cal M, 10¢00  
Sicily, bx, 9¢00  
Oranges, Mex, 30¢  
Tahiti, 30¢  
Cal., 10¢00  
Pears, bx, 1¢00  
Pineapples, doz 6¢00  
Pomegranates, 40¢  
**RED FRUIT.**  
Apples, lb, 4¢  
Apricots, 10¢  
Citrus, 28¢  
Figs, Black, 5¢  
White, 6¢  
Peaches, 7¢  
Pears, 7¢  
Plums, 7¢  
Prunes, 12¢  
Raisins, Cal, bx 15¢  
Malaga, 3¢00  
Zante Currants, 9¢  
**VEGETABLES.**  
Artichokes, doz, 50¢  
Asparagus, lb, 50¢  
Beets, ctt, 50¢  
Cabbage, 100 lbs, 55¢  
Carrots, 50¢  
Cauliflower, doz, 50¢  
Celery, 75¢  
Garlic, lb, 10¢  
Lettuce, doz, 10¢  
Mushrooms, 8¢  
Parsnips, lb, 1¢  
Squash, Marrow-fat, in, 12¢50  
Turnips, ctt, 60¢  
White, 1¢00

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢  
Surfaced, 30¢  
Refuse, 20¢  
Flooring, 28¢  
Refuse, 18¢  
Clear Flooring, 20¢  
Refuse, 20¢  
Half-inch Siding, 20¢  
Refuse, 16¢  
Half-inch Surfaced, 25¢  
Refuse, 20¢  
Half-inch Battens, 20¢  
Rough, 13¢  
Rough, Pointed, 26¢  
Fancy, Pointed, 26¢  
Shingles, 35¢

**REDWOOD.**  
Rough, M., 18¢  
Refuse, 14¢  
Clear, 30¢  
Clear Refuse, 20¢  
Rustic, 32¢  
Refuse, 22¢



## Nurserymen.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES,  
EVERGREENS,SHRUBS AND GREENHOUSE PLANTS,  
Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons,  
And Other Tropical Fruits.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and the public on the

Most Reasonable Terms.

FRUIT, EVERGREEN, NEW AND RARE  
TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Pritchardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF  
ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

FRUIT AND ORNAMENTAL  
TREES,  
Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,

516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.TREES,  
TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG &amp; CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

200,000

Australian Gum Trees For Sale,

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

SANTA BARBARA NURSERY,  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.JOSEPH SEXTON, Proprietor  
CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

PETALUMA NURSERIES.

Established - - - - - 1860.

We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE,  
PEAR, PLUM, CHERRY, PEACH, APRICOT,  
ALMOND, QUINCE, OLIVE, FIG,  
GRAPEVINES, AND SMALL  
FRUITS.EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER,  
ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

P. O. Box 32.

HANNAY BROTHERS.

## PEPPER'S NURSERIES

ESTABLISHED IN 1858.

The largest and most complete stock of Fruit Trees north of San Francisco Bay; also, a general assortment of Shade Trees, Evergreen Trees and Shrubs, Green House Plants, etc.

Catalogues and list of prices furnished on application. Address, W. H. PEPPER, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb Catalogue gratis. Address, F. K. PHENIX, Bloomington Nursery, Ill.

## Seedsmen.

My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refund the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. *New Vegetables a specialty.*JAMES J. H. GREGORY,  
Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco.

**D.M. FERRY & CO'S**  
**NEW ILLUSTRATED**  
**DESCRIPTIVE**  
**AND PRICED**  
**SEED ANNUAL**  
Will be mailed to all applicants on receipt of 25 cts. This is one of the largest CATALOGUES published, contains about 250 pages, over 600 fine engravings, two elegant colored plates, and gives full descriptions, prices and directions for planting over 1200 varieties of Vegetable and Flower Seeds, Bedding Plants, Roses, &c., and is invaluable to Farmer, Gardener & Florist. Address, D. M. FERRY & CO., Detroit, Mich.

Our Abridged Priced Catalogue FREE to all Applicants.

**MAILED FREE**  
**FLORAL GUIDE**  
Contains over 1,200 varieties Vegetable and Flower Seeds. COLORED PLATES. Elegant wood-cuts of vegetables and flowers. Handsomest Guide Published! 40¢ Send for it.  
DETROIT SEED CO., Detroit, Mich.

**VICK'S**  
**FLORAL GUIDE**  
A beautiful Quarterly Journal, finely illustrated, and containing an elegant colored Flower Plate with the first number. Price only 25 cents for the year. The first No. for 1877 just issued in German and English.  
Vick's Flower & Vegetable Garden, in paper 50 cents; with elegant cloth covers \$1.00  
Vick's Catalogue—300 Illustrations, only 2 cents.  
Address, JAMES VICK, Rochester, N. Y.

John Saul's Catalogue of New, Rare and Beautiful Plants, will be ready in February, with a colored plate of the New Striped Rose,

BEAUTY OF GLAZENWOOD.

"A rose of golden-yellow, striped and flaked with scarlet vermillion. Sounds like a dream or a fairy tale; it is nevertheless a reality."—H. Curtis, in the Gardener. Catalogues free to all my customers; to others, price 10 cents, or a plain copy free. JOHN SAUL, Washington, D. C.

\$ ONE DOLLAR. \$

Spoooner's Gardening Guide for 1877,

And Spoooner's special collection, 30 varieties choice Flower Seeds, or 25 varieties selected Vegetable Seeds, mailed to any address on receipt of \$1.00; or the guide free to applicants

WM. H. SPOONER, Boston, Mass.

SEEDS. SEEDS. SEEDS.

MY CATALOGUE OF

Field, Flower and Garden Seeds, Etc.,  
For 1877, will be mailed free to all applicants.

WILLIAM RENNIE, - - - TORONTO, CANADA.

SPANISH CHUFA  
SEED FOR SALE.  
Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity. We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

The "ENTERPRISE" FEED MILL  
(PACKER'S PATENT),  
FOR GRINDING BARLEY, ETC.,

Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

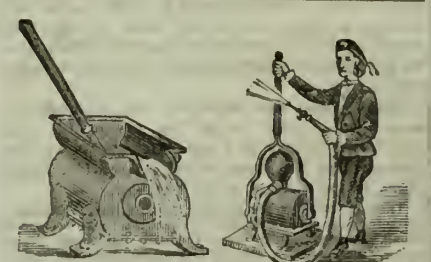
Send for Illustrated Circulars and information to

HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.



## THE SLUTHOUR PUMP

HAS NO EQUAL FOR

## IRRIGATION.

Send Your Orders to

J. M. KEELER &amp; CO., Agents,

330 Sansome Street, - - San Francisco.



Patented and manufactured by H. N. Dalton, at the Pacheco Agricultural Implement Works, Pacheco, Cal. Established in 1858. Send for Circular and Price List.

## IRON SECTIONAL HARROW.

This Harrow was Awarded the First  
Premium at the California  
State Fair in 1875.

The undersigned, having purchased the patent right of this Harrow for California, are now manufacturing them in Roseville, Placer County, and would call the attention of Farmers to the superior merits of this Harrow over all others now in use.

As its name indicates, it is made in sections of about three feet in width, each section having four bars, in which the teeth are inserted, and by connecting the sections with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do all kinds of work, he should purchase six sections, which would be suitable for four horses, and would cut 18 feet in width; by disconnecting two sections he will have a two or three-horse Harrow, cutting about 13 feet. One section alone is complete in itself, and suitable for garden work, with one horse. The Harrows are made of the best quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superiority for these Harrows over all others in use on this Coast:

First—By the lightness of the draft, taking into consideration the amount of work it does.

Second—By working uneven or rolling ground just as well and as evenly as if it was entirely level.

Third—They are made of Iron and Steel, and therefore are not affected at all by sun or rain, or by heat and cold; they are always tight, and ready for use; they are also durable. A farmer purchasing one has a Harrow that will last a life time.

Fourth—The teeth being fastened with a nut and screw into the cross bars, should one break, another can be inserted in a moment. We are making three sizes, all being the same in width, but different in depth and weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

BREWSTER &amp; CO.,

Roseville, Placer County,

Will be promptly attended to, and satisfaction guaranteed in all cases.

## CAUTION.

It has come to our notice that certain parties are now making this Harrow in this State, and that several of them have been sent here from the East. Now this is to caution all persons against making, selling or buying them, so made and offered for sale, as we shall enforce our rights in relation to the matter, and would call the attention of all persons inquiring upon our patent, to the law in regard to it.

BREWSTER &amp; CO.

Roseville, July 15th, 1876.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON &amp; WILLIAMSON,

Stockton, Cal.

## WANTED AND FOR SALE.

I HAVE AT THE

Bull's Head Live & Let Live Stock Yards,  
Cor. 9th, 10th and Howard Streets,  
SAN FRANCISCO,

Two Thoroughbred Short-Horn Bulls, Imported from Kentucky, and two years old; RED, and fine pedigrees. As I have quit importing I will sell one of the above at \$550 (has cost me over \$900), and take it in fresh Milch Cows or good hay, at the market price. A good chance to get a fine bull cheap.

ROLLIN P. SAXE, Proprietor,  
Bull's Head Live and Let Live Stock Yards.

## LOOK!

ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Bolden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,

Ceres, Stanislaus County, Cal.

25 ELEGANT CARDS, all styles, with name, 10c; post-paid. GEO. I. REED &amp; CO., Nassau, N. Y.



**GRANGERS' BUSINESS ASSOCIATION.**

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

**OFFICERS AND DIRECTORS.**

DANIEL INMAN, (PRESIDENT). AMOS ADAMS, (SECRETARY). THOS. FLINT.  
 R. C. HAILE, (VICE PRESIDENT). THOS. UPTON. G. P. KELLOGG.  
 JOHN LEWELLING, (TREASURER). I. C. STEELE. W. L. OVERHISER.  
 O. HUBBELL. D. CAMPBELL.

**SHIPPING AND COMMISSION HOUSE,**

Grangers' Building, - - - 106 Davis Street, S. F.

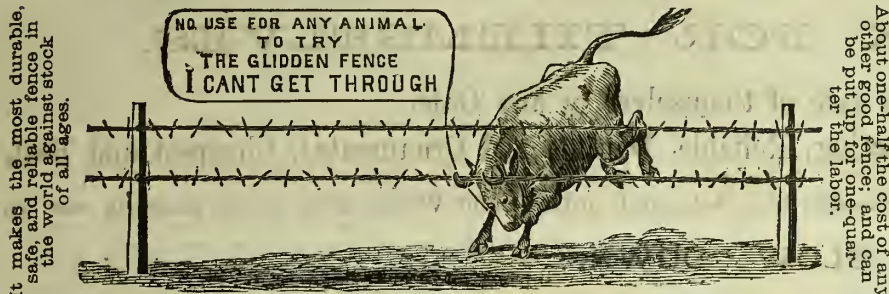
Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS &amp; CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn &amp; Moen Manufacturing Company.

**PACIFIC OIL AND LEAD WORKS,**

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

**BEWARE OF ADULTERATED LINSEED OIL.**

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE &amp; CO., Agents.

**LEA AND PERRINS' SAUCE,**

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

**NEW VINELAND TEMPERANCE COLONY.**

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal.

JAMES W. WEBB, President.  
CHARLES MALTRY, Secretary.**The Patron's Almanac for 1877.**

Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,

Mechanicsville, Bucks Co., Pa.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.**CALIFORNIA YEAST CAKES,**

MANUFACTURED BY

F. M. LEEF &amp; CO.,

SACRAMENTO, CAL.

Ask Your Grocer for Them.



Use None Other.

TRADE-MARK.

B. B. SCOTT, General Agent,

Sacramento, Cal.

**References—Wholesale Grocers:**

Messrs. Tillman & Bendel, San Francisco, A. P. Whitney, Petaluma, Adams, McNeil & Co., Sacramento.  
 Taber, Harker & Co., San Francisco, Luther & Schroeder, San Jose, T. M. Lindley & Co., Sacramento.  
 Newton Bros. & Co., San Francisco, Chas. Jones, Oakland, Booth & Co., Sacramento.  
 J. A. Folger & Co., San Francisco, J. H. Seymour, Los Angeles, H. S. Sargent, Stockton.

**BREEDERS' DIRECTORY.**

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

**CATTLE.**

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

**SHEEP AND GOATS.**

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

**POULTRY.**

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

**SWINE.**

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

**HEALD'S BUSINESS COLLEGE**

No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

**INTERNATIONAL HOTEL,**

ALL NEWLY FURNISHED.

824 &amp; 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

ALEX. BUSWELL,

**BOOK BINDER, PAPER RULER**

AND BLANK BOOK MANUFACTURER,

521 Clay Street, S. F.

Blank Books Ruled, Printed, and Bound to Order.

20 LADIES' FAVORITE CARDS, with name, 10c.; 25 Fancy Cards, all styles, with name, 10c.; 15 Scroll Cards, 15 styles, no name, 10c., postpaid.  
 J. B. HUSTED, Nassau, Renss. Co., N. Y.

**Grangers' Bank of California,**

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

**OFFICERS:**

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTPELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

**EXTRAS. EXTRAS.****For the Kirby Machines.**

D. M. OSBORNE &amp; CO. ARE READY TO SUPPLY

ANY DEMAND FOR EXTRA PARTS FOR ANY

"KIRBY" EVER MADE. ORDERS

SHOULD BE SENT IN BEFORE

THE HARVEST SEASON

ADVANCES.

Address, D. M. OSBORNE &amp; CO.'S

BRANCH HOUSE,

254, 256 Market St. }  
 and } SAN FRANCISCO, CAL.  
 8, 10 Front St., }

**Rupture.**

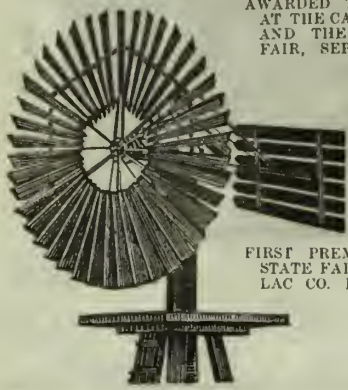
Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lumbago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 69 Sacramento Street, S. F.

**IMPORTANT!**

Notice to Farmers in want of labor! The well-known Employment Agency of ZEEHANDELAAR & CO., formerly the "Free California Labor Exchange," has removed to 606 Clay Street, (up-stairs) San Francisco.



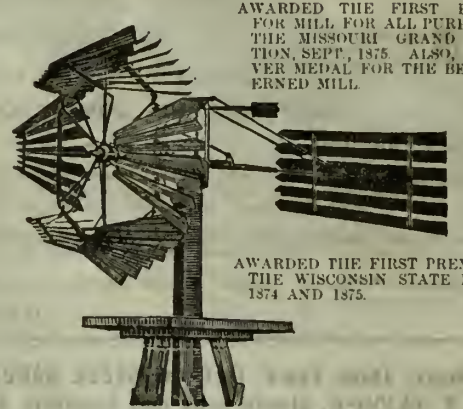
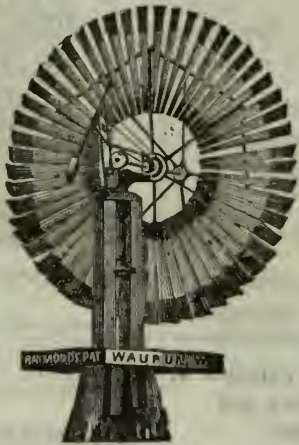
# ALTHOUSE AND RAYMOND WINDMILLS.



AWARDED THE FIRST PREMIUM  
AT THE CALIFORNIA STATE FAIR,  
AND THE STOCKTON DISTRICT  
FAIR, SEPT., 1875.

FIRST PREMIUM AT THE IOWA  
STATE FAIR, 1875, AND FOND DU  
LAC CO. FAIR, WIS., 1874.

The Althouse Windmill in a Light Wind.



AWARDED THE FIRST PREMIUM  
FOR MILL FOR ALL PURPOSES AT  
THE MISSOURI GRAND EXPOSITION,  
SEPT., 1875. ALSO, THE SILVER  
MEDAL FOR THE BEST GOVERNED  
MILL.

AWARDED THE FIRST PREMIUM AT  
THE WISCONSIN STATE FAIR IN  
1874 AND 1875.

The Althouse Windmill in a Heavy Wind.

## THESE MILLS SPEAK FOR THEMSELVES.

Run with Uniform Speed in Light or Heavy Winds, and take care of themselves in any Gale.

Perfectly Self-Regulating and Self-Protecting, Reliable, Durable and Ornamental, Cheapest and Best,

For the Reason that they Run in Very Light Wind, work Quietly and Steadily in a Gale, and, unlike Solid Wheel Mills, when properly set up

### THEY NEVER BLOW DOWN.

L. H. WOODIN, Esq., San Francisco.

The Althouse Windmill is the best I have seen in use. It gives satisfaction in every respect.  
Eureka, Nevada, Jan. 16th, 1877. EVERETT, Gen. Supt. Eureka & Palisade R. R.

I believe the Althouse Windmill cannot be excelled in any particular.  
Colusa, Sept. 5th, 1876.

J. A. WINSHIP.

We are satisfied, after a fair trial, that the Althouse is the best Windmill in use.  
Galt, Sac. Co., Aug. 23d, 1876.

WHITAKER & RAY.

ORDERS PROMPTLY ATTENDED TO.

L. H. WOODIN, San Francisco, Cal., Proprietor.

My Althouse Windmill has been in use since the 1st of May, and has not failed one day to furnish plenty of water for all my stock and ranch use.  
Plainsburg, Merced Co., Oct. 27th, 1876.

R. M. BURCHELL.

I know of no Windmill which I believe to be as perfect a self-regulator, or that will run in lighter wind. No gale can injure it whether running or standing still.  
Martinez, Contra Costa Co., Dec. 15th, 1876.

JOHN ROGERS.

Mine, though of smallest size, raises water 85 feet, enough for seven families and their stock, and as much more for irrigation.  
San Buenaventura, Aug. 20th, 1876.

S. BRISTOL.

SEND FOR PRICE LIST TO

BAKER & HAMILTON, Sacramento or San Francisco, Gen'l Agents.

## SEEDS.

## SEEDS.

### IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New  
Early Canada  
Early Dutton  
Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Sweet Corn.

Yellow Flint Corn.

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings,  
Polish Hamburgs, Game  
and Sebright Bantams,  
Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL

Eggs Shipped to

OF FOWLS

Any part of the

GUARANTEED

Coast to Hatch After Arrival.



Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 108 Battery Street, San Francisco.

SOLE AGENT FOR THE PACIFIC COAST.

## 100 DAYS TOMATO

EARLIEST AND MOST PROLIFIC GROWN!

Sold last year into every State, to thousands, with great success. Per packet, 25 cents; Six for \$1. MY LOW PRICE LIST OF SEEDS (Twelfth Annual List) sent with every order.

J. A. FOOTE, Seedsman, Terre Haute, Ind.

## Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, *Harper's Weekly* and *Scientific American*, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, Dewey & Co., Publishers, San Francisco.

## Wakelee's Bath for Sheep.

FOR THE PREVENTION AND CURE OF FOOT-ROT, SCAB, ETC., AND THE DESTRUCTION OF PARASITES INFESTING THE FLEECE.

H. P. WAKELEE & CO.

Importing and Manufacturing Druggists,  
Cor. Montgomery & Bush Sts., S. F.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

## R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

**SEEDS**

Our Combined **CATALOGUE** for 1877

OF

**EVERYTHING**

FOR THE

**GARDEN**

Numbering 175 pages, with Colored Plate,

**SENT FREE**

To our customers of past years, and to all purchasers of our books, either Gardening for Profit, Practical Floriculture, or Gardening for Pleasure.

(Price \$1.50 each, prepaid, by mail.)

To others, on receipt of 25c.

Plain Plant or Seed Catalogues, without plate, free to all.

*Peter Henderson & Co.*

Seedsman, Market Gardeners and Florists,

35 Cortlandt St., New York.

**PLANTS**

PARO ROBLES, CAL., October 18th, 1875. DEWEY & Co.—Gents:—The letters patent for the Tire Upsetter have come to hand. For the prompt manner with which you have brought the matter to a successful issue, please accept my thanks. Yours respectfully, JOHN H. MERTZ.





Volume XIII.]

SAN FRANCISCO, SATURDAY, FEBRUARY 10, 1877.

[Number 6.]

### Reed-Bird, or Bob-o-Link.

Our illustration shows members of the feathered tribe which comes from the Atlantic shore, both north and south, will recognize. It is known as the "meadow-bird" in Louisiana, the "reed-bird" in Pennsylvania, the "rice-bunting" in the Carolinas, the "bob-o-link" in New York and thence eastward; is always the same, and yet of very different characteristics in the different regions. Entering the southern portions of the United States, it proceeds northward in early spring, flying by night; but, returning in the autumn, it flies by day. It reaches New York by the middle of May, having inflicted much injury upon the corn-fields of the South in its journey, but is believed to do little injury in the North. At this season it becomes so plentiful all over the country as to be found in pairs in every corn-field and meadow, their varied plumage and joyous song everywhere attracting the desires of bird-catchers, who capture them in trap-cages, and sell them for good prices in every city. They are sometimes taken to Europe, and, in such cases, the change in the hue and the cessation of the song of the male, by the time the journey is over, often disappoints the adventurous shipper. In captivity they are easily tamed, but appear cheerful only in spring and parts of the summer, though the song is never so glad as when the bird is free.

Our illustration calls to mind the somewhat vexed question of the value of birds to the agriculturist. It is well known that while there are birds which play havoc with crops of grain and fruit there are also birds which wage a valuable warfare upon noxious insects. There are also birds which divide their attention between fruit and insects and some which seem to be most fond of eating insects which are known to be beneficial. It is quite proper that scientific investigation should be brought to bear upon the actions of birds to ascertain their value or worthlessness. We learn from a Chicago exchange that Professor S. A. Forbes, of Normal, Ill., has been engaged in a work of this kind. He is examining the stomachs of the different species of birds (he has 1,000 stomachs already gathered and preserved in alcohol for this purpose), to ascertain the kinds of food on which they live, and to gather facts, so as to be able to discriminate between birds that are beneficial and birds that are injurious. In making up his estimates of the horticultural value of the different species of birds, he bases his calculations upon the following guiding principles:

First. Any bird of which it is only known that it feeds upon insects, is to be regarded as beneficial, until facts are discovered to the contrary.

Second. A bird feeding upon *Hymenoptera* (bees, wasps, ants, etc.) is to that extent probably injurious. A bird feeding on ants is to that extent neutral, neither beneficial nor injurious.

Third. A bird feeding upon *Lepidoptera* (butterflies and moths) is to that extent probably beneficial; if this is a twilight bird it is almost certainly so.

Fourth. A bird may be reckoned beneficial, in so far as it feeds upon caterpillars with two rows of abdominal prolegs.

Fifth. He can infer little or nothing, at present, from the presence of *Diptera* (flies, gnats, etc.) in a bird's stomach.

Sixth. *Coleoptera* (beetles), considered in the mass, are to be reckoned injurious. *Cicindelidae* (tiger beetles), *Carabidae* (ground beetles), *Coccinellidae* (ladybirds), *Lampyridae* (fire flies), are beneficial. The *Cerambycidae* and some *Meloidae*, the tetramerous beetles, are especially injurious.

Seventh. *Orthoptera* (cockroaches, crickets, grasshoppers, etc.) may be set down as injurious. Many of those species which are not now especially beneficial would become so if their increase were unrestrained.

Eighth. A bird feeding upon small *Neuroptera* (dragon flies, lace wing flies, may flies, white ants, etc.) is of suspicious character.

Ninth. *Myriapoda* are on the whole beneficial. *Chilopoda* especially so, while *Chilognaths* are neutral.

Tenth. Spiders are beneficial, and birds eating them largely are to be watched. The *Phal-*

*angidae* (harvestmen) are especially to be protected.

Upon the above classification the stomachs of the birds are examined and their probable value or injury determined. It is also announced that Prof. Forbes, assisted by Prof. Cyrus Thomas, State Entomologist, contemplates the preparation of a bill, to be submitted to the legislature of Illinois, having in view the promotion of economical science. The object is to secure a small appropriation, say \$2,000, for the investigation of the food and habits of birds, with

take a hint for useful scientific work, for with the rapid spread of noxious insects in this State it seems clear that early precautionary measures will be wise on the part of our legislators.

AN ELECTRICAL PLANT.—A botanical traveler in Nicaragua describes through the columns of a Belgian horticultural publication a species of *Phytolacca* which is in the vegetable world a counterpart of the gymnotus, or electric eel. On attempting to gather a branch of this plant, the hand feels a shock as if from an electrical



THE REED-BIRD, OR BOB-O-LINK.

reference to their relation to agriculture and horticulture, also to study the food and habits of fishes, with a view to ascertain the condition essential to the increase and propagation of the kinds most valuable for food, and also for the collection and preparation of specimens of the injurious and beneficial animals of the State, especially birds, fishes and insects, to be placed in the State House at Springfield, and also in the museums of the various State educational institutions. It is not proposed to pay any officers' salaries with the money, but only to pay the actual expenses of the work.

From the above movement in Illinois we may

machine; and a compass is sensibly affected by proximity to the plant, the needle being agitated in proportion to its nearness to the shrub, taking on a rapid gyratory movement when the instrument is placed in the middle of the bush. There is, it seems, no doubt that the phenomena are due to an electrical state of the plant itself; for, first, the intensity of the action varies according to the time of day, being slight during the night and at its maximum an hour or two after noon; and secondly, during stormy weather it is considerably increased, while in dry seasons it reaches its minimum, the plant remaining withered until the arrival of rain.

### Mr. Blowers's Raisin-Drying.

Considerable discussion has recently taken place as to the comparative merits of sun-dried and machine-dried raisins. The samples of machine-cured raisins sent to this market, in many cases, do not compare favorably with those dried in the sun. In subjecting the grape to a high degree of heat in order to insure rapid drying, the product invariably acquires a cooked flavor, while the bloom of the fruit is entirely destroyed, thus injuring its appearance and unfitting it for table use. These objections, however, can in a measure be, if not entirely, overcome by taking a longer time for the curing process.

R. B. Blowers, of Woodland, has succeeded in producing raisins, by means of a drying house of his own invention, that can scarcely be distinguished, either in appearance or flavor, from sun-cured fruit. His drier contains 16 rooms, each capable of holding, at one time, sufficient grapes for 100 20-pound boxes of raisins. The advantage of this drier over others is in its large capacity and small consumption of fuel. As it is capable of treating 96,000 pounds of grapes at once, the operator can afford to conduct the process slowly, and at a temperature sufficiently low not to injure the quality of the fruit. Mr. Blowers endeavors to keep the temperature of his rooms at 110°, that being about the degree of heat on the drying platforms when exposed to the full force of the sun in the field, though the heat can be somewhat increased towards the close of the process. With this degree of heat a charge of grapes is sufficiently cured in ten days. The importance of a process by which first-class raisins can be made independent of sunshine, and in spite of early rains, is very great, especially to the grape growers of such localities as Santa Clara, Sonoma and Napa valleys, where the crop ripens so late that difficulty is found in curing it by sun heat alone. Most of the drying machines now in use can, of course, be operated at a low temperature, but the process will necessarily be slow. Probably almost any grape grower in the State can devise a cheap building with furnaces for supplying the heat, that will answer every purpose and do away with all the uncertainties now attending the curing of raisins.

THE JAPAN PERSIMMON.—We were gratified on Wednesday at receiving a call from Rev. Henry Loomis, a college associate of ours, who has been for the last few years carrying on a good missionary work in Japan. He found his health failing in Japan and came to this State to recuperate. His experience in that country taught him the desirability of the Japan persimmon, and he is now employed for a time in bringing this highly prized fruit to the attention of our fruit growers. It is a matter in which we would give him all encouragement, because we believe the fruit would be a great addition to our fruit resources and would meet with profitable recognition in our markets both in a green and dried state. Mr. Loomis's advertisement in another column gives a very full statement of the qualities of the fruit and its desirability for general introduction. The testimonials which may be read in the advertisement are of such character as to leave no room for question on this point. The Japan persimmon is developed from the Virginia persimmon and sustains the same relation to it that our finest improved apples do to the original crab. The tree is very hardy and is a prolific bearer. The fruit comes late and would strike our markets after the floods of summer fruits are exhausted, and this will prove a great advantage in its marketability. The trees are now growing in several localities in this State, and Col. Hollister, of Santa Barbara, has produced the fruit. We doubt not many growers will take the advantage of Mr. Loomis's importation to add the tree to their fruit lists.

By the suspension of Congressional work at the public printing office in Washington about 600 persons were thrown out of employment. The Public Printer has no money, except the unexpended balance of appropriations to departments and the congressional library, and for printing the proceedings and debates of Congress.



## CORRESPONDENCE.

### Agriculture and Mining.

EDITOR PRESS:—In your issue of January 13th, 1877, is copied an article from the *Mining and Scientific Press* on the above question, and which has been extensively read and discussed in this vicinity. It is generally conceded that while it gives the views and position of the hydraulic miners with fidelity to their interests; it passes over lightly or ignores entirely the agricultural interests of our State while purporting to be a discussion of both interests. By your permission I would offer a few remarks on this (to us all) important subject, and would ask, if found worthy, for a space in your valuable publication.

There is a principle involved in this question that is as old as law itself. It is not a question of local importance or application. If this well established law and precedent can be ruthlessly violated in two or three counties in the State, it carries with it the right for any enterprise to crush out all antagonistic interests if necessary for its own successful prosecution. If we concede the necessity of sacrificing the agricultural portions of Butte, Yuba, Sutter and Sacramento counties to the claims of hydraulic miners, we virtually give up agriculture in California, and every interest connected therewith, at the call of this one interest, however remote it may be. In the name of our beloved State and her past, present and future history, her renowned accomplishments in agriculture and commerce, I protest against such a surrender as against all law and precedent; against our true State policy; as against robbing our children of their inheritance, finally, as against selling the glorious future of our State for present gold. Let us examine a few of the leading arguments of our mining friends and endeavor to see if they are treating us with deserved candor.

We are told we went upon these lands knowing the danger we subjected ourselves to. I deny this assertion. All our rich alluvial bottom lands were owned long before the discovery of gold. The land upon which the city of Marysville now stands was so owned and occupied, and the city itself named after the wife of one of our earliest pioneers, Mr. Corlland, whose splendidly improved farm in the suburbs of the city, consisting of orchards and vineyards, houses, barns, etc., have all been covered up and destroyed by this "lava" of sand and mud, and the proprietor and his wife, "Mary," are inhabitants of the city of the dead and their children bereft of their true inheritance.

The whole Yuba river valley was occupied before there was a hydraulic mine in existence; the same is true of the American, Bear and Feather rivers. Mining as prosecuted in this State the first ten years did not materially injure these lands. It is not denied that these lands were periodically overflowed, but these deposits rather enriched than otherwise, and no injury resulted until the year 1862. To guard against this debris at the time of settlement would have been to waste means on an imaginable evil that might never have come.

We are also told that because the mines furnished a market for our products we have no right to complain; that our profits were equal to theirs and dependent on them. I concede the truth of this only for the first few years of agricultural experience, after which our market over-leaped the bounds of California and the United States, and our products were sought by the people of Europe, Asia and Australia. To this epoch dates our great prosperity as a State, and our commercial importance. Our mines furnish the agriculturists not a tithe of a market for this surplus.

But we are told that it would not do to interfere with hydraulic mining, as the precious metals are required by our government to enable it to preserve its credit and to assist it to resume specie payment. I would ask in all candor—Shall we be sacrificed that the government may flourish? The position is utterly untenable. I will not occupy space to refute such a monstrous proposition. Our friends in their distress are seeking to unite the entire mining interest on the Pacific coast in an offensive and defensive alliance against the farmers. Now, it is well known that we have no complaint to enter against any but the hydraulic process; all others as yet are not encroaching upon our rights or interests. We are only asking for that consideration and protection that is vouchsafed to the humblest miner as against his neighbor. There is an old and trite saying, "whom the gods would destroy they first make mad." The alliance spoken of will necessitate a counter alliance by the farmer and his sympathizer, and then it will go into politics. In my opinion it will not require a very far reach of imagination to foretell the end.

We are told that some of the leading mine owners attempted to procure reasonable legislation on the subject at the last session of our legislature. Now, we happen to know that the very reverse is true. The agriculturists made such an attempt to have the subject examined in all its bearings by a committee, together with competent engineers and report their observations to the next legislature. But this reasonable request was denied us by the

miner, and the best we could get was a resolution calling the attention of congress to the subject. When they get through making presidents we may hear of the resolution and we may not. If the object was to gain time, the miner could not have chosen a better course. However, the miners did offer a resolution looking to State investigation; but the Commission was instructed to report the great benefits to the farmers of this detritus to their lands, past, present and prospective. Now, if that was not jesting it was an insult, at least could not be accepted by the farmers.

Finally, it is suggested that miner and farmer unite and conduct this sediment to the great tule marshes, and thus reclaim them. At first thought it seems feasible if the means were provided. But on fuller investigation, I apprehend it will be found to have insurmountable objections. The greatest that presents itself to my mind is that these great tule lakes serve as a receptacle or reservoir for the great surplus waters that periodically precipitate themselves into the inland valleys in a few hours. The natural fall of these valleys and their rivers being insufficient to carry the waters to the bay as fast as received from the mountains, it would follow that the entire valley would be inundated if these tules were reclaimed as proposed. I am confident that a scientific examination would find this the greatest obstacle to be overcome.

I have made no allusion to the great destruction already accomplished, that was largely done a year ago; although made light of recently, it yet remains a stubborn fact. But I prefer to address myself at present to the saving of what yet remains to us. Much money has already been spent in constructing works to keep off this detritus, and much more will have to go the same way. But that we shall ultimately triumph, I have no doubt, for this valley is too valuable to be given up for a dump to the hydraulic miner.

Let me foreshadow the final decision of this question, for I have no hope that the miners will accept anything until driven to it.

"The waters of the State belong to the people of the State for purposes of navigation and the use of man and beast. No one will be permitted to use it to the injury of all others." Every industry must be so conducted as not to injure any other industry of equal paramount importance. When this is done the cloud that now overhangs us will clear away, and agriculture asks no more.

GEORGE OHLEYER.

Yuba City, Jan. 29th, 1877.

### Making the Desert Bloom.

EDITORS PRESS:—Referring to correspondence from Lake county in the Press of January 13th, it is delightful to hear that "the dry weather don't hurt us of Lake county one particle." We look forward with confidence to a time when this will be said of every section of the State, and of every State and Territory. It is time that the lachrymose and melancholy refrains of the "ne'er-do-well" people who fain would have the fruit ripen and drop into their open mouths, while they lay supinely on their backs, was hushed, and we heard instead the cheerful click-click of the machines echoed by the voices of the husbandman resounding far and wide. The conditions are undoubtedly present in this western wing of the Republic to create an empire, the like of which is not on record—but it takes work, not grumbling. To those among us who were reared among the rocks and sterile sands of the far-away Eastern shore and from some stranded whaler or hide-dragger were cast upon this blessed land long since, the driveling, whining complaints of shiftlessness roll off harmless, but of course have their effect upon the uninitiated.

We have seen that even in the so-called deserts of Arizona and Utah, the most comfortable homes are created, and in the pre-historic remains all over the continent and in other nominally desert countries, evidences exist that the very desert has been and yet may be the most densely populated of any portion of the known surface of the earth. Labor is the enchanter's wand, the philosopher's stone, that creates fairy lands and changes baser metals to gold.

Your correspondent alludes to the "lower counties" as not having as promising an outlook apparently. The older inhabitants chose the south half of the State as the more satisfactory on the whole, for they undoubtedly weighed the matter carefully before making their selections, notwithstanding the fact that hardly half the rainfall can be expected as in the upper counties. It has been determined long since that the amount of rain falling in the northern counties is, on an average, superfluous, and that a less amount is better, if properly husbanded.

The labor required for this is a mere bagatelle when compared with that expended by some of our ancestors in removing rocks, stumps, swamps, etc. And the work of making a home on these apparently desert places is by no means as formidable as the weak-kneed ones tell about.

All things considered, some of the so-called deserts are preferable to the land covered by dense vegetation, for sanitary reasons, the conditions for subsistence being more easily brought together than the objectionable features in the other case are dissipated.

Numbers of instances occur to us where small pieces, of from one to five acres, have been re-

claimed from comparative worthlessness by labor simply, when the lands that were near that were of any marketable value had been absorbed long previous, compelling the poor settler to go on to the desert and "strike" for life. Success, as ordinarily accepted, is but effort gone to seed. It is by what are called failures that anything of value is learned; thus we must grow to fill the domain a bounteous Providence has bestowed upon us. Envious carping or repining avails nothing. It matters little what spot of earth we select as a residence, so that we take sufficient root. Air is free, water nominally so; occupation and contentment supply the other ingredients for happiness. The idlers are not happy, neither those who seek by gymnastic contrivances to cheat nature. Only the actual producers of their own subsistence and raiment are the ones to be envied in their enjoyment of earthly bliss. F. M. S. Los Angeles, Jan. 23d, 1877.

### Our Industrial Condition—No. 1.

EDITORS PRESS:—Californians are entitled to a goodly share of charitable consideration for their extravagance and disregard of economy in all things. This want, so manifest in public and private affairs, is the outgrowth of an education and habits formed in the early settlement of the State, when representatives from all nations impelled by the desire of gain flocked to these shores, and everything else was lost sight of in their frenzied efforts to secure the glittering prize. There was neither law nor order; indeed, a social olla-podrida existed, as the flood-tide of gold hunters swept over this newly discovered El Dorado, scattering with reckless prodigality the treasures that had lain hidden in river beds and mountain sides since creation. The strongest minds became unsettled and the heads of all completely turned. Chaos reigned supreme, the wildest speculations were the order of the day, business of all kinds became demoralized, fluctuations the most extreme were not daily but of hourly occurrence. Cost was not reckoned or regarded; supplying immediate wants or necessity the only test of value.

To illustrate: tacks, worth ordinarily from five to eight cents a paper, sold at wholesale for a dollar and twenty-five cents. Eggs were in request at one and a half to two dollars each. Baking powders and saleratus were worth their weight in silver. Potatoes and onions were more precious than golden nuggets; while the street crossings in San Francisco were made with cases of the best brands of Richmond tobacco. Invoices of clothing of the finest broadcloth could not be sold for enough to pay the freight. Bibles went begging, while cards were at a premium. Church-going was not thought of, when the doors of the Bella Union, El Dorado and a score of gambling houses, like Janus's temple, were never closed. Fortunes were made and lost in an hour; the turn of a card decided the fate of thousands. No one cared for or thought of expense, with bags of dust at command, which could be filled when emptied without an effort.

These, however, are the recalls of that brilliant past, so dear to the '49er, upon which he delights to dwell. The remembrance is now his empty portion and only beguement. Willful waste has been followed by poverty and want, a condition difficult to be understood or accepted by people of the present day, who in their lavish expenditures and carelessness in money matters have become proverbial. To be known abroad as a Californian is all that is required to secure the especial attention and courtesies of the social cultures that prey upon them at every turn. Should we not glean wisdom from present experience, rather than suffer from a false pride begotten of the past? This brings us to the gist of this communication:

#### Reform.

That kind of reformation which will relieve us from debt, from the grasp of usurers, who reap where they have not sown, whose coils are daily tightening around and crushing out the agricultural and manufacturing interests of our State. A reform that shall free us from unequal and oppressive taxation, that will secure legislation in behalf of the people instead of granting special privileges and immunities to individuals and corporations, a reform that will render those representatives odious whose time and talents are devoted to selfish ends and squandering the public money.

#### Facts About Taxation.

By close estimates the area of California is one hundred million five hundred thousand acres, one-third only of which is available for grazing and agricultural purposes, the balance being made up of rugged mountains, barren wastes and deserts, bays, lakes and rivers.

About two-thirds of the portion (20,959,908 acres), fitted for grazing or agriculture, is divided among some 45,000 owners; by no means, however, in equal proportions, as 122 individuals own nearly one-half, the average assessment on whose land is less than \$4 per acre, while that on the whole exceeds \$13.70 per acre. According to the last report of the Surveyor-General of the State, there was in 1874 enclosed 6,213,556 acres; under cultivation, 3,541,900 acres. The assessed value of real estate and improvements for the year 1874 was \$412,359,543, which, if equally divided, would give to each inhabitant \$525.58. The aggregate State and county tax for 1875 was \$11,608,314.92—\$14.67 for every man, woman and child in the State, Indians and "heathen Chinese" included; or, to get a better understanding of it, \$67.35 for each and every registered voter in the State. This is not the sum total, however, as there must be added the district or town, school and poll, all absolute taxes, which will run it up to nearly \$80 (\$79.35), with Federal taxes and licenses yet to come in.

Let us pause a moment and ascertain where we are, with this showing of \$79.35 tax for each of the 172,128 registered voters. Our estimates may vary as to the proportion of those registered who own no property and pay no share of the tax; call it one-fifth, however, (which is below rather than above the number,) for a divisor. We find \$95.22 as the annual tribute exacted from each voter of substance for the privilege of a social existence, the right of possessing a habitation, for which he has labored.

This letter having been extended beyond the limits intended, suggestions for relieving us from our troubles will be offered in a subsequent communication. G. C. PEARSON. South Vallejo, Cal., Jan. 30th, 1877.

### Quack Advertisements.

EDITORS PRESS:—In your issue of the 20th I noticed an article from Dr. C. S. Anderson, which speaks, doubtless, what many good people feel and few express, and still fewer trouble themselves to discountenance and act against—i. e., "humbug" in its different forms.

The doctor speaks especially of "quack" doctors and their humane advertisement that appear so regularly in journals claiming truthfulness and honesty in their dealings among men, but in these advertisements of vicious nostrums they can quiet their consciences (if they have any,) under the rotten shield of legitimate business, forgetting, apparently, that the "tares" will flourish without their aid, but the "wheat" needs culture.

But I intended only to say amen to the expressions of the doctor in regard to one of the many frauds of the day, and perhaps help others to think more and differently from what they appear to, and count one on the right side now if not hereafter.

A CONSTANT READER.

Nicolaus, Sutter county, Cal.

## THE DAIRY.

### Butter Making Notes.

At the recent meeting of the St. Lawrence County Dairymen's Association, Hon. Harris Lewis, one of the most successful butter makers of central New York, read the following points as reported by the *Utica Herald*: The quantity of butter depends upon the condition of the milk, and the method of its manufacture, including the packages and packing. A butter cow, above all others, should be kept quiet and contented. Pure water is a prime requisite. Many failures to make good butter can be traced to impure water. The cow may be a machine to turn herbage into milk, but she is not a filter, capable of purifying all the filthy waters some are compelled to drink. Mr. Lewis has had better success with shallow than with deep setting, yet considers that there is little difference in the results that may be obtained from the two methods. He has obtained the best results from keeping the temperature of the milk from 58° to 60° during the hot weather, and at from 60° to 65° in cold weather. He would skim milk as soon as it is perceptibly sour. Better results will be obtained by churning each day if the quantity of cream is sufficient to warrant the frequency. When the cream has to stand three or four days, add an ounce of salt to each quart of cream of the first skimming, and stir up the cream of each subsequent skimming. Cream should be brought to the proper temperature for churning by immersing the jar which contains it in warm or cold water, as the case may require. Butter made for immediate use gives better satisfaction if it is gathered in the churn and left unwashed. But for long keeping the butter should be washed. Would have a churn that would produce butter by concussion and not by friction. Churns which produce butter by friction break the grain of the butter, making it salvy, and destroying its keeping qualities. It is safe for dairymen to let such churns alone, notwithstanding the amount of time and labor they save. The buttermilk in butter coming too soft can be worked out better at two different light workings, five or six hours apart, than by one working. Butter is frequently overworked and overwashed. A sliding or grinding motion when working butter will destroy the grain and injure the value. Butter should not be worked with the hands. Wooden packages should be disinfected with hot brine and then soaked in cold brine until the woody smell cannot be detected. Metallic packages for butter may yet become successful, but he had never used one which was proof in all its parts against the action of the brine. Butter should be packed perfectly solid, but it is often injured by too much pounding, smoothing and unnecessary musing over. Ice should not be put in cream to cool it. A square box churn is the only one he ever used that brought all the cream to butter at the same time. It is better to thin cream by adding milk than water. Cream rises better when the milk is a little colder than the air.



## THE VINEYARD.

## The Raisin Trade.

The *Call* prints the following concerning the raisin trade of the city: The supply of domestic raisins has this year occupied a prominent place in the fruit trade of the city, and has to a very great extent excluded those of foreign production. At the solicitation of several receiving houses we have undertaken to ascertain the stock now on hand. On personal application to 20 different commission merchants and dealers, we find that the stock of California raisins now in first hands aggregates 18,000 boxes. The quantity will be a surprise to many who had placed it at a much lower figure. The number of boxes given, however, may be relied upon as very nearly correct, and if any error has been made, it is in placing the total too low. The first of the new crop arrived on the 15th of September, since which time the reported monthly receipts, in boxes, have been as follows: September, 274; October, 9,894; November, 9,429; December, 3,619; January, to date, 1,492; total, 24,708. The quantity received during the corresponding period last year was 20,000 boxes. The arrivals would have been much greater had not a large portion of the crop been lost by the heavy rains in October. The receipts as obtained for the daily papers are necessarily less than the actual arrivals, as shipments frequently come forward unspecified on the manifests and waybills, or are put down simply as dried fruit. We are inclined to believe that the total receipts this season do not fall short of 28,000 boxes. The *Commercial Herald* gives the imports and exports of foreign raisins, in boxes, for the years 1875 and 1876 as follows: In 1875, imports, 22,228; exports, 3,941; difference, 18,287. In 1876, imports, 29,187; exports, 6,315; difference, 22,872. The usual annual requirements of this market are given by prominent dealers at 40,000 boxes, the quantity varying somewhat with the price, and now, an account of the abundant supply and low prices of the domestic fruit, supposed to considerably exceed that quantity. A considerable portion of the crop still remains in the hands of the producers. How large the quantity is, it is difficult to say, though we know of 7,000 boxes that have not yet been forwarded. Placing the quantity still in the interior at 10,000 boxes, and the total product for the season amounts to 38,000 boxes. Early in the season it was thought that the crop would amount to 60,000 boxes, but after the October rain the estimate was reduced to 40,000, which would appear to have been not very far out of the way. It is evident that the supply is sufficiently ample to obviate the necessity of foreign importations.

## Zante Currants.

Next to raisins and prunes, Zante currants take the most important place in our foreign imports of dried fruits. The Ionian islands and the Morea have a monopoly of the trade and supply the world with \$5,000 to 90,000 tons per annum. Barff & Co., of Patras, estimate the crop the past season at 85,000 tons, as follows:

	Tons.		Tons.
To United Kingdom.....	56,966	To Russia.....	656
To United States.....	6,674	To Marseilles.....	82
To Canada.....	906	To Orders.....	395
To North of Europe.....	5,825		
To Trieste.....	2,911	Total.....	74,439
Held here and on the coast for shipment, mostly Provincial, about (tons).....			5,000
Held in Zante and Cephalonia.....			5,000
Total.....			10,000

Crop about.....84,439  
The exports to the United States, as given in the table, do not represent the whole quantity brought to this country, as the greater portion of the supply is imported by way of England and a part from Hamburg and Trieste. We have not the value of the imports at hand for the past year, but in 1873 the quantity imported at New York was valued at \$371,000, and for 1872, \$444,000. The Corinth grape, from which the currants, or more properly raisins, are made, has been introduced into this State, and has proved to be perfectly adapted to our soil and climate. A few currants were prepared last season that were acknowledged by dealers to be superior to the imported, and in quantities would have brought two to three cents per pound more than the foreign product. Owing to the small size of the grape and the ease with which it is cured, this fruit can be produced cheaper than raisins, and in many localities where raisin grapes cannot be profitably grown. Here, then, would seem to be an industry to which the California grape grower may turn his attention with a certain prospect of ample remuneration.

THE MICROSCOPE IN GOOD HANDS.—A competent judge declares that Professor Pasteur has saved enough to France by his discoveries to pay the entire indemnity to Germany. He is a great chemist, and one of the most skillful experimenters in the world. For many years he has been subjecting the theory of spontaneous generation to the most severe scientific tests, and is positive in his conviction that all life, so far as we know it, springs from living seed or germs. The experience of the best dealers in wine has been baffled in seeking a remedy for a difficulty. Professor Pasteur put some of the spoiled wine under the microscope and soon discovered the cause of the trouble. Minute organisms were found in the wine in every instance,

and the change of quality was due to their presence and growth. Of course they grew from germs, and if the germs could be destroyed the mischief would be averted. Judging from experiments in other liquids that heat would be fatal to the germs, he subjected the wines to a degree of heat which they could bear without injury, and found that all the germs were destroyed. The wine makers profit by the science of the chemist, and save millions of dollars formerly lost by the spoiling of the wines. Having been successful in making wines unalterable, he turned his attention to vinegar. This was subject to changes, which made it putrid and worthless. He detected another kind of organism in vinegar, and taught the dealers how to destroy it in germ and keep the vinegar unharmed.

## HORTICULTURE.

## Banana Stalks Rotting.

It seems our Florida friends are having trouble with some of their banana plants. The following from the *Florida Agriculturist* may be possibly of some service to our growers: I have just read a letter in your issue of the 18th from a fruit grower at Fort Meade, who complains of his banana stalks rotting off at the root and toppling over, and as I have frequently heard similar complaints from others, I will offer a few hints based upon my own experience: The trouble probably arises, not from excess of water, but from unfitness of the soil. There are low, rich hammocks which seem to be unsuited to some plants, probably from deleterious elements entering into their composition. I have seen such pieces of land, naturally drained and of great fertility, where corn would fine and orange trees and banana plants grow finely for awhile and then become diseased and die out, yet other things, as for instance Irish potatoes, beans and English peas, would thrive. But on pine lands near by, possessing a similar subsoil, much inferior in fertility, and less perfectly drained, the banana would succeed perfectly, showing no signs of disease, and producing large bunches of fine fruit. Theoretically the banana likes a moist, rich soil, with good drainage, but it often does admirably on low, wet pine lands, with some admixture of muck, such as is found along the slope of a branch. Also large piles of decaying trash, heaped around the plants, will frequently produce the diseased condition complained of, as will a too liberal application of powerful manures. I had a large plant on the outside of a poultry yard, about five feet from the fowl-house, which was destroyed from the latter cause. In congenial soils a moderate quantity of loose litter buried around the plants, with an occasional dressing of muck, and particularly ashes and light-hoe culture, will be attended with most satisfactory results. Some kinds of hammock will do for bananas, but on low, moist pine lands, with very moderate fertilizing, they usually succeed most admirably. Let "S. W. C." select another spot, and try again.

## Impressions of Fruits.

Nurserymen and pomologists who wish to retain an accurate knowledge of the forms and appearances of the numerous sorts of fruits under cultivation, find it important to preserve outlines showing their size and figure. It has been a common way to make these outlines by first cutting the fruit through the center from the stem to apex, laying the flat side on paper, and then with a fine pointed pencil to trace the outline carefully in contact with the halved fruit. This is somewhat troublesome and not very accurate, and we have accordingly adopted a simpler and more perfect mode, which 30 years' testing has proved all that can be desired. The mode is simply the following:

First cut the fruit accurately through the center, with a sharp, thin-bladed knife, splitting first the eye and then cutting down and splitting the stem. By a little practice this is done without difficulty or failure. Then with a pen or camel's hair pencil touch lightly the cut face with ink, including the stem, to which the ink should be applied more heavily. Then press the whole face on a sheet of thick unsized or blotting paper, taking care that every part comes in contact with it, and pressing the stem down firmly. Then remove it, and a perfect outline will be left. The moisture of the fruit will dilute the ink on its cut face, and a soft, distinct impression will be made, much resembling a neatly shaded picture, if carefully done. A little practice will enable any one possessing a moderate share of skill to make very satisfactory impressions.

Pears which are ripe and molting will have too much water on the cut surface, unless it is first partly absorbed with a sponge, piece of cotton, or with blotting paper, before the ink is applied; and the fresh picture may need some drying by the same means.

A good sized book of blotting paper prepared by the book-binder may be used for the impressions of all fruits which can be cut through the center; and such a book, with its yearly additions, will become a volume of much value for reference.—*Country Gentleman*,

## ARBORICULTURE.

## Trees on the Plains.

EDITORS PRESS:—Having read an editorial in your invaluable paper in relation to the catalpa tree and its culture, I feel desirous of adding a few of that variety of forest trees to my thrifty little grove of eucalyptus, and respectfully solicit information as to where the seeds or plants of the catalpa might be obtained, and by compliance you might lay yourselves under lasting obligations to hundreds beside myself, for the great scarcity of timber in the vast valleys of the Sacramento and the San Joaquin present the greatest inducements for tree culture, every considerate man knowing that fence posts, railroad ties and fuel must demand higher prices 10 years hence than at present. And at present prices it would be reasonable to estimate a grove of 10-year-old trees at \$2 each, and on 10 acres we have 6,800 trees, eight feet apart, and there are plenty of men on the Joaquin who can multiply 6,800 by two. But they said years ago that trees would not grow in this section of the country without irrigation, which we find by experience to be a huge mistake, for a few trials, or the trials of a few, have established the fact that trees will grow as well in the Joaquin country as any other part of the State. But one of the chief points in tree culture is to

## Prepare the Ground

Well before setting out the trees, and then irrigate. Work liberally with the plow, harrow and hoe, and success will abundantly repay for all the outlay. I set out a small grove of blue gum last February, the plants being six to 14 inches high, which are now from six to 10 feet high. J. D. Darby, on the adjoining ranch, set out 2,000 at the same time which are now from six to 14 feet high and one and a half to three inches in diameter, the greatest growth being on ground in extra condition.

Groves and avenues of thrifty growing and valuable timber on the farm are not only sources of profit in dollars and cents, but they are ornamental to the home, making it comfortable and attractive.

I must give you an idea of

## Deer Valley,

Which is situated seven miles southeast of Antioch, Contra Costa county. The valley is three and a half miles long by one-fourth of a mile wide, running east and west, opening out and losing its name in the great valley of the San Joaquin. Deer valley is one of the most beautiful valleys in the State, containing 10 families and a schoolhouse convenient to all. Our young orchards are just beginning to bear, and I will venture the assertion that most kinds of fruit and nuts will attain the highest degree of perfection in this valley. Wheat, barley, corn and early vegetables do well. The upper part of the valley is beautifully set with oak timber, which extends over the hills on either side, with an occasional stately pine rising high, watching, as it were, with magisterial authority over the inferior oaks below. Land in the valley is worth from \$25 to \$40 per acre.

Antioch, Cal.

J. W. DARBY.

We do not know now where the seed of the catalpa may be obtained. The tree is quite common in the Southern States and some of the prairie States, and doubtless our seedsmen could get the seed from Eastern dealers.—*Eds. PRESS.*

## The Date Palm.

The San Francisco *Call* notes that the date palm, *Phoenix dactylifera*, has proved itself perfectly hardy in Sonoma, Santa Clara, Santa Barbara, Los Angeles and San Diego counties, in this State, and should be more extensively grown. At some of the old missions are specimens of this magnificent tree 60 feet in height, and with their majestic crowns of ever-verdant feathery leaves are the most striking features of the landscape. The plant is ornamental when quite young, and is well worth cultivation, even if it should never fruit. It succeeds best in a hot, dry climate, and in several portions of Asia gives its annual crop of luscious fruit, where the winters are equally as severe as in many parts of California. It grows to perfection in some localities in Palestine, where frosty nights occur, and in Mesopotamia, where the climate is very similar to that of the San Joaquin valley. We are strongly of the opinion that the date palm will thrive in several of our hot interior valleys and perfect its fruit.

Concerning the growth of this tree in foreign lands and the demand for its fruit we read in the *Fruit Reporter* as follows: In the countries of its production it forms in a great measure the staff of life, while with us it is only a luxury, and less appreciated than its properties entitle it to be. Mr. Witherby, in his "Report on Dried Fruits" shown in the food collection at the London exhibition, 1873, observes: "The date is sent to us by thousands of tons, supplying material for food, for distilling, and for confectionery purposes. It is the delight of the schoolboy, the competitor of nuts at country fairs, and the *piece de resistance* of the London street stall in the winter and spring, when no fresh fruits are attainable.

The date is the special tree of the Saharan

regions. Its constitution, temperament and habits particularly suit it to the African climate, which is especially characterized by the scarcity of rain and the digressions of temperature. Its fruit is the source of sustenance for the nomad and sedentary people, white or black, scattered over its immense countries. The dates, after having been gathered, are dried in the sun, and when quite hard, buried in the sand. They may thus be preserved about two years; but generally after 18 months they are attacked by worms, and in the beginning of the third year nothing remains of them save the stoups. As an every-day food, dates are considered very heating, in consequence of which they are not much used on journeys, as causing great thirst. The most relishing and wholesome way to eat them is when made into a paste and mixed with barley. The date palm cultivated and attended to from time immemorial, has produced in the hands of the natives as many varieties as our most carefully cultivated fruit trees. There are reckoned not less than 90 varieties of dates in the Zibans. The different dates are of almost every color except pure white and black. There are not, as is the case with our apples and pears, early and late sorts, but all arrive at maturity about the same period (restricted to within a fortnight), which falls in Fezzan about the latter part of August. The fruit is the common food of both man and beast; camels, horses, dogs—all eat dates.

Besides the dates destined for home consumption in the country, dates of a superior quality are gathered, and, being prepared with great care, fetch a higher price in the markets of Europe. Several Parisian merchants, within the last few years, have given importance to this trade, by proceeding each year to the seat of production in Algeria and preparing on the spot, by special modes, large quantities of dates for France, which replace with advantage those formerly procured from Tunis and Egypt. The region of Ziban, to the south of the Province Constantine, is the part of Algeria where the culture of the date occupies the largest surface, is carried on with the greatest care, and where the fruit is of the best quality. This region includes 19 oases, of which Biskra is the principal. Laghouat, in the Province of Alger, is another center of production. Algeria might take a considerable part in this commerce, by direct communication with England or through Marseilles, of the dates of Laghouat and of Constantine, a large part of which are sent from Tunis. Dates are a most important article of production in Egypt. The quantity produced is estimated at 750,000 tons, but they are nearly all locally consumed.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

## Cross-Bred Fowls.

It has been stated in leading agricultural papers that it would not pay the ordinary farmer to breed pure bred fowls, but that he would derive more profit from breeding from some judicious cross. This we think is an error. If it will pay A to breed pure bred poultry, we see no reason why it will not pay B equally well, provided he gives them the same care and attention. If the farmer does not intend raising fancy chicks for sale as breeders, it may pay him just as well to get two good breeds and cross them; but great care must be used in making the cross, or it will not prove a valuable one, and even then it will be no better than a pure breed; therefore we do not think there is anything to be gained by crossing. It will not do to breed much from cross-bred parents, as they will soon run out and become no better than ordinary dunghills; and, although the first cross may be strong, active birds, the offspring of these cross-bred fowls will be much more liable to disease than those that are bred pure. "What is worth doing at all is worth doing well;" this will apply to poultry breeding as well as anything else. Get good stock, take good care of them, pay attention to the selection of the best for breeders, and it will pay any man to breed poultry. People must not expect that to get good stock is all that is required, and that it will take care of itself and prove a horn of plenty; poultry, like all other stock, must be well cared for, and then it will pay its keeper well, better, in proportion to the money invested, and the time spent, than any other farm stock.—*Nation*.

## Poultry Books.

EDITORS PRESS:—Will you be so kind as to inform me through your most valuable paper the best work on poultry and where I can get it?—C. G. S., Grand Island, Cal.

The best work is Wright's Illustrated Book of Poultry, containing, besides other engravings, 24 large colored plates of various fowls. This enables those who have never seen fine specimens of a variety to judge of the points and degree of excellence of a fowl. The work costs \$15 bound, or 50 cents a number; there are 24 numbers. Of the smaller works, we think that Wright's Practical Poultry Keeper is among the best; price \$2. Our poultry editor can furnish any book on this or kindred subjects at New York prices.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Napa County Grange Work—Past and Future.

EDITORS PRESS:—Since the Grange began its valuable work in 1873 for California agriculture, the farmers of Napa county have been among the foremost in the State as zealous and efficient workers for the Grange cause—which means nothing more than the general interests of farming in all its branches. Last Saturday witnessed the largest gathering of Grange members and their friends which has occurred for a year in that county, and one of the largest the writer has ever seen in California. The occasion was the installation at Yountville, as a central point, of the three sets of officers—39 in all—of that Grange, and of Napa and St. Helena. It was certainly a most pleasant and encouraging reunion.

In the work of the present how liable are we to forget the past! As I passed Napa City to our point of meeting—a few miles further north on the railroad—in company with Worthy Master Webster and Brothers Blanchard and Earl, the memories of our beginning in 1873 naturally rushed upon me—how Napa Grange was the first organized in April of that year, and how at Napa City, the 15th of July following, the delegates of 29 out of 35 Granges then formed in the State, met to organize, under Judge Garretson's guidance, the State Grange of California. How many of our fellow Patrons remember the various objects officially announced at that memorable meeting, in our "Declaration of Purposes?" To refresh our memories and recall the progress made in attaining those objects, permit me to state them here in brief. To add force to the real success achieved by our co-operation, directly and indirectly, we should remember the heavy burdens imposed on our farming interests in California in 1872 and previously.

The following will suffice as samples of such burdens: Each wheat sack, 18 cents; each barley sack, 21 cents; one and a-half to two per cent. per month for all money advanced or loaned—compounded monthly, or as a rare favor semi-annually; \$2.50 per ton storage per season; freights to Liverpool, £5 to £5 10s; all farm and home supplies from five to 50 per cent. higher than now. The vital necessity to free ourselves from these and similar oppressive rates, or to abandon farming, gave to California farmers that peculiar zeal and success in combining with outside friends to gain our objects, which has given them an enviable name abroad as Grange workers.

#### Original Purposes of the Grange.

Besides our well-known social, educational and benevolent purposes, our objects, as clearly set forth at Napa, were the following, in fewest words: 1.—To establish co-operative systems of trade, thus bringing producers and consumers as near together as possible. 2.—To establish banks from which farmers could obtain loans at reasonable rates. 3.—To arrange for purchasing farm implements, machinery and sacks, directly from manufacturers. 4.—To obtain direct shipments on more favorable terms; storage and advances at lower rates. 5.—To establish grain stores when needed. 6.—To gradually substitute the cash for the credit system. 7.—To seek a reduction of railroad freights and fares by all legitimate means; to advocate reduction of port charges, irrigation and the fostering of mechanical industry. 8.—To have some day in Europe an agent to look after our interests in the chartering of ships and advances on cargoes shipped directly to European consumers in the interests of California farmers.

Who so blind, or prejudiced, as not to know how great, in little more than three short years, have been the improvements in these and other respects. Much, indeed, has the welfare of our real farmers and those dependent on them been advanced by many concurrent circumstances. Not the least of these circumstances has been the co-operative efforts of many thousand zealous, persevering Grange members, aided by their many outside friends, who have recognized and advocated the justice of our cause.

Since the Granges of various States and their associations have become so active in applying their business principles to direct trade, banking, insurance, etc., it has become a favorite statement of those who oppose our business efforts, that the Grange in doing these things is going beyond its principles as first declared. I have heard it stated, even by a few members who ought to know better, that our founders never intended these business features as a part of the work of our Order.

To prove that all such statements are incorrect and that our business efforts were originally anticipated by our founders, it is only necessary

to quote from Worthy Master Saunders's address at the third session of the National Grange, February, 1870, when the cause was still weak and almost unknown. In his summary of the objects of the Patrons of Husbandry, as then organizing, he states the following:

"4. To secure economies in the purchase of implements, fertilizers and family supplies, and in transportation, as well as increased profits in the sale of the products of their labor, at the same time lessening the cost to the consumer.

"5. To entirely abolish the credit system in their ordinary transactions, always buying and selling on a cash basis, both among themselves and in their dealings with the outside world.

"6. To encourage co-operation in trade, in farming and in other branches of industry, especially those most intimately connected with agriculture."

It can be seen at once, then, that the Grange has only been endeavoring to practice these principles in the most efficient way, having gone so far as to seek and secure an alliance with European consumers.

Now, how can we better secure and add to the advantages already gained than by unitedly sustaining the Grange and the enterprises so successfully established under its guidance and founded on its principles?

Such seemed to be the sentiment which animated the large assembly of devoted Grange members at Yountville last Saturday. On all sides they admitted the improved condition of the farmers and their families in their favored valley, since the advent of the Grange among them. May none of our members be so ungrateful as to forget the great good accomplished by our Grange work. The defects have taught us remedies for the future, and should discourage none. Let us show our gratitude by sustaining the good cause with even more firmness than in the past. It must be sustained or its good effects will be lost. In that case, the fault would rest with our members who have disregarded their obligations and their duties.

Five hours or more were spent together at Yountville most agreeably. The meeting was held in the handsome brick building erected by the Grange—the upper room its hall, the lower a large store-room, run in the interest of the Order.

Worthy Master Webster installed and delivered a most impressive charge to the new officers, showing that the prosperity of their Granges the coming year depended largely on their fidelity and zeal.

Your correspondent, by request, addressed the gathering in public, and afterward in close Grange meeting. The feast was characterized by the usual features of abundance, variety, and the ample justice done by all who shared the hospitality of the Grange. Our faithful sisters, to whom, as co-workers, so much of the success of our organization is due, were present in large numbers, attended by numerous little Grangers, varying in age from four months up to 16 years. Even the babies enjoyed it so that not one of them was heard to cry throughout the day.

Space does not remain to dwell fully upon the charming prospect Napa valley presents after its abundant rains—heavier this winter than in any other part of the State. Its grain crops could not look better, and each farmer is sowing all available land to wheat, barley, and oats. Having already over 13 inches of rain their valley really has a surplus of moisture. Because of the warm winter the almond and early apple trees are blooming, and the first wild flowers are opening. On the fine farm of J. D. Blanchard I saw a remarkable Australian red gum (*Eucalyptus rostrata*), whose rapid growth from a small tree a few feet high I had an opportunity to observe three years ago.

The facts connected with its growth are really worth recording. It is probably not surpassed by any instance in the State. It is eight years old. By accurate measurement its circumference at the ground is six feet 11 inches; two feet from the ground, five feet six inches. Its height is at least 60 feet. It is that species which produces the hard, tough, durable wood like hickory, and which is used in Australia for buggy shafts, single-trees, and similar purposes in carriage and wagon making. The value of this species among the future hard woods of California can scarcely be over-estimated.

S. F., Jan. 31st, 1877. J. W. A. W.

DEATH OF A GRANGE FOUNDER.—Bro. N. W. Garretson, of the Oregon Cultivator, says: General William Duane Wilson, of Des Moines, Iowa, is no more; peacefully he passed from earth's labor and sorrows, on the morning of the 7th inst. Bro. Wilson was a good man, and his long life (almost 70 years), was full of sunshine and labor. He was founder of some of the strongest journals in the country, and the oldest printer in the Northwest. He was one of the founders of the Order of P. of H., and if we except Bro. O. H. Kelly, did more than any other man for its establishment. Rest in peace, noble brother, we remember and would practice thy many virtues.

INSTALLATION AND DEDICATION.—The installation of the officers elect of Golden Gate Grange, of this city, has been postponed from Tuesday the 6th to Tuesday the 13th inst. The dedicatory exercises of the new Grange hall, which has been fitted up at the Grange headquarters, corner of California and Davis streets, will take place on the same evening. Members of the Order who may be in this city on that evening, will find it pleasant and profitable to attend.

### Resolutions "For the Good of the Order."

EDITORS PRESS:—I send you a series of resolutions from a sister Granger of Eden Grange. The sister being one of the committee for the "good of the Order," brought them before the Grange as subject for discussion. They were adopted as such and by vote of the Grange I forward them to you for publication.

Resolved, That those who do not in some way by mental or manual labor add to the world's wealth are paupers and drones.

Resolved, That intelligent labor is ennobling; it brings dignity and respect.

Resolved, That it is the duty and privilege of every Patron of Husbandry to inform themselves of the practical workings of all the business proceedings that have any bearing or influence on or in connection with their business.

Resolved, That the farmer is realizing too little for his produce, and those who handle them are realizing too much.

Resolved, That if the merchant or trader has the right to fix his profits on the commodities they are dealing in, the farmer should be granted the privilege of fixing the price on his produce.

Resolved, That our Grange is composed of men and women who represent the farm, and as such should be cleared of every foul and noxious weed of ignorance and bigotry, and in their stead planted the seeds of knowledge and wisdom, then nurtured into healthful, practical intelligence.

Resolved, That the Grange can be benefited by co-operating and working together.

Resolved, That the Grangers' Business Association of San Francisco is a success.

J. SHARAL, Sec'y.

### From the Granges.

#### Lodi Grange.

EDITORS PRESS:—The installation at Lodi came off agreeably to announcement, and on a morning that dawned as calm and cloudless as a summer's day. The good Patrons from Stockton, Washington, Lockeford, Woodbridge and Lodi Granges, began to assemble at Spencer's hotel, Lodi, to participate in the impressive and interesting ceremonies of a public installation. After our cordial and social greetings one with another, it was proposed by a sister that we proceed to the church where the exercises were to be held. All preliminary arrangements having been made, the Grange opened with inspiring music, both vocal and instrumental, and Brother Wolf, Worthy Past Master of Stockton Grange, assisted by Brother Overhiser, Deputy, conducted the ceremony in their happy and efficient manner. After the L. A. S. was conducted to her position, the newly installed officers were invited to make a speech. Most of them responded promptly, making a few appropriate remarks befitting the occasion, with hearty thanks for the honor conferred. After a short recess our Worthy State Lecturer was introduced, and such a "feast of reason and flow of soul" we have never listened to. He held the audience in rapt attention for one hour and three-quarters, with his highly interesting address. Would I could compliment him sufficiently, but here my adjectives fail me. If it becomes his duty to visit Lodi Grange again he has promised to honor us with a call, to which event we shall look forward with the greatest of pleasure. On motion of Brother Holman, Worthy Master of Lockeford Grange, a vote of thanks was tendered to our Worthy Lecturer for his able, masterly and eloquent speech. Brother Overhiser followed in a few appropriate remarks, fully sustaining the sentiments of the Worthy Lecturer, and also gave us some interesting facts in regard to the early history of Stockton; and declared he was not a "bit hungry, but would rather talk than eat," but as three o'clock drew near, the hour appointed for dinner, we adjourned to the hotel. On our way thither one of our installing officers, whose name is not unlike a certain ferocious animal we might mention, said he never felt more "wolfish" in all his life, and I am sure that feeling prevailed generally, for keener appetites never entered a dining hall than did the Grangers, on that occasion. And we sat down and did ample justice to a sumptuous harvest feast provided by our genial host and hostess, Mr. and Mrs. Spencer; after which all separated with the good humor that had prevailed throughout the day, and I think every one would exclaim in their hearts—God bless our Granges.

A GRANGER.

#### Franklin Grange.

EDITORS PRESS:—Saturday, February 3d, the officers of Franklin Grange were installed by Bro. J. W. A. Wright. It was a day fraught with much enjoyment and long to be remembered. Bro. Wright was accompanied by Bro. Earl, of San Francisco, an earnest representative of the Fruit Growers' Association of California. Florin Grange was represented by Bro. Fassett, Master of Florin Grange, and Sister Fassett. Besides the inspiring presence of the brothers and sister mentioned, we were very much encouraged by the presence of a goodly number of our outside friends and neighbors, who, by their attendance and close attention, showed an appreciation of the good work of our Order. After the installation exercises we sat down to a bountiful harvest feast, which was enjoyed by all to the fullest extent. We had a few toasts, which were happily responded to. Order was restored and we were favored with an able and encouraging address by Bro. Wright. He held the close attention of the audience throughout. In his easy and graceful manner he showed to us conclusively the good results which have

followed the Grange movement all over our broad land, and forcibly impressed us with the grand achievement yet in store for us if we are faithful and stand firmly together. If any of our sister Granges are discouraged or languishing, we would recommend them to secure the presence of Bro. Wright, for we can assure them he is just the man to animate them with new life and vigor. Bro. Earl's remarks were "words fitly spoken," and calculated to cheer and encourage every fruit grower in California. As I sat listening to the cheering words of Brothers Wright and Earl, I could not help thinking of the power developed and yet to be developed "In the hand that holds the bread."

S. G. BRADFORD.

Franklin, Cal., February 5th, 1877.

#### Joint Grange Meeting.

San Jose and Santa Clara Granges will hold a joint meeting at the hall of San Jose Grange, on Saturday, Feb. 25th. Bro. Pilkington, State Lecturer, will be present by invitation to address the Patrons and farmers assembled there.

#### Election of Officers.

CHRISTMAS GRANGE, No. 141, TULARE CO.—Election, Jan. 13th: C. H. Robinson, M.; A. B. Corry, O.; S. H. Blood, L.; Wm. A. Yost, S.; C. G. Lambert, A. S.; Jos. M. Purves, C.; Josephus Perrin, T.; T. J. McQuiddy, Sec'y; E. Y. Bock, G. K.; Sister T. J. McQuiddy, Ceres; Sister C. Talbot, Pomona; Sister C. C. Lambert, Flora; Sister Phebe A. Purves, L. A. S.

EL DORADO GRANGE, No. 178, EL DORADO CO.—C. T. Foster, M.; F. C. Carpenter, O.; C. G. Carpenter, L.; Joseph Wax, S.; Tracy Carpenter, A. S.; O. Nelson, C.; Wm. Kramp, T.; John Bryan, Sec'y; Philip Kramp, G. K.; Sister C. Carpenter, Ceres; Allie Davis, Pomona; Artie Hamel, Flora; Luther A. Carpenter, L. A. S.

ELLIOTT GRANGE, No. 183, SAN JOAQUIN CO.—James Lamb, M.; B. M. Greene, O.; J. B. Greene, L.; F. Ritter, S.; J. Wilts, A. S.; R. Adams, C.; C. M. West, T.; H. H. West, Sec'y; H. Adams, G. K.; Mrs. S. Lamb, Ceres; Mrs. M. A. West, Pomona; Miss Jennie Lamb, Flora; Mrs. Jennie Ritter, L. A. S.

KIWELATTAN GRANGE, No. 88, ARCAT, HUMBOLDT CO.—Election, Dec. 30th, 1876: Wm. Nixon, M.; W. N. Campbell, O.; H. W. Arbogast, L.; Jas. Sinclair, S.; F. McPhee, A. S.; H. S. Daniels, C.; Jos. Nellist, T.; Sister Mary Sinclair, Sec'y; Geo. Zehender, G. K.; Sister H. W. Arbogast, Ceres; Sister W. N. Campbell, Pomona; Sister M. E. Nellist, Flora; Sister J. Minor, L. A. S.; Trustee for three years, G. B. Kneeland; one year, Amos Foltz.

LAKE GRANGE, No. 134, TULARE COUNTY.—Election, Jan. 20th: R. B. Huey, M.; W. H. Docker, O.; M. S. Babcock, L.; J. W. Rhoads, S.; A. P. Kenner, A. S.; R. C. Davidson, C.; R. T. Armstrong, T.; Matt. M. Rhoads, Sec'y; R. J. Wilson, G. K.; Sister Amanda Rhoads, Ceres; Sister H. F. Bicknell, Flora; Sister S. Shattuck, Pomona.

LITTLE LAKE GRANGE, No. 151, MENDOCINO COUNTY.—Election, Dec. 4th: P. Muir, M.; W. Gibson, O.; A. Martin, L.; J. Vassar, S.; M. N. Sawyers, A. S.; J. G. Snell, C.; J. C. Thompson, T.; Wm. Blosser, Sec'y; J. Frost, G. K.; Mrs. Muir, Ceres; Mrs. Vassar, Flora; Mrs. Gardner, Pomona; Mrs. Felton, L. A. S.

MODOC GRANGE, No. 247, MODOC CO.—L. A. Hammersly, M.; E. V. Coffin, O.; L. E. Henderson, L.; W. H. Seitz, S.; F. Vincent, A. S.; J. D. Brown, C.; A. E. Boyce, Sec'y; Mrs. M. J. Coffin, Ceres; Mrs. R. E. Boyce, Pomona; C. Kelley, Flora; Mrs. L. Perkins, L. A. S.

NATIONAL RANCH GRANGE, No. 235, SAN DIEGO CO.—E. T. Blackmer, M.; F. A. Kimball, O.; M. B. Hammer, L.; T. Parsons, S.; S. C. Field, A. S.; W. C. Kimball, T.; Flora M. Kimball, Sec'y; T. Walker, G. K.; Mrs. A. Field, Ceres; Mrs. J. Walker, Flora; Mrs. S. C. Kimball, Pomona; Mrs. L. Roberts, L. A. S.; Mr. L. Roberts, Trustee; P. Rouland, Librarian.

OLD CREEK GRANGE, No. 26, SAN LUIS OBISPO COUNTY.—C. H. Smith, M.; C. S. Clark, O.; S. Riley, L.; W. Nicholls, S.; A. Kingery, A. S.; R. C. Swain, C.; S. Kingery, T.; A. L. Tolle, Sec'y; W. Richter, G. K.; Sister Kingery, Ceres; Sister Phillips, Pomona; Sister Clark, Flora; Sister Nicholls, L. A. S.

SUNOL GRANGE, No. 163, ALAMEDA CO.—B. F. Cooper, M.; Mrs. M. Black, L.; Mrs. Baker, S.; G. I. Vandervoort, A. S.; Mrs. Hadsell, C.; Charles Duerr, T.; S. W. Millard, Sec'y; E. M. Carr, G. K.; Mrs. Vandervoort, Ceres; Mrs. Arnet, Pomona; Miss D. Baker, Flora; Miss Sarah Carr, L. A. S.

SOUTH SUTTER GRANGE, No. 207, SUTTER COUNTY.—Wm. E. Roberts, M.; John R. McClellan, O.; John Morrison, L.; D. D. Marvin, S.; John Jones, A. S.; R. H. McClellan, C.; Homer Sankey, T.; Benton Hudson, Sec'y; Iven Lenasters, G. K.; Mrs. Mary J. Richardson, Ceres; Mrs. Harriet Murphy, Pomona; Mrs. Chloe Abbott, Flora; Mrs. Ann E. Robert, L. A. S.

TURLOCK GRANGE, No. 29, STANISLAUS CO.—J. T. Dunn, M.; W. L. Fulkerth, O.; B. H. Deane, L.; M. J. Hall, S.; A. S. Fulkerth, A. S.; C. Broadhurst, C.; E. McCabe, T.; Mrs. S. H. Jeffers, Sec'y; M. Joyce, G. K.; Mrs. M. Trimmer, Ceres; Mrs. C. Fulkerth, Pomona; Mrs. M. J. Hall, Flora.



## In Memoriam.

## AMERICAN RIVER GRANGE, No. 172.

WHEREAS, It has pleased our Heavenly Father to remove from the field of his labors, from time to eternity, our worthy Brother, G. M. KILGORE, therefore, be it

Resolved, That in the death of Brother KILGORE the American River Grange has lost one of its most respected and faithful members.

Resolved, That the community, in which he has so long resided, and by whom he has ever been highly esteemed for his many virtues, has had removed from its midst one of its most faithful workers, that the cause of education has lost one of its most trustworthy guardians—the unfortunate a true friend, and his neighbors one in whom they could place the most implicit confidence.

Resolved, That we extend to the bereaved family of the deceased our heartfelt sympathy in this their sad hour of affliction.

Resolved, That a copy of these resolutions be sent to the family of the deceased; also, that a copy be sent to the PACIFIC RURAL PRESS for publication, and that they be spread upon the minutes of the American River Grange.

## MONTEZUMA GRANGE, No. 158, Solano county, December 30th, 1876.

WHEREAS, Our brother, DANIEL HALERON, has been suddenly called away by our Divine Master on Dec. 25th, 1876; Therefore be it

Resolved, That the members of this Grange wear the badge of mourning for 30 days.

Resolved, That the preamble and resolutions be placed on our records, and a copy of the same be sent to the RURAL PRESS for publication.—Committee: James Galbraith, Thos. T. Hooper.

## PETALUMA GRANGE, No. 23, Sonoma county.

WHEREAS, Our Heavenly Father in His infinite wisdom has seen fit to call from earth and from our circle, on the 14th of December, 1876, our beloved sister, Mrs. SARAH GREEN; and

WHEREAS, In the death of our sister Petaluma Grange has lost a good, true and esteemed member, her husband a faithful and affectionate wife, her children a loving, kind and tender mother, and the community a worthy and respected woman; Therefore be it

Resolved, That this Grange truly and sincerely sympathizes with the husband and children of the deceased in this their hour of bereavement; may they remember her many virtues and wise counsels, and cherish her memory as a bright star to guide them through all the trials and vicissitudes of life and to direct their thoughts in the highest and holiest channels.

Resolved, That as a token of respect for the memory of our deceased sister, that our hall be draped in mourning for 30 days, and that these resolutions be spread upon the minutes of this Grange and a copy furnished the family of the deceased, also the Petaluma *Argus*, PACIFIC RURAL PRESS and California Patron for publication.—Committee: Mrs. C. A. Parker, Mrs. L. W. Walker, Mrs. A. A. Mann, Mrs. E. E. Grover.

## SAN JOSE GRANGE, Santa Clara Co., Jan. 13th, 1877

WHEREAS, It hath pleased our Divine Master to remove from our Grange circle our cherished brother, H. G. HART, to that circle above where the weary are at rest, in that house not made with hands, eternal in the heavens, therefore be it

Resolved, That in obedience to the call of our Heavenly Master, San Jose Grange has parted with a kind hearted and faithful member, a most worthy brother, and that we most sincerely mourn the broken link.

Resolved, That we extend our heartfelt sympathies to our bereaved sister, who has thus been separated for a time from a faithful and loving husband, and also to the mourning friends and relatives.

Resolved, That our charter be draped in mourning for 30 days, that this sincere expression of the Grange be spread upon our records, and that a copy thereof be sent to the RURAL PRESS and San Jose *Mercury* for publication.—[Committee: C. T. Settle, Wm. Erkson and Mrs. E. P. Bicknell.

## SAN JOSE GRANGE, Jan. 13th, 1877.

WHEREAS, Our Great Master has called our worthy brother, L. L. TOURTELLOTT, to labor in heavenly fields on high, therefore be it

Resolved, That in this event San Jose Grange has suffered the loss of a faithful member and brother, and the community an esteemed citizen.

Resolved, That we extend to our bereaved sister our heartfelt and fraternal sympathies in her great loss and that we sympathize with the relatives and friends who mourn his loss.

Resolved, That we drape our charter in mourning, that these resolutions be placed upon our records, and a copy sent to the San Jose *Mercury* and the RURAL PRESS for publication.—[Committee: C. T. Settle, Wm. Erkson and Mrs. E. P. Bicknell.

## SUTTER MILL GRANGE, No. 179, El Dorado county, January 6th, 1877.

WHEREAS, On the 3d day of December, 1876, it having pleased our Divine Master, who doeth all things well, to remove from our heretofore unbroken Grange circle one of its charter members, our loved sister, MAY DELORY,

To that circle above,  
That home of the blest,  
Land where the weary  
Ever shall rest,

Whose pleasant voice and quiet ways we shall ever miss, therefore be it

Resolved, That in the death of Sister MAY DELORY, Sutter Mill Grange has lost a worthy and devoted member, her family an affectionate daughter and sister, and we do hereby tender our heartfelt sympathy to her family in their great bereavement.

Resolved, That in respect to her memory the charter of our Grange be draped in mourning and the usual badge of mourning worn for 30 days, that this sincere expression of the Grange be inscribed on our records, a copy sent to the family of the deceased, one to the Placerville *Republican*, one to the Mountain *Democrat* and one to the RURAL PRESS for publication.—[Committee: Mrs. L. J. Valentine, Mrs. M. J. Stearns and Mrs. L. Chalmers.

## SOUTH SUTTER GRANGE, No. 207, Sutter Co., Cal.

WHEREAS, By the decree of our Divine Master, our worthy brother, WM. E. BUSI, has been called from us by the sad messenger of death; and

WHEREAS, We knew him as a worthy member of this Grange, a true brother, a good citizen, a warm-hearted and genial friend; Therefore

Resolved, That by this dispensation this Grange has lost one of its most respected members—a man universally esteemed for his many virtues and genial disposition. Our Brother BUSI has left a good record through the pages of life, and we believe our mournings and loss to be his everlasting gain; that he has entered that higher and better Grange where sighs and sorrows will be known no more forever. Our brother, WM. E. BUSI, was aged 55 years, a pioneer of '49, and a resident of Sutter and Yuba counties up to his death.

Resolved, That these preamble and resolutions be placed upon the minutes of our Grange, a copy sent the relatives of deceased and a copy to the RURAL PRESS for publication.—Committee: James O. Harris, R. H. McClellan, R. H. Creekmore.

## TEHICIPA GRANGE, No. 214, December 23d, 1876.

WHEREAS, By the all-wise dispensation of our Heavenly Master, our late brother, J. E. WILLIAMS, has been removed from our midst by death; and

WHEREAS, We desire to express our sorrow at his demise; Therefore be it

Resolved, That in the death of our late brother Tehicipa Grange has lost a good and worthy member, society an upright and honorable citizen, and his family a loving, faithful and affectionate husband and father.

Resolved, That we most earnestly sympathize with the family in their great sorrow and bereavement.

Resolved, That these resolutions be placed upon the minutes of this Grange, and a copy handed to the family of the deceased, and a copy be sent to the RURAL PRESS for publication.—[Committee: J. M. Stout, L. F. Humiston, H. F. Wiggins.

## AGRICULTURAL NOTES.

## California.

## AMADOR.

RANCH SOLD.—Stockton Independent, Feb. 1: We have been credibly informed that the Central Pacific Railroad Company have purchased the immense tract of land comprised in the Arroyo Seco rancho in Amador county, formerly owned by Messrs. Hart & Goodman, together with all the sheep, horses, cattle and farming utensils thereon. The price paid is supposed to have been about \$300,000. The tract embraces some 40,000 acres of valuable farming, grazing and mineral land, including the town site of Ione City and the coal, copper and gold mines surrounding it. It is one of the most valuable tracts of land in the State on account of its extremely varied resources, and in connection with the railroad just completed it can be developed to the most thorough advantage. We understand that the railroad is already paying handsomely and is demonstrating the great value the narrow gauge from Stockton would have been if we had been wise enough to appreciate and build it.

## DEL NORTE.

PRODUCTIONS OF THE COUNTY.—Cor. Bulletin: The following is a list, as complete as I can make it, of the exports of the products of Del Norte county for the year 1876. All except the gold dust are put at the amount of revenue they yield to the county; and all but that and two or three of the smallest items are from carefully obtained statistics as to the amounts: Gold dust, \$100,000; lumber, 10,000,000 feet, \$100,000; butter, 200,000 pounds, \$60,000; pickled salmon, 1,000 barrels, \$12,000; wool, 243 bales, \$12,000; pork, 116 barrels, \$2,500; bacon, 14 cases, \$1,000; lard, 17 casks, \$1,000; leather, 17 bales, \$1,500; hides, 1,000, \$4,000; skins and furs, 218 bales, \$5,000; buckwheat, 10,000 pounds, \$200; dried apples, 5,000 pounds, \$500; miscellaneous, 577 packages, \$10,000. Total, \$299,700.

## FRESNO.

CONDITIONS.—Republican, Feb. 3: From reports received from different parts of the county we learn that the rainfall has been sufficient in every section to start the grass, and in the foothills quite abundant. On hard land on the plains the ground is not wet deep enough to admit of thorough plowing, but loose soil is wet to a depth of eight inches or more. It is believed that the losses of sheep for this season are about over, and those who are well informed assert that they have not been greater so far than in ordinary years. Many have been killing their early lambs, but the grass is now growing so rapidly that there will no longer be a necessity for this. Lambing is progressing favorably, and the outlook for stock-men promising. The abundant snows in the mountains insure plenty of water for irrigation during the summer, and so much land is now under cultivation with water that there can be no possible famine, even if we have no more rain. Notwithstanding the lateness of the season, the majority of farmers still look for sufficient rain to bring good hay, and possibly grain.

MR. WEST ON TREE PLANTING.—Expositor, Feb. 1: B. Marks, Superintendent of the Central California colony, has received a private letter from W. B. West, the Stockton nurseryman, from which we extract the following valuable hints: There is one thing which I hope will be advocated, and that is the planting of only useful trees. Many think that they must have a hedge of some quick growing tree around their lots; they do not want any such thing. A row of poplars, eucalyptus, willows or any such trash will occupy as much land as fig, pecan, walnut or fruit-bearing trees. Don't let any humbug nurseryman sell you Monterey cypress or eucalyptus for hedges; they must of course to attain such great growth use up a great deal of land. I see that the man on the south side of my lot has a row of poplars on my line; they will raise borers enough for the whole colony. I never saw any use for a hedge around a vineyard; they are better and less liable to mildew without it; fig trees, peach, apple, etc., certainly do not need protection. Try to induce every one to plant only useful trees, except on the avenues and a little ornamental patch before the house; have shade trees around the house, fig or mulberry, or something equally as good. I am led to this train of thought by seeing so many of my neighbors' improvements, such as eucalyptus, 60 feet to the first limb, affording about as much shade as a telegraph pole; Lombardy poplars ten years old, all used up by borers and falling every gale, all their beauty gone. My walnuts, six or eight years old, are fine; pecans are beautiful trees like the hickory; I have them four years from the seed, 14 feet high. The American and Persian mulberry do well with you; are good shade and fruit bearing trees. The fig is my favorite, and they are finding a market in spite of prejudice against them. More California figs have been sold this year than ever before and at better prices; they will pay to feed to hogs. The amount of figs which an old tree will bear is wonderful.

## KERN.

LIVERMORE RANCH.—Californian, Feb. 3: The farm of Mr. W. H. Souther is now entirely planted. There are about 2,000 acres sown in grain. All the land has been thoroughly watered through the Kern Island canal, and if not a drop more rain should fall it could not prevent the harvest of a full crop. About 1,000

acres have been put in alfalfa. The farm is well worth a visit, and in a short time the grain will be waving with a luxuriance which should make glad the most stolid spectator.

SHEEP LOST.—Before the late rain commenced the gale from the southeast continued near the mountains for two days, sweeping everything before it. Some Basques with their sheep on the plains on the south side of Kern lake were unable to follow their flocks. About 8,000 head were driven by the wind to the shelter of the sage brush near the lake. After the rain fell the ground became boggy, and the sheep, weak from starvation, sank in the soft ground by hundreds. In places they lie in piles, where they have struggled to get above one another.

## LAKE.

SUCCESS WITH FRUIT TREES.—Bee, Jan. 25: At present Lake county is very poorly supplied with fruits of all kinds, not because we cannot grow them, but simply for the reason that in the years gone by we neglected to plant the trees, or, when planted, have given them so little attention that they have proven a failure. This should not be so, for the soil of Lake county is just as good for the production of different varieties of fruits as any other section of the State. For apples, plums and pears we cannot be beaten. You have but to go to the farm of Capt. M. Sleeper, at Upper Lake, or to Isaac Alters's, in Paradise valley, or to E. Bole's, near Kelseyville, or to G. H. Scudamore and T. Deming's, or Scott's valley, or to that of Sam. Morrison, across the lake, to have it demonstrated that many of the choicest varieties of fruits can be grown in this county, and to have these gentlemen tell you that they realize more clear profit from their fruit than from any other source requiring so little labor and expense. We are glad to be able to say that many of our citizens in the last few years have begun to plant fruit trees.

A WINGLESS ROOSTER.—Democrat: Mr. Martin has a Brahma rooster, eight months old, on his place near Lakeport, that was born without wings, and is to-day a wingless rooster. He is a thrifty chicken, and crows as lustily as any in the barnyard, but nary a flap of the wing, as an Irishman might say, "comes out uv him."

STILL IMPROVING.—The farmers of Lake county are gradually enhancing the beauty and value of their homes by building fine, substantial, roomy dwellings on their farms. The next in order is Mrs. Thompson, whose place is on the Highland springs road. Mr. Vanderhoof is about to erect a two story house for this lady, of ten rooms. The main building is to be 28x32 feet.

## LASSEN.

RED FISH.—Advocate: The red fish of Walloes lake, Cal., are described as being blood red in color, very fat and weighing about eight pounds, and are preferred when taken to salmon. It is said there are only four lakes known in which this fish is found—Payette, in Idaho, a lake in Maine, one in Scotland and Walloes lake. A company engaged in commercial fishing on the latter frequently bring in a ton of red fish at a haul with a seine of medium length. Lake Walloes is 2,000 feet deep, and the fish suddenly appear on the surface in August and disappear in December.

## LOS ANGELES.

EUCALYPTUS GROWTH.—Herald, February 3: During the first week of last April I planted some blue gum trees of the *Eucalyptus globulus* variety, three miles northwest of town. They were at that time from eight to 12 inches in height. I measured four of them to-day that were almost of an equal growth. The tallest was 18 feet and four inches high and well proportioned. I then measured its branches and found that the total figured up the enormous growth of 1,275 feet. These trees were never irrigated, the only treatment they received being an occasional stirring and mulching of the soil around them. This growth of ten months may seem almost incredible to many, especially to strangers, but the trees are living witnesses of their growth, and a score of people can testify to their ages. The soil they are growing in is moist, but not more so than thousands of acres in this valley.—JAMES GORDON.

COTTON PLANT.—Outlook, Jan. 31: Mr. I. T. Carney, of Downey City, has a vegetable curiosity which one does not often see. It is a stalk that has borne its fourth crop of cotton, and bids fair to continue indefinitely. The stem near the ground is as large as a man's wrist. The plant has ceased to be an annual, and has become perennial. We shouldn't be surprised if it developed into a tree.

## MARIN.

MR. HOWARD'S IMPROVEMENTS.—Journal, Feb. 1: Mr. Evans is still vigorously pushing his work of reclamation on the Howard estate, which changes the face of the country with great rapidity. It is the transition from the natural growth of timber and brush, to handsome fields of grain. Water courses are also being changed to match the improved order of things, in some instances turning large fields of low meadow into dry and very productive land. Mr. Evans has 90 men constantly employed on this work. Ten thousand gums have been shipped by Mr. Trumbull to Olema, destined for a grand quincunx hedge on the Point Reyes.

## MERCED.

FARMERS' CANAL COMPANY.—Valley Argus, Feb. 3: The Farmers' Canal Company, composed of farmers whose lands are situated in Merced county south of the Merced river, organized and incorporated in 1873, have been engaged ever since the organization in construct-

ing a canal for irrigating purposes from a point upon the Merced river, some four miles above Snelling, thence along the base of the foothills to a point upon Bear creek, some 10 miles east of this town, and near enough to the foothills to irrigate the entire plain of Merced county east of San Joaquin and south of the Merced rivers. Since the commencement of operations the company have been so cramped that the prosecution of this work has been too slow to meet the requirements of the country, hence an effort is being made to inaugurate measures that will ensure the completion of this important work in the course of a few months. It is proposed that the land holders throughout the district of country irrigable from this canal bound their lands at two dollars per acre to raise a fund sufficient to complete the canal in a few months. It is not necessary, in this article, to give the details of the proposed arrangement; but as energetic, practical capitalists and land holders have expressed a willingness, on certain conditions, to embark in the enterprise, and the stockholders of the present company have agreed to act in concert with them in bringing about the conditions proposed, we consider the prospects for an early completion of the canal as very flattering. That the plan for conducting the water from the river over these plains is a feasible one will scarcely admit of a doubt; and should the conduct of the enterprise fall into the hands of those whom it is proposed shall have the management of it, the prosperity of the county is insured for all future time. We hope to see land owners enter into the spirit of the enterprise with a will and prosecute the work to an early completion of the main canal and all necessary distributing ditches.

## NAPA.

GROWTH.—Reporter, Feb. 3: The farmers now think they will have to graze their fields to keep the grain from making too much straw. Three weeks ago some of them thought it doubtful whether they would have anything to graze. Moral: Hereafter, when it is dry, don't despair.

## PLACER.

FRUIT DRYING.—Argus, Feb. 3: Wednesday evening, according to appointment, the subscribers to the Alden enterprise met at the American for the purpose of deciding on a place of business. Newcastle was represented by a number of business men and fruit-growers, but after considerable discussion they withdrew their subscriptions and decided to let the Auburn folks try their hand alone. After deciding upon Auburn as the principal place of business the meeting adjourned. Thursday evening the subscribers again came together, Judge Hale in the chair. As the Secretary, Mr. Calvin, chosen the evening before, could not attend, F. D. Adams was appointed in his place. The first business on hand was signing the articles of incorporation, which was done by a large number of our citizens. The temporary Board of Directors was then chosen as follows: F. T. Lerner, J. E. Hale, J. W. Hulbert, O. W. Hollenbeck, N. R. Peck. The articles of incorporation having been completed, arrangements were made for having them duly recorded, when a meeting of the stock-holders will be called for the purpose of adopting by-laws and electing permanent officers. When its other business was concluded, an informal discussion as to the location of the work was held, a number of the subscribers participating, the uniform opinion being expressed that convenience and economy in conducting the business should govern the location.

## SACRAMENTO.

SOWING ALFALFA.—Record-Union, Feb. 3: As a general thing we think the middle of February, or from that to the middle of March, is soon enough to put alfalfa seed in the ground. The frosts after that time in this State are not apt to be very severe, and are generally succeeded by damp and dewy mornings, so that they do not injure the young plant very much. All the rain we are likely to have will be needed. We think there will even now be more danger from lack of moisture than from frosty weather. We would therefore advise sowing as soon as it can be got into the ground. We like a good thick stand, and we sow from 20 to 30 pounds to the acre. The ground for the seed should be well plowed to a good depth, and then the surface should be completely pulverized. The seed should not be covered more than half an inch deep. If deeper than this it will not germinate, but will remain dormant in the soil. It may be covered with a very light and short toothed drag, or with a brush, or what is better than either, a board. A very good instrument for covering the seed is made by taking about four boards, or inch-and-a-half or two-inch plank, say eight feet long and one foot wide. Fasten these to two scantlings, say three feet long, running crosswise of the plank and the plank so fastened that the edges overlap each other. Then fasten a chain say two feet from each end of the instrument and to the plank first put on, and hitch the team to the center or middle of the chain. As this is drawn over the surface of the soil the edge of each plank scrapes and crushes the clods and leaves the soil fine and mellow, and at the same time covers the seed sufficiently deep. Such an instrument is much better than a roller to cover the seed with, and leaves the soil in much better condition, as the roller presses the clods into the soil, while this crushes them, and with them so crushed and pulverized covers the seed.

GROWING WEATHER.—We seldom have at any time of year more growing weather, so to

Continued on page 92.





### The Toys.

My little son, who looked from thoughtful eyes,  
And moved and spoke in quiet, grown-up wise,  
Having my law the seventh time disobeyed,  
I struck him, and dismissed  
With hard words and unkind;  
His mother, who was patient, being dead.  
Then, fearing lest his grief should hinder sleep,  
I visited his bed;  
But found him slumbering deep,  
With darkened eyelids, and their lashes yet  
From his late sobbing wet.  
And I, with moan,  
Kissing away his tears, left others of my own;  
For on a table drawn beside his head  
He had put, within his reach,  
A box of counters, and a red-veined stone,  
A piece of glass abraded by the beach,  
And six or seven shells,  
A bottle with blue-bells,  
And two French copper coins, ranged there with careful  
art,  
To comfort his sad heart.  
So, when that night I prayed  
To God, I wept and said:  
Ah! when at last we lie with tranced breath,  
Not vexing Thee in death,  
And Thou rememberest of what toys  
We made our joys,  
How weakly understood  
Thy great commanded good,  
Then, fatherly, not less  
Than I whom Thou hast molded from the clay,  
Thou'lt leave Thy wrath, and say:  
"I will be sorry for their childishness."  
—C. P., in *Pall Mall Gazette*.

### Who are Responsible for the Hoodlums?

[Written for the PRESS by E. BERWICK.]

EDITORS PRESS:—There is a saying current, that if every dairyman pronounced an opinion on his own product, it would be a difficult matter to find where all the poor butter and cheese comes from.

Similarly, if every parent's opinion of their own offspring were received as correct, it would be hard to say how the article, at present labeled "hoodlum," first found a footing in our midst.

Yet none of us doubt that there is a good deal of poor dairy produce in the market; and if the proceedings before the San Francisco police judge and county justices be correctly reported, the creature hoodlum indubitably is localized in California. I do not propose to inquire *who* first raised the animal; but I want to call public attention to the question,

#### How He is Raised.

The ways of producing the creature are so numerous and so easy, that I am at a loss to know where to begin.

Now, all we RURAL PRESS readers know that when we want to raise "gentle" stock, that shall on arrival at maturity do us satisfactory service, there is nothing for it but to begin "handling" them while very young. By "handling" them we mean imposing restraint upon them, teaching them to submit their wills to ours. We know, I say, that by restraining them while young, we form in them the habit of self-restraint, with far less trouble to ourselves and far less detriment to them, than if we allowed them to grow to maturity as "broncos."

Now, I think all my readers will concede that what holds good with calves and colts in this respect, also holds good with our children. Their characters for good or evil are formed while young.

I was much pleased with Mrs. Tuttle's spirited rejoinder to "Philmore," printed in your columns a few weeks since. She forcibly points out the different relation occupied by the grandfathers to the fathers of the present generation, to that occupied by the said fathers to said generation. The grandfathers realized that their main duty was their duty to their children and their home. The fathers appear to consider their main duty is their duty to the corner grocery or the "poker" table. Home life and care of children is considered as a thing rather to be despised, as effeminate and derogatory to the dignity of the masculine biped. Corner-grocery-haunting and poker-playing are such man-ennobling pursuits, such peremptory and perennial demands on his leisure, that his family may be justly ignored if only the choice spirits of the corner grocery do not feel themselves neglected.

Now, of all the mental characteristics of childhood (possibly even of manhood),

#### Curiosity and Imitation

Are the most thoroughly developed. The father showing by his example that the greatest delights of life are whisky-drinking and card-playing, what more natural than that the son should grow up in a similar belief. Add to this, that corner grocery devotion precludes the possibility of the mother receiving any help from her husband in her toilsome housework, etc., and, consequently, she having no time to attend to her family, the conditions for producing hood-

lums are at once realized. It is useless to suppose that by sending children, so neglected at home, to the common school, you can relegate your duties to the teacher. A willful, unruly, disobedient child may make a vast deal of trouble in a school; but the teacher has but little chance of reforming a child whose

#### Home Influence

Is entirely antagonistic to order and virtue. Of course, I'm far from saying that all mankind is entirely devoted to the special vices mentioned. Many neglect the personal care of their children because their time is entirely occupied in gathering in dollars for the supposed benefit of those very children when full-grown. The children had far better receive from you a well-developed character, a truthful, industrious, self-reliant, God-fearing disposition, than grow up self-willed and luxurious, ready to

Anticipate,  
Lavish and dissipate  
All that your busy pate  
Hoarded by.

There are hoodlums of a higher standing in society than those who figure prominently in the papers; but the method of raising them is precisely similar, and the true culprits, as a rule, are the parents.

When one sees the unruly, wilful ways that so many parents (kindly intending, perhaps), allow their children to pursue when young, it is by no means hard to prophesy that a bed of thorns, of their own making, is in store for those parents as their children advance in years. Tightening the reins will then be impossible; tighten them now while you may.

A child well controlled and directed is far happier than one left to its own willful indulgence. Mischief is the almost necessary pursuit of the latter, from the mere fact that it seeks relief from the ennui arising from an overabundance of leisure.

How few men ever know how to dispose profitably of leisure moments, saloon and "poker" tables are my witnesses. If I wanted a third, I should call up the dreary, neglected homes most of our rural population appear content to inhabit, when one-half the time and money spent in loafing and whisky-drinking would convert every dwelling into a little domestic paradise.

It is wonderful how a little whitewash applied to a bare redwood board shanty, and a few flowers and shrubs set round about it, convert a repulsive habitation into a cheerful, cosy-looking home. I find I'm running rather away from my subject, but I'll sum up, to conclude my case.

A hoodlum becomes a hoodlum either from neglect or over-indulgence from his parents during his babyhood and tender years.

The parents who neglect to direct into their proper channel, and apply to their right purpose, the gentle springing and ebullitions of the waters of life, at a time when the current is easily checked or led, are responsible to their own children and to mankind at large for the harm that is wrought by the roaring floods of vice and crime that, in their adult offspring, mock their every tardy effort to check or curb their onward rush to the cataract of black ruin and despair.

Hoodlums may be worthy objects of pity—the neglect and evil example of parents are the true objects of our just censure.

### Beautify Your Homes.

[Written for the RURAL PRESS by JOHN MAVITY.]

Is it not strange that so few people, comparatively, make an effort to beautify their homes and make them attractive, when it can be so easily done? A large sum of money is not required, but simply a little tact in arranging things, so as to make them look pleasant and inviting to the eye. None are so poor but that they can make their home a little Eden, if they only have the will to do so.

Nurseries are numerous over the land, and they are supplied with nearly every variety of tree, shrub and flower, which are generally sold at reasonable rates; or they can be raised from the seed for almost nothing. Take a survey of your premises, then reflect how much you could improve the appearance of your homestead by planting an assortment of trees and shrubbery. Put your evergreens and shrubbery in your door-yard, and if you wish to blend the useful with the ornamental, plant cherry, pear and plum also.

In some parts of the world fruit trees are planted along lanes and public highways as a roadside tree; but in our dry climate they would not answer so well. The black walnut (*Juglans nigra*) or our native walnut, Monterey cypress and the gums—eucalyptus—are perhaps the best for most localities for a roadside tree.

It is a cheerless sight to see a homestead without trees of any kind near it. Such a home must indeed be a dreary one, and the inmates to be pitied. Our children who are brought up in a home of beautiful surroundings will be far better and more refined. They should be encouraged to assist in the planting of trees and flowers and to the cultivation and care of them, because trees and shrubs require careful attention and should be treated according to their nature and habit of growth. This is, in itself, a beautiful and interesting study to all lovers of nature.

I hope the time is not far distant when every home in this beautiful land will be surrounded with trees and flowers. Just imagine how

beautiful the whole country will appear when all the farms and homesteads in our beautiful valleys are ornamented with tree, shrub and flower, and the highways lined with shade trees.

We are living in a favored land. Nature has done much for us. We have a genial climate and scenery the most grand. We have but to do our part to complete the picture, and make our homes the most lovable and enjoyable on earth. So let us go on, hand in hand, improving and beautifying, until, when we come to lay life's labors down, we can say we have done all in our power to make the world better and more beautiful than we found it.

### Elsie.

My mother and I were spending the summer with my uncle, David Gregory, at his home. The kind old gentleman had written to me to bring one of my schoolmates with me. "Some one (he wrote) who loves the country." I invited Elsie Ventnor. She was not a scholar like myself, but lived with Mme. Du Poi, teaching the children who were day scholars.

One afternoon uncle came in where we were all sitting over our fancy work, and said, with a smile:

"Madge, put this in the Bible for me. See, it is a four-leaved clover. I found it just now. Some good fortune must surely be coming to me."

When I had done as he asked he sat down and unfolded a new plan for our amusement. We were to get up tableaux and invite all we chose to help us, and conclude with a dance.

"Oh, uncle, how nice! When shall it be?"

"As soon as you wish. I will have everything done for you that is necessary, and you may use anything in the house you like for the purpose. I want you to enjoy yourselves as much as you can. It will be but a dull house after you are gone, and I shall only have the gay memories to enliven it."

When he had left us I exclaimed: "Oh, mamma, isn't it a pity that uncle never had any children? He is so fond of seeing young folks enjoy themselves."

"Hush, Madge!" she hastily replied; "for mercy's sake! never say anything like that before your uncle."

"Why not, mamma?"

"Because, my child, there are reasons why you should not."

I wondered a good deal in my mind over that scrap of conversation, but I did not ask any more questions. It was no hard matter to get a merry party to join us, and such fun as we had, rummaging in the attics, with Deb's assistance, for old-fashioned things to turn into use.

One afternoon mamma called Elsie and myself into her room to look through an old trunk she had found stowed in the back of an unused closet.

"Here, girls, examine. I shouldn't wonder, from the peep I have taken, if we had found a treasure-trove."

We were both delighted. When we had taken out its contents—old fashioned dresses, feathers, laces, etc., in a tray, all by itself, was a dress which would have driven Queen Mab to envy, and which was evidently more modern in its fashion than the other articles strewn around us. It was a long-trained skirt of the palest lilac silk, with an overdress of lilac tulle, covered with embroidered clover blossoms, as if some careless hand had flung them in profusion all over the delicate material. The rosettes on the tiny slippers were decorated in the same way, and a wreath of white clover, sprinkled with mimic dewdrops, lay with them.

"I think, Madge," said mamma, "it must have belonged to your uncle's sister, Hilda; I have heard she was a great belle in her day."

"Oh, mamma, we'll have a tableau called the 'Spirit of Good Fortune,' and Elsie shall wear this dress. Come, dear, and try it on."

Even the famous belle herself could not have looked fairer than did my friend, when we had arrayed her in the beautiful costume. Instead of the name I had chosen, mamma thought it would be just as appropriate, and much prettier, to call the tableau "The Four-leaved Clover."

The evening came, and all the tableaux were successfully gone through with, amid great applause, except the last.

When I was helping Elsie to dress, she opened a case, and taking out a massive chain, clasped it around her neck, saying:

"I will wear this to-night, Madge."

"Why, Elsie! what an exquisite thing."

"Yes, it is all I have left of my mother's. I never wear it, as it would hardly be suitable for my plain dresses. See." And opening the diamond-studded locket which hung from the chain, she showed me the picture within.

There, smiling at me, was a face something like Elsie's, only more rosy, more radiant. It was the only time Elsie had ever spoken to me of her mother, and I wished she would say more. But the bell rang for the last tableau, and we hastened to our places—I among the audience, and she to appear as "The Four-leaved Clover."

The curtain rose, and Elsie stood in a graceful attitude, handing the symbol of good fortune to a youth, who, on bended knee, waited to receive it. The diamond-studded locket on her white neck caught the light in a hundred sparkles, and the dew-spangled clover flashed it back again. It was a brilliant picture; but we hardly had time to admire it sufficiently, for with a low groan my uncle fell heavily forward from his chair to the floor.

Then all was confusion. The young people did not stay for the promised dance, and to a darkened room they carried the old gentleman, while a physician was hastily sent for. No one could account for the strange attack until uncle, after a long time, awoke to consciousness.

Then Deb, the old housekeeper, with strangely working features, came into our room and said: "Miss Ventnor, may I have the chain and locket you wore to-night?"

Wonderingly Elsie rose and got it for her.

"Deb, Deb!" I exclaimed, "what is the matter? How is dear uncle? Why do you want Elsie's chain?"

"Miss Madge," solemnly interrupted Deb, "with that clover-dress came misfortune to this house, and now it has brought good luck back again, I think."

And without stopping to explain her ambiguous sentence or answer my question, she departed. When Deb came into the room again, it was to say uncle was better and wanted Elsie. When we were alone Deb told me a strange story—that my uncle had had a child, a beautiful daughter, who had married against his will, and whom he had refused to forgive until it was too late.

"Miss Madge, it was at her coming-out party she wore that dress—she was always fanciful—and at that party she met the gentleman she married. With my own eyes I saw her father clasp that chain and locket (here a light broke in upon my mind) around her pretty neck. When he refused to let her marry her lover (whom he knew was dissipated) she ran away, Miss Madge, and they went abroad to a foreign country. Her husband died, we heard. But with all Mr. David's trying, we could never get any news of her till this day. At last, through your means, Miss Madge, her daughter, Mr. David's own grandchild, has been brought to his very house."

Here the good woman clasped her arms around me and wept for very joy.

Elsie told how she came to be with Mme. Du Poi. When Madame had first established her school, she was in her garden one day, and saw a young woman passing on her way from the station, carrying a child in her arms. She was struck by the weary look in the pale face, and going to the gate, she called her to come in and rest. Madame made her comfortable in her sitting-room, and hastened to bring some refreshment. When she reached the room again she saw the young woman had fainted, as she supposed. But it was not a faint—it was death. No inquiries could discover who she was, and she was quietly buried—dear, good Madame herself erecting a plain monument to her memory. The baby's clothes were marked "Elsie Ventnor," and so Madame called her.—*World*.

### How Valentines are Made.

"St. Valentine's day" is coming, and even at the risk of crushing sentiment, we give the following timely information from *Good Words*:

Modern valentines, aside from the valuable presents contained in them, are very pretty things, and they are growing prettier every year, since large business houses spare neither skill nor money in getting them up. The most interesting thing about them to "grown-ups" is the way they are made; and perhaps even you youngsters who watch eagerly for the postman, "sinking beneath the load of embarrassments not his own," would like to know how satin and lace and flowers and other dainty things grow into a valentine.

It is no fairy's handiwork. It went through the hands of grim-looking workmen and dowdy-looking girls; it made familiar acquaintance with sand paper and glue pots, and steel stamps and inky presses and paint brushes, and all sorts of unpleasant things before it reached your hands.

To be sure a dreamy artist may have designed it, but a lithographer with inky fingers printed the picture on it; a die cutter with sleeves rolled up made a pattern in steel of the lace work on the edge; and a dingy-looking pressman with a paper hat on stamped the pattern around the picture. Another hard-handed workman rubbed the back of the stamped lace with sand paper till it came in holes and looked like lace, and not merely like stamped paper, and a row of girls at a common long table—talking about their own narrow lives, the hard times, and so forth—put on the colors with stencils, gummed on the hearts and cupids and flowers and mirrors and doors and curtains, and stuck in the sachet powder, and tied up the bows, and sewed on the fringes, and tucked in the handkerchief or other gift, and otherwise finished the thing exactly like the pattern before them.

You see the sentiment about a valentine doesn't begin yet. To all these workmen it is merely their daily duty, and to them means only bread and butter and a home. It is not until Tom, Dick or Harry takes it from the stationer and writes your name on it that it acquires, in some mysterious way, the sentiment that makes it such a nice thing to get.

The hideous abomination called a "comic valentine," which is merely a cruel or low-minded insult to the receiver, is beneath the notice of any gentleman, whether he be five or fifty years old, and I am sure no boy cares to know just how it is made.

WHAT A WOMAN CAN DO.—The *Oregonian* says: There is a woman on Mount Jefferson pass who has cleared 80 acres of land for herself and children, and has almost finished her log cabin.



## Light Breaks.

When twilight's gentle musings are suddenly ended by the dropping out of sight of the rays of the gentle and pale-faced moon; when the bovines have chewed the cud of contentment till Morpheus has stilled their tongues and closed their eyes, and the little pigs have made themselves into a snowy pile; when the midnight crowing of our barnyard friend tells 12 on nature's noisy bell; when the "wee sma" hours get uneasy in their little beds, and warn the late houred lovers to take a parting kiss and wait for another Sabbath eve to welcome the tryst under the feathery elm's spreading arms in the big pasture by the singing brook; when honest laborers are recuperating their muscular and nervous powers under the repeated doses of the narcotine of peaceful slumber; when Aurora is about to push the dawn up the orient, and Sol with his streaming red hair is hitching his fiery team to drive up among the fleecy clouds and smilingly nod to the dew-tipped flowers of awakening earth; when strange humanity begins to move uneasily on their feather beds, and guardian angels whisper of the dawn's approach and the duties of another day; when the dreams of the night are brushed away by the magical wand of returning consciousness, the eyelids quiver and open—then the light breaks—breaks upon the eye, upon the brain, and joy beams from the eyes, pleasure irradiates the well-furnished parlors of the heart, and the beatitude of life in magnetic currents makes the waking mortal raise the silent voice of prayer in thankfulness that he lives and enjoys.

Even at the dark hour of midnight, when all nature is drowned in sleep, save the wailing whip-poor-will, the solemn owl, or the consumer of midnight oil, it is not impossible that light should break. Look at that occupied mind wading in thought through the intricacies of a machine yet in the brain of the thinker. Behold! a radiance beams from his face; a smile of satisfaction plays about his mouth and his lips utter aloud the significant words, "I have it now." At that moment of excitement and joy, light breaks upon his understanding though the sky be dark as Erebus without. A flash of light bursts upon his dazzled soul, and ecstasy of delight permeates every sensitive fiber of his mental being, and he thanks heaven that light breaks upon his waiting mind. The visions of a useful machine are about to crystallize into gold, and the hard labor of years receive its just reward.

When the little boy is presented his first knife, light breaks, and glorious visions of the past are about to be realized; and as he steps forth in his first pants with pockets in them, light breaks again, and yet once more when he has a gun all his own. Light breaks again when his dear Katie returns his love and the wedding ring is on her finger, and again when she calls him up in the dead hours of night to bring the soothing syrup, for baby is sick. Light breaks in the halo of loving children to soothe his last moments with kind acts of filial love. Light breaks upon the mind that believes that immortality is the gift of God, and that Christ is the Saviour of those given to him by the Father. Immortal light breaks upon a mortal mind, and it leans confidently in faith upon the Saviour of the world. The veil is lifted as the spirit returns to God who gave it, and a brilliant halo of light encircles the angel soul, time without end.—R. K. Storson, in *Western Rural*.

**THE DEBT TO MOTHERS.**—Mothers live for their children, make self-sacrifices for them, and manifest their tenderness and love so freely that the name mother is the sweetest in human language. And yet, sons, youthful and aged, know but little of the anxiety, the nights of sleepless and painful solicitude which their mothers have spent over their thoughtless waywardness. Those loving hearts go down to their graves with those hours of secret agony untold. As the mother watches by night, or prays in the privacy of her closet, she weighs well the words she will address to her son in order to lead him to a manhood of honor and usefulness. She will not tell him all the griefs and deadly fears which beset her soul. She warns him with trembling lest she say overmuch. She tries to charm him with cheery love while her heart is bleeding. No worthy and successful man ever yet knew the breadth and depth of obligation which he is under to the mother who guided his steps at the time when his character for virtue and purity was so narrowly balanced against a course of vice and ignominy. Let the dutiful son do his utmost to smooth his mother's pathway; let him obey implicitly as he can her wishes and advice; let him omit nothing that will contribute to her peace, rest and happiness, and yet he will part from her at the tomb with the debt to her not half discharged.

**BUSINESS.**—The *New York Tribune* says: Mr. Vanderbilt was asked one day what was the secret of his success in his business. "Secret! There is no secret about it. All you have to do is to attend to your business and go ahead." At another time he said: "The secret of my success is this; I never tell what I am going to do till I have done it." This was nearer the mark. He kept his own counsel and never betrayed his best friend—himself. His best friend—himself. That was the secret of the railroad king's career.

## Young Folks' Column.

## Letters to Boys and Girls.—No. 16.

[Written for the *RURAL PRESS* by JENNIE E. JAMESON.]

"Please tell me the Pip and Jyp story, it's so splendid, you know," said Master Walter while we were waiting for the dessert this noon. Walter always thinks the present time is the convenient season for stories. "Yes, I would like to hear it, too," said his mamma. "I heard you tell it yesterday and am quite interested in it. It will be a nice story to put Willie to sleep on when he is a little older. You know our dog is named Pip, and brother Will's is Jyp. It is curious to find a story with their names in it."

Of course I told the story. It seems to be my fortune to be continually finding little boys and girls who are perfectly ravenous for stories. I sometimes pinch myself to see if I am anything more than a bundle of stories. It is easy enough to tell stories to the seven-year-olds, but the smaller ones are harder to amuse. Of all the stories I have ever told, the "wee bits" seem to like the one about Pip and Jyp the best. I am not certain where it came from in the first place, or whether the one who started it would recognize it now; but here it is, for I think some one who reads the *RURAL PRESS* would like to tell it to some sleepy little curly-head, that it may smooth the way over the straits to the "Land of Nod."

Once upon a time there were two little dogs. One was named Pip, and the other was named Jyp. They lived in a nice little house in their master's yard. One day when they woke up from a long nap, Pip said to Jyp, "Let's take a walk," and Jyp said to Pip, "Yes, let's go." So they went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet went pat, pat, pat, and pat, pat, pat, and pat, pat, pat; and their little tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag, and pretty soon they came to a little yard beside the road. In the yard there were three little lambs and one old sheep. Pip thought he would try to scare the lambs, so he ran up to the fence and said, "Bow-wow-wow," and Jyp ran up to the fence and said, "Bow-wow-wow-wow!" The lambs said, "M-a-a-a, m-a-a-a, m-a-a-a!" and they ran to their mamma and told her all about it. She said, "B-a-a-h! b-a-a-a-h!" which was as much as to say, "Just you curl down here in the corner beside me and those naughty dogs won't dare to touch you." So the little lambs curled down in the corner and went fast asleep. And Pip and Jyp went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet said pat, pat, pat, pat, pat, pat, pat, pat, pat, and their little tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag, and pretty soon they came to a large house. In front of the house there were four little kitties playing and having a fine time. But Pip and Jyp ran up to them and said, "Bow-wow-wow! bow-wow-wow!" Then the kitties were very much frightened and cried, "M-e-w, m-e-w, m-e-o-u-w!" and ran into the shed, and told the old kitty all about it. She was in a barrel, turned down so that the little kitties could run into it. She called to them, "M-e-o-u-w, m-e-o-u-w, come right in here with me and the dogs can't touch you;" so the four wee kitties tumbled into the barrel, head over heels, and laid down and went fast asleep; while Pip and Jyp went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet said pat, pat, pat, pat, pat, pat, pat, pat, pat, and their little tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag, until they came to a little pond, upon which were sailing five little ducks. Then, of course, they must exercise their little throats, so they rushed up to the edge of the water and said, "Bow-wow-wow! bow-wow-wow!" The ducks, "Quack! quack! q-u-a-c-k! q-u-a-c-k!" and sailed off as fast as they could. When they got to the old mamma duck they told her all about it, and she said, "Quack! q-u-a-c-k! quack! q-u-a-c-k!" which meant, "Just curl down here beside me, and the dogs can't hurt you; they're most all bark, anyway." Pip and Jyp found that they could not frighten the ducks any more, so they went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet said pat, pat, pat, pat, pat, pat, pat, pat, pat, and their little tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag, and by and by they came to a yard where there were ten little chickens playing and picking up seeds to eat. Pip rushed toward them and said, "Bow-wow-wow!" and Jyp ran up and said, "Bow-wow-wow!" Then the poor little chickens cried, "Peep, peep, p-e-e-p!" and ran into the coop, (which was a little house built of slats placed far enough apart so that the chickens could run out, but their mamma had to stay inside,) and told the old hen all about it. She said, "Cluck, cluck, cluck, cluck!" which meant, "Come here, you poor little chicks, and curl down under my wings, and the naughty dogs shan't hurt you." So the little chicks curled down under the old hen's wings, and were soon fast asleep. Then Pip and Jyp went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet said pat, pat, pat, pat, pat, pat, pat, pat, pat, and their little

tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag; and pretty soon they came to a cunning little girl playing in the yard in front of a cunning little cottage. Pip ran up to her and said, "Bow-wow-wow!" and Jyp ran up and said, "Bow-wow-wow!" as loud as he could. The little girl began to cry and said, "Go off, you naughty dogs!" Then she ran into the house and told her mamma all about it, and her mamma took her up in her lap and she was soon fast asleep. Pip and Jyp looked around, but as they could see nothing else to frighten, Pip said to Jyp, "Let's go home," and Jyp said to Pip, "Well, let's go," so they went, trot, trot, trot, and trot, trot, trot, and trot, trot, trot; and their little feet said pat, pat, pat, pat, pat, pat, pat, pat, pat, and their little tails went wag, wag, wag, and wag, wag, wag, and wag, wag, wag; until they got back to their little house, where they found a nice dinner all ready for them. After they had eaten all they wanted they curled down in a corner and were soon fast asleep. So the lambs and the kitties, and the ducks and the chickens, and the little girl and the doggies, were all fast asleep; and if the shadows are beginning to creep into the corners, I think it is time that the little folks who have heard this story were fast asleep, also.

## GOOD HEALTH.

## Sunlight Necessary to Health.

In his last quarterly report, Dr. John Liddle, the medical officer of health for the White-chapel district, says: I firmly believe that many persons who are compelled to occupy rooms in which the rays of the sun never enter, soon lose their health, and find it necessary to change their residence; and this remark applies, although perhaps with less force, to those who are confined to counting-houses during the day in which no sunlight is admitted. Sunlight is especially necessary for the healthy existence of children; and this is strongly pointed out in the evidence of the late Mr. N. B. Ward (the inventor of the "Wardian cases" for rearing plants in towns, and conveying them to and from distant places, a gentleman of great eminence in the medical profession, and who has given much attention to the influence of the temperature, of air and light upon the health and growth of animals and plants) who says, in his evidence before the commissioners appointed for inquiry into the state of large towns and populous districts, that, as the result of his experience, the influence of light is a matter of the highest importance to the proper physical development of the human species; and whatever stunts the growth of a child certainly operates upon his physical capacity for labor; that the amount of disease among persons occupying light rooms is infinitely less as compared with that in dark ones; and that the influence of light, especially solar light, in preventing the fatal termination of disease, is a fact well known to him. In further illustration of this subject, Mr. Ward quotes a fact stated on the authority of Sir James Wyllie, "that the cases of diseases on the dark side of an extensive barrack at St. Petersburg have been uniformly, for many years, in the proportion of three to one to those on the side exposed to strong light.—*Public Health*."

**FOOD FOR INTemperance.**—A writer in the *Herald of Health* on the "relations of intemperance to food" makes this point: What is the remedy for intemperance? I answer, nerve food—building material to supply the waste of the nervous tissue in the masses. I answer, further, a reform in the present popular system of dietetics, by reducing the proportion of fat and muscle forming elements, and increasing the nerve and brain building material in a proper ratio. Let the supply in each case meet the demand and no more. A study of this subject, and a practical application of the theory that I am advocating for the past 15 years, gives me a solid basis of fact on which to rest its advocacy. Food beverage—a liquid food composed largely of brain and nerve building elements, a combination, concrete, soluble, and one that is so rapidly taken into the circulation that the patient feels immediately its invigorating, energizing power, has proved in my hands an almost certain remedy. It at once, and at the same time, allays thirst and invigorates without stimulating, imparting to the system a permanent basis of nervous vigor and energy.

**APPETITE AND WORK.**—Pavo says that a falling off of the appetite indicates a diminished capacity to labor. A farmer was once asked why he paid his hands so much, replied, it was economy to pay them well, so they could buy sufficient food. One might as reasonably expect much labor from a meager diet as much fire from a little wood. A good appetite is generally synonymous with health and ability to do much labor. Great workers, whether with body or brain, or both, are usually liberal eaters. Lawyers and ministers are apt to be good eaters. They should eat wisely as well as liberally, otherwise, dyspepsia will be the result. The old notion that great thinkers are small eaters is incorrect, except in the case of those who live very quiet and inactive lives.—*Dr. Holbrook*.

**CURE FOR RHEUMATISM.**—Remain constantly in a dark room and drink lemon juice freely. This, it is said, has cured the most obstinate cases of inflammatory rheumatism. Whoever tries this is requested to report to the *Press*.

## DOMESTIC ECONOMY.

## How to Make Oat-Meal Cakes.

The *Rural Cyclopaedia*, published at Edinburgh, Scotland, gives the following recipe for making oat-meal cakes. Well made they are delicious: "As much meal as will make a sheet 24 or 30 inches in diameter and one-eighth of an inch in thickness, is put into a wooden basin, with a sufficiency of water for working the meal into a light paste. The meal and water are mixed by the fingers of the right hand, while the basin is turned constantly round by the left hand, till the paste is made; the paste is then turned out on a clean board or table, and alternately kneaded with the knuckles of both hands, sprinkled with meal, gathered up, kneaded and sprinkled, and kneaded again and again, till it becomes a well kneaded and homogeneous dough; the dough is then flattened out with the knuckles into a circular cake of half an inch or less, in thickness, and immediately afterward distended with a roller into a sheet of about one-eighth of an inch in thickness; and the sheet is then pared round the edges and cut into three or four parts from the center with a knife. The parts of the cut sheet of dough are fired or half baked, first on the one side and then on the other, upon a thin circular plate of iron, called a griddle or girdle; and then they are toasted or whole-baked, by being placed on their edge on a toaster close before the fire, with first the one side and then the other exposed to the heat. Some butter is sometimes mixed with the paste, to render the cakes 'fresh' and highly relishable, and occasionally a few caraway seeds also are added, but in the estimation of racy, unsophisticated cake eaters, all such admixtures are an abomination."

A Scotchman writing to the *New York Observer* in reference to these cakes and oat-meal generally, says: "The favorite accompaniment to this is sweet milk, dipped with the spoon (which has previously taken up and contains a portion of the porridge) out of a separate dish from the porridge."

## Oat-Meal Breakfast Cakes.

These are made of No. 2 oat-meal, with water enough to saturate it, and little or no salt. Pour it into a baking tin half an inch or three-quarters deep, shake it down level, and when this is done it should be so wet that two or three spoonfuls of water should run freely on the surface. Put in a quick oven and bake 20 minutes. Eat warm. It will be as light and tender as the best "Johnny cake," or else you have wet it too much or baked it too long. This is one of the most accommodating baked dishes that can be made. It will do very nicely with a little longer time if the oven is not quite hot. If it will not bake there at all, pour it into a frying-pan, cover it close and set it on the top of the stove, where it will even bake in 15 minutes.

## Salad.

In the preparation of salads America is far behind other countries. No French or German peasant can live without his salad. If lettuce cannot be obtained, a few cold boiled potatoes or string beans, with a bit of onion or parsley, will do just as well. Hundreds of bits and ends which are thrown away by an American housewife could be compounded into a delicious salad with a suitable dressing. In our cities the art of salad-making is rapidly advancing, and nearly every housewife prides herself upon the composition of a creamy mayonnaise; but in the country, where lettuce and hundreds of salad vegetables and grasses grow in perfection, the art of salad-making is almost unknown. Many recipes for salads of fish and meat and greens have come down to us in the old Roman records, showing that the people of olden time were not behind the present day in their attention to an appetizing addition to a meal. It is almost impossible to give exact directions for the mixing of a savory salad. This is something which should never be left to the hands of an ordinary cook, for no dish requires so much delicacy of preparation. Every cultivated man or woman should understand this subtle mystery. The salad is the aesthetic dish of the meal, the refreshment and recreation after the more solid plates which have satisfied the appetite, and it should be a direct offering from the hostess to the delicate palates of her guests. If the salad is delicious let no one fear for the rest of the dinner, for that is a direct index to the whole character of the cuisine.—*Helen S. Conant, in Harper's Magazine*.

**TOMATOES PRESERVED IN WATER.**—Choose fine ripe tomatoes free from spots or bruises, says M. Bazin, in *Les Mondes*, wipe them carefully with flannel and place them in a large-mouthed vase, until the vessel is full to within an inch and a half of the top. Pour on clear filtered water until the tomatoes are just covered, and then paste a sheet of paper over the mouth of the jar. It is absolutely necessary that the tomatoes be free from any spot or bruise whatever, and care must be taken to remove from the water any which in course of time show signs of injury.

**FIG WATER.**—Boil a quarter of a pound of best preserved figs with a half ounce of ginger in two quarts of water. When reduced to a pulp, strain off and bottle for use.





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. S. EWER. O. H. STRONG. J. L. BOONE.  
PRINCIPAL EDITOR: W. B. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.50; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line. . . . . 25 .80 2.00 5.00  
Half inch (1 square). \$1.00 3.00 7.50 24.00  
One inch. . . . . 2.00 5.00 14.00 40.00  
Four weeks are rated a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, February 10, 1877.

### \*TABLE OF CONTENTS.

GENERAL EDITORIALS.—Reed-Bird, or Bob-o-Link; Mr. Blowers's Raisin-Drying, 81. The Week; The Rain and the State; Twelfth Industrial Exhibition of the Mechanics' Institute, 88. Silk Culture in Kansas; A Home for the Sailor; A Visit to Baden Farm, 89. State Board of Agriculture; Whip-Making and the Effects of Steady Employment; Patents and Inventions, 92.

ILLUSTRATIONS.—The Reed-Bird, or Bob-o-Link, 81. San Francisco Sailors' Home, 89.

CORRESPONDENCE.—Agriculture and Mining; Making the Desert Bloom; Our Industrial Condition No. 1; Quack Advertisements, 82.

THE DAIRY.—Butter Making Notes, 82.

THE VINEYARD.—The Raisin Trade; The Microscope in Good Hands, 83.

HORTICULTURE.—Banana Stalks Rotting; Impressions of Fruits, 83.

ARBORICULTURE.—Trees on the Plains; The Date Palm, 83.

POULTRY YARD.—Cross-Bred Fowls; Poultry Books, 83.

PATRONS OF HUSBANDRY.—Napa County Grange Work—Past and Future; Death of a Grange Founder; Resolutions "For the Good of the Order;" From the Granges; Election of Officers, 84. In Memoriam, 85.

AGRICULTURAL NOTES from various counties in California, 85-92.

HOME CIRCLE.—The Toys (Poetry); Who are Responsible for the Hoodlums; Beauty Your Homes; Elsie; How Valentines are Made; What a Woman Can Do, 86. Light Breaks; The Debt to Mothers; Business, 87.

YOUNG FOLKS' COLUMN.—Letters to Boys and Girls—No 16, 87.

GOOD HEALTH.—Sunlight Necessary to Health; Food for Intemperance; Appetite and Work; Cure for Rheumatism, 87.

DOMESTIC ECONOMY.—How to Make Oat-Meal Cakes; Salad; Tomatoes Preserved in Water; Fig Water, 87.

QUERIES AND REPLIES.—A Use for Dynamite; Egyptian Corn; Public Land in Fresno; Jerusalem Artichoke; "Emigrant," 88.

SHEEP AND WOOL.—Collie Dogs as Sheep Drivers; Shelter for Sheep, 89.

THE APIARY.—An English Bee Show; The Honey Prospect, 90.

THE STOCK YARD.—Prickly Comfrey as a Fodder Plant; Grading Hides, 90.

GENERAL NEWS ITEMS on page 92 and other pages.

MISCELLANEOUS.—The Wheeler Surveys; Leeches as Weather Prophets, 91. Seasoned Timber may Shrink; Using Putty; Beet Sugar; The Poisonous Principle of Spoiled Corn; Too Many Swallows; Utilization of Sawdust; Coffee Leaf Tea; Size of Wagon Wheels, 91.

### NEW ADVERTISEMENTS.

Los Gatos Nurseries, S. Newhall, San Jose, Cal.; Bulbs, Seeds, Trees, Sevin Vincent & Co., S. F.; Webster's Unabridged Dictionary; The Nurseryman's Directory, D. W. Scott & Co., Publishers, Calena, Ill.; Imported Horses For Sale, E. R. Westfall, Sacramento, Cal.; Spanish Caneles, Etc., W. A. T. Stratton, Petaluma, Cal.; Peach Seedlings For Sale, W. A. T. Stratton, Petaluma, Cal.; Moustache Protector, C. H. Barrows, Willamette, Conn.; Bull's Head Live and Let Live Stock Yards, S. F.; The Diospuros Kaki, or Japan Persimmon, Rev. Henry Loomis, Trumbull's Seed Store, S. F.

### The Week.

The week finds first note of interest in foreign doings. The Turk shows signs of a tamed disposition, and has offered to the insurgents terms which bear a fair exterior, and will probably be accepted. Thus, unless a quarrel arise concerning the price of peace, it may be expected that the drain of war will be spared from the life and industries of Europe.

At Washington the question as to who is legally elected President is being tried before a triple court of inquiry, and there will be all haste to ensure the nation a man to be the hero at the ceremonies of March 4th.

The late rains have brought our markets the forerunners of the glorious abundance of spring vegetables. Asparagus is becoming more familiar to the eye. Tomatoes of the new crop have come, and the sidewalks have been lined with boxes of mushrooms nearly as thickly as last summer the peaches and grapes were gathered together. Already the first of the new crop of strawberries is heralded from San Jose, while the old crop is not yet a month from its ending.

### The Rain and the State.

As we noted last week, the last rain was the best of all, and completed the surety for crops in most counties of the State. There is still a deplorable lack in the upper San Joaquin region, but fair growth is now coming forward, and with the prospect which still remains for more abundant wetting, there is activity and good heart among the farmers. We are unable to learn what has been the actual precipitation of rain in some of these counties, but cheering notes are found in the local press. The Stanislaus News says: "The ground is now much wetter than it has been at any time during the present winter. The rains of the past week have been warm, without frosts or chilly winds. The conditions of the climate have been very favorable for the growing of vegetation of every description. Previous to the rain of last Monday many of our farmers had again become discouraged and ceased plowing altogether, whilst others kept their plows dragging through the dry ground, but refused to put grain in the soil. All of this is now changed. Confidence is restored and work resumed. From the foothills of both the Coast and Sierra Nevada ranges of our county, we have been informed that grass is making a rapid growth and sheep doing very well."

In Merced county we learn the conditions from the *Valley Argus* as follows: "The rain with which we have been blessed for the past week has brought gladness to the hearts of despondent farmers, and again activity in farming operations is observable throughout the valley. The weather has been unusually warm for January, and the young grain came up holdly, giving hopes of at least a fair crop."

From the great grain-growing counties lying north of the counties named the reports are all of promising abundance, even beyond the result of other favorable years. The figures of the rainfall in a number of them may be found in the following table:

Auburn, Placer Co. . . . .	13.19
Woodland, Yolo Co. . . . .	7.91
San Rafael, Marin Co. . . . .	14.97
Stockton, San Joaquin Co. . . . .	5.81
San Jose, Santa Clara Co. . . . .	3.77
Los Gatos, Santa Clara Co. . . . .	10.62
Gilroy, Santa Clara Co. . . . .	5.50
Hollister, San Benito Co. . . . .	3.00
Santa Barbara, Santa Barbara Co. . . . .	3.04
Martinez, Contra Costa Co. . . . .	5.00
Santa Rosa, Sonoma Co. . . . .	9.13
Salinas, Monterey Co. . . . .	3.64
Lakeport, Lake Co. . . . .	10.10
Napa, Napa Co. . . . .	13.10
Sacramento, Sacramento Co. . . . .	6.61
Petaluma, Sonoma Co. . . . .	11.27
Vallejo, Solano Co. . . . .	6.21
San Francisco . . . . .	8.67
Los Angeles . . . . .	3.96
Pomo, Mendocino Co. . . . .	13.20
Antioch, Contra Costa Co. . . . .	3.22

Upon the whole the present outlook is for an abundant grain surplus. With a good growing and harvest in the months to come, it may be safely estimated that the larger area of ground which has been worked this year in the counties which now promise best, will make up for any possible shortage in the less favored districts, and insure a high general average of product for the State.

In the southern coast counties there has been a light rainfall, but it has been effective for desirable results. We read from Ventura that "for about six hours the rain was a continuous downpour, during which time nearly two inches fell. This, with what had previously fallen, insures a good crop of both grain and grass. The day being warm, neither the young lambs nor calves were hurt by the storm. Already the grass and grain are coming up thrifty and strong." In San Diego "the young grass is growing vigorously, and may now be considered strong enough to take care of itself till the next good rainfall. Where but a few days since all was brown and dry, the fresh green grass covers the ground. You can almost see it grow." These remarks are also true of other coast counties from north to south.

These being the facts, we can perhaps look good naturedly upon the silly paragraphs which are coming to us in our Eastern exchanges. We are very much in the position of a grandfather of ours who heard his funeral sermon preached. These Eastern writers seem a little over-anxious to bury us and steal our trade. We read in the *St. Louis Rural World* of Jan. 24th as follows: "From our California subscribers we learn that the wheat crop of that State has 'gone up.' The failure of the rains has produced a failure of wheat; and instead of California being a great wheat exporting State the present year, she will have to import wheat to feed her citizens. 'It is an ill wind that blows nobody good;' and the Missouri farmers will derive a big profit from the calamity that has befallen our sister State of California. The millions of bushels of wheat that the latter State has been shipping to Europe yearly of late, she cannot supply the present year."

Such lamentable ignorance would be perhaps pardonable in the old days of slow communication, but when it is known that every daily newspaper in the East had dispatches on the morning of Jan. 14th that rain was falling freely in California, and the great wheat markets of Chicago and New York were influenced by the announcement, it is very sleepy journalism which waits a week longer and then says that California must buy bread. If the *Rural World* proposes to go on with the funeral it has mapped out, it will find California a very lively corpse.

### Twelfth Industrial Exhibition of the Mechanics' Institute.

Steps have already been taken for the twelfth industrial exhibition of the Mechanics' Institute, which is to open on Tuesday, August 7th, 1877, and continue for at least 30 days. The exhibition will be held in the Pavilion on Market, Eighth and Mission streets. The building is 200 feet wide, 550 feet long and 100 feet high, with a gallery around the inside 50 feet wide, besides a promenade 16 feet wide and 1,000 feet in length. In addition to this space, there is a horticultural garden 70 by 220 feet, for the display of fruits and flowers. The "mechanical annex," for the display of special machinery, is 200 by 50 feet.

A large and powerful engine will furnish the motive power for all machinery required to be in motion, while steam and water will be supplied in ample quantities to such machines or appliances as require them. The main line of shafting is 500 feet long, with sufficient pulleys for all requirements.

The art gallery is 400 feet long by 50 feet in width, well lighted by sky-lights during the day and at night by the most improved reflectors. It will be made specially attractive, the directors announcing that many noted works of art are already promised, so that it is confidently expected that this department will excel anything ever before seen on this coast. A grand instrumental concert will be given each afternoon and evening by an orchestra composed of the best musical talent on this coast, and under the leadership of an experienced and popular conductor.

In accordance with the general request of exhibitors, the management have decided to offer liberal premiums at this exhibition, consisting of medals and cash, all to be for the first degree of merit only. The medals will be of a new design, three and a half inches in diameter, and somewhat similar to those awarded at the Centennial exhibition. This idea is a good one, as it promotes a spirit of emulation among exhibitors and encourages them in making their displays as attractive as possible. The miscellaneous diploma system is worn out and we are glad to see that the managers intend giving medals and cash for only one degree of merit, instead of giving everybody something to keep them all in good humor. The proposed method will entail some intelligent work on the part of the committees, but the awards will be more satisfactory on that account.

A carefully prepared classified list of premiums will shortly be published. The circular of the managers states that articles may be entered for competition or exhibition only; but if for the former they must be so designated when placed in position. A copy of the premium list, blank applications for space, rules and regulations and any information regarding the exhibition will promptly be given or sent, by addressing the Secretary of the twelfth industrial exhibition. J. H. Culver, 27 Post street, is the Secretary. The Board of Managers consists of A. S. Hallidie, H. L. Davis, George Spaulding, Asa R. Wells, Daniel E. Hayes, Jeremiah Browning, James Drury, P. B. Cornwall, James Spiers, James C. Patrick, Charles Elliott, Henry S. Smith, J. H. Stoutenborough and J. B. Stetson.

It is important that all parties intending to contribute to this exhibition should give early notice of the amount and kind of space required. Those who intend exhibiting should commence to prepare as soon as possible, so as to have their articles ready for display on the opening day.

THE NOMENCLATURE OF THE ORANGE.—The confusion which pervades all fruit nomenclature is shared by the orange. It seems that the Floridians are moving to establish a standard name for the varieties. We read in the *Agriculturist* the following, which may be suggestive in this State: "Dr. J. C. Kenworthy requests us to announce that the committee appointed by the Fruit Growers' Association to inspect and name the different varieties of the *Citrus* families are now ready to receive specimens of the oranges, lemons, limes, citrons, etc., for that purpose. The freight must be prepaid. It is essential that the age, origin and the present name by which it is called should accompany each parcel. The fruit will be classed, and a return given in at the meeting of the Association. A. I. Bidwell, Esq., and Dr. G. W. Davis have been added to the committee. Our people must be aware that this is a most important movement, and will be of vast benefit to those who are now entering on the culture of these fruit, enabling them to know where to procure buds of the varieties they want. Our oranges can then be sorted and sent to market under distinct names, so that orders can be given for each sort that the consumer may require. We hope every one will be interested, and send in their samples without delay. Do not send the largest or smallest fruit, but pick out the medium-sized ones. Only a few of each sort is required."

ON FILE.—"Offices of Reason," J. G. L.; "The Wool Interest," S. W. J.; "On Draft," D.; "New Grange Work," P.

### QUERIES AND REPLIES.

#### A Use for Dynamite.

EDITORS PRESS:—I see in a number of your very excellent paper the practicability of using dynamite for the cultivation and pulverizing the soils of orchards and vineyards. If you can inform me where I can get it and how to use it I would like to experiment with it. I think it might be made useful for the reclamation of alkali lands on my ranch, as well as upon thousands of others; there are more or less low spots, from the size of a table to many acres, where the water collects from the higher land during the winter, and remains until late in summer. These ponds not only affect the health of the country, but are a great nuisance to the farmer. Now the question is, what is the best and cheapest way to get rid of them. I have done much this year by scraping off the high ground into the low spots, thereby leveling up the surface, so that instead of the water running off of the high places into the lower, and leaving both barren, it has a chance to penetrate the soil equally in all places. I am much pleased with my success so far, it being done much cheaper than I expected; but those who have large shallow ponds covering many acres could not fill them in this way without a great expense. Upon examination I find the bottoms of these ponds are composed of a fine, hard clay or cement, too deep for the plow to reach, and as impervious to water as an earthen dish—probably formed by the continual washing of the fine clay, etc., from the upper lands. Now the cultivation of the higher ground will cause that to soak up a greater amount of the rainfall, and I think if holes were bored in the bottom of these places 10 or 15 feet deep and as many apart, when they are dry, and a charge of dynamite exploded in each, it would break up this cement basin and pulverize the soil, so that the surplus water would penetrate and by working the surface well with coarse manure it might be made to produce good crops. I would like to hear the views of others upon this subject, as it concerns many in our valleys. We are having the finest rain of the season; everybody is jubilant; crops are looking very fine for the season of the year; you will be likely to hear from Cohasset county about harvest time. J. R. TOTMAN, Cohasset.

The use of dynamite in stump rending and in loosening hard soils has been the subject of experiments in Europe, and we have given items concerning it as we found them in our foreign exchanges. More than this we do not know of it. The use proposed by Mr. Totman seems practical enough. Doubtless he would have to experiment a little to ascertain the right sized charge to loosen the hard pan without scattering the field over the neighborhood. Dynamite is another name for "giant powder," and this can be obtained from the Giant Powder Co., 210 Front street S. F. All directions concerning the proper method of handling the explosive can be doubtless had from the manufacturers.

#### Egyptian Corn.

EDITORS PRESS:—Can you or any of your readers inform me where seed of Egyptian corn can be obtained?—H. M. JOHNSON, San Diego, Cal.

The Egyptian corn was noticed in the *RURAL PRESS* about two years ago, from some samples grown by R. J. Trumbull; the plant was introduced, we believe, upon the recommendation of Dr. Silver, who tested the grain in Egypt. Upon inquiry of Mr. Trumbull, we learn that the grain has been grown and floured by Gen. John Bidwell, of Chico, and we are promised a report of the experiments soon. The seed can be obtained of Mr. Trumbull, of Sansome street.

#### Public Land in Fresno.

In answer to an inquiry we state that information concerning the public lands of Fresno county should be sought of the Register at Stockton, Cal. A part of Fresno county was under the supervision of the land office at Visalia.

#### Jerusalem Artichoke.

EDITORS PRESS:—There is an article in the *PRESS* of January 6th, on the Jerusalem artichoke. If it produces half as many bushels per acre as said, I should like to get a small quantity for seed. Will some reader of the *PRESS* inform me through the *PRESS* where I can get seed, and what the cost will be?—JACOB HENRY, Capay, Yolo Co.

This would be a good subject for an advertisement if any reader of the *PRESS* has the seed to offer.

#### "Emigrant."

A correspondent at El Dorado, California, signing himself "Emigrant," asks several questions which will be answered in a private letter if he will send his name.

METEOLOGICAL.—The movement for the application of the Signal Service to the practical observation of the Pacific coast weather, and the foretelling of storms, etc., is advancing. At the last meeting of the Academy of Sciences Dr. Gibbons proposed the formation of a section in meteorology, as the Signal Service at Washington desired to open communications with a scientific source on this coast, and steps were taken to carry out the idea. Professor Davidson stated that the Central Pacific railroad had 50 signal stations from the Rocky mountains to the Gulf of California, and that the observations had been full, reliable and of considerable use, and regularly reported to the Smithsonian Institute at Washington. It was now proposed, by a number of private gentlemen in this city, to establish nine meteorological stations on the North Pacific, from Alaska, where the United States Government is about to establish a tidal station, through the Aleutian islands to Kamtschatka. Dr. Gibbons said that this subject was of great importance to the agricultural and mining interests of this coast.

THE CADET.—We have received the first issue of the *Cadet*, edited and published by the students of the California Military Academy at Oakland. It is a bright, handsomely printed and well edited four-page newspaper. The following are the editors: James L. DeFremery, J. W. Givens, E. M. Hills, Charles L. Riddell, George A. Whitby and Carlton Wilson. We wish the new publication all success.



## Silk Culture in Kansas.

Professor Riley, of Missouri, is a believer in the possibility of the silk industry being made a success in this country. He believes, also, that Kansas is on the high road to that success. His beliefs and the reasons on which he bases them are interesting reading. He said in a recent lecture: I fully believe that in 1876—and perhaps long before—the southern Atlantic States and southwestern States will abound with silk reeling establishments and silk manufactories, supplied with cocoons reared on all hands around and about them, or brought at reasonable rates from Pacific's golden shore.

Though we may not, at present, be able to compete, in their own markets, with the cheaper labor of parts of Europe and Asia, there is no reason why, with proper intelligence, we may not produce our own silk as cheaply as it can be brought here from these countries; and I am convinced that should we ever be cut off by war from those countries on which we rely for our present silk supply, we can easily fall back on our own resources; and there are few parts of the United States better adapted to the raising of silk than your own State of Kansas. Even now, there is no reason why the young people, and those unable to harder work, in thousands of families, should not spend a few weeks each year in the pleasant work of producing cocoons. The spinning wheel and the distaff have been superseded and driven from the household by modern machinery; and the time which used to be given to their working in former days, might be profitably devoted now-a-days to silk-raising and reeling. Such a substitution of the finer for the coarser fiber would indeed be typical of our modern civilization and progress, compared with the old.

Not very many years have elapsed since grape-culture was considered impracticable in this country, while the practicability of pisciculture is only just now beginning to be realized; and to those who are familiar with the details of sericulture abroad, it becomes very clear that, with the endless variety of soil and climate, the production of silk might soon be added to our constantly increasing resources—especially if fostered and encouraged at the first by wise government. Had I the capital I would not hesitate to-day to erect a filature or reeling establishment in the very city of St. Louis, where I live, relying in a few years on getting a sufficient quantity of home reared cocoons to obviate the necessity of importing them. The reeled silk is always in demand, and hundreds of factories in New Jersey and New York would seek the product eagerly.

Nay, more, there is still a brighter side to the picture which the future presents. Up to the present time there have been no reeling machines in America, and though we have demonstrated the adaptability of our climate to the rearing of the worms, there has been no market for the cocoons. The California raisers relied on the sale of eggs and the silk-raising came to a stand-still there as it did everywhere else in the country in consequence. Now there is in Kansas a man whom your people will some day learn to honor. A Frenchman of wealth, but loving democratic institutions, he bought large tracts of land in Franklin county and determined to establish the silk industry there. He has fully satisfied himself as to the feasibility of producing the silk, and seeing at last, as I argued five years ago, that the one thing yet needed to advance industry was a reeling establishment, he returned to France, and last spring came back with the needed reeling machinery. Still another point: Finding that the common silk worm would feed on the Osage orange so extensively grown in this country for hedges, five years ago obtained, through our former Commissioner of Agriculture, Col. Capron, eggs of one of the best races from Japan and commenced feeding the worms on the Osage. The subsequent year I crossed these with a French race which I brought over from France. The cross I have reared each year on Osage, and the worms have grown heartier and healthier, without material diminution of silk. I hold in my hand a hank of silk reeled for me by Monsieur Boissiere from the fifth generation of these Osage-fed worms, and pronounced excellent by him. Indeed, it compares favorably with any silk I have seen. It is the first hank of Osage orange produced silk ever reeled in this country. With each future year the race will become better and better adapted to the Osage orange, and by judicious selection the quality and quantity of the silk can be kept up or improved.

You need not, therefore, go to the trouble and expense of growing mulberry trees. Every Osage orange hedge grower will be thankful to have his hedge trimmed, and those who do not own a foot of ground may rear a number of cocoons each year.

To Kansas belongs the honor of first starting a reeling establishment, and I say to her people, go ahead, let every household make a point of raising a few ounces or pounds of cocoons; encourage Monsieur Boissiere both by your own efforts and through your legislature, and from the present small beginning will yet flow one of your richest industries, and some of those in my audience will, I hope, live to see this, my dream, realized.

REMOVAL.—John Skinner, agent for the celebrated Winchester arms, has removed his establishment to 115 Pine street.

## A Home for the Sailor.

Some 10 or 12 years since a number of philanthropic ladies of this city formed an association to secure a home for sailors, where they might be properly taken care of while in port and protected from the impositions and robberies of unscrupulous men. These ladies have worked long and earnestly, by holding fairs, soliciting personal contributions, etc., until they had accumulated a fund of some \$16,000 or \$18,000, with which they purchased a suitable lot about a year ago on which to erect a home.

Soon after that purchase, at the suggestion of several prominent citizens, they prepared a memorial and petition to Congress for the use of the old marine hospital building, corner of Harrison and Spear streets, for the purpose of a home. Through the exertions of our delegation in Congress, the petition was heard and granted, and some three months since the ladies were put in perpetual possession of that property for the uses specified—the same to revert to the government whenever its uses were diverted. This is better than owning the property, as while the title rests in the government the property is not liable to taxes of any kind.

The building is now in process of thorough renovation, at an expense of some \$15,000, including furnishing—the money thus far having been raised by selling the lot belonging to the society, for which they now have no further use. The home will be opened about the first of April, and will form one of the largest, most convenient and most complete institutions of the kind in the world, and capable of accommodating from 400 to 500 persons. It will be, indeed, a "Palace hotel" for poor Jack, which he will no doubt fully appreciate. It will be provided with a library, reading room, lecture room, etc., and will be a place where seamen can find good board and lodging at fair rates, and where they may pass their time while in port out of the way of the pernicious influences



SAN FRANCISCO SAILORS' HOME.

to which they are now subjected. We give annexed a view of the building, which is worth over \$100,000 as it stands. It is located on a slight elevation commanding a fine view of the city and harbor, and forms a most conspicuous object to the mariner as he enters the port.

The work of the ladies has been, for years, a most untiring and arduous one, and one which, by the liberality of the general government, has been finally crowned with most abundant success. These ladies deserve the gratitude of the whole community for this national work in behalf of our seamen. We know that it is most fully appreciated by the leading merchants and ship owners of this city.

The lady officers and managers of the society are: Mrs. C. D. Knight, President; Mrs. Capt. Henry Tucker, Recording Secretary; Mrs. P. S. Williamson, Corresponding Secretary; and Mrs. E. D. Cogswell, Treasurer. Their associates in management are Mrs. A. E. F. Baker, Jane Rowland, B. F. Lambert, R. Barclay, G. Burrows, W. B. Ewer, A. W. Loomis, J. Hughes, A. Kohler and W. Kielly. The President and Secretaries are Trustees.

Their Advisory Board are Capt. Oliver Eldridge, L. M. Kellogg, Hon. E. D. Sawyer and W. B. Ewer, all men having the confidence of the public.

A VISIT FROM FRANK LESLIE.—We have the pleasure of first announcing the contemplated visit of Mr. Frank Leslie to California and neighboring States. It is his intention to leave New York in March, with artists and editorial assistants accompanying, and he intends business. By the publication of correct California views and scenes, drawn on the spot, and published broadcast over the world, Mr. Leslie's illustrated journals will do our coast a material benefit, hence our people are all interested in the success of Mr. Leslie's tour among us. We recently visited Mr. Leslie's newspaper establishment in New York, and found it, even in these dull times, a perfect beehive of industry. Seventeen regular publications are edited, composed and printed entirely in the building. The business, drawing and engraving, added to the other departments, makes up an immense concern, all built up with remarkable rapidity, to the credit of Mr. Leslie's dashing enterprise and judgment.

## A Visit to Baden Farm.

Having a few hours' leisure on Thursday we made a trip to Baden farm, where our contributor, Robert Ashburner, conducts a milk dairy and breeds Short Horns. The rains have brought forward a fine growth of feed and the farms along the road are looking fresh and inviting. We found Mr. Ashburner at home, and after a short season at the bounteous board we took to the fields for observations. We found field after field of rich and heavy feed. As we noted on our last visit, Mr. Ashburner makes wide use of alfalfa, both for hay and pasture, when we asked Mr. A. what was the secret of this splendid growth of forage, he said it was manure. This is something out of the line of general California farming, and though Mr. Ashburner's belief in manure has been stated before in our columns, we endeavored to learn more of his success with this agent.

He told us that when he came upon the ranch five years ago it was almost bare of vegetation; it had been run as a hay farm and all the strength of the soil had been carried to the hay market. He began to work the soil and to put on the manure; with the enriching of the soil the natural grasses and clovers began to reappear, and now, with the alfalfa, make a rich carpet of verdure.

We went to the mangold field which was described in the Press last spring. This was the poorest piece on the ranch when Mr. A. began to work it; he plowed it deep and manured freely. This year's crop of mangolds was nearly exhausted, but enough remained to show the large growth which had been gained. Between the remaining mangolds we found alfalfa in blossom and two feet in height. On a part of this beet field barley was sown for hay, just after the October rains. The late rains

have brought this forward so fast that it was lodged in many places and Mr. A. will be obliged to feed it off as soon as the ground gets hard enough. These items as we saw them show very clearly that this piece of land has been brought up from the poorest of the ranch to a condition of splendid fertility with the application of manure. Mr. A. has now a pile of the scrapings of his horse and cow stables which is 20 feet square and eight feet thick, waiting to be used on the land; he would be rejoiced if it were four times as large. In addition to the manure made on the ranch he buys guano and applies it before sowing the second year's beets.

## The Herd.

We met the active milkers of the herd on their way up to the afternoon milking. The dairy herd is, of course, made up of high grade Short Horns, nearly all bred upon the farm. We did not notice a single animal in the herd in poor condition, or in even ordinary poor condition, considered from the dairymen's standard of condition. Nor was there any mark of pampering. To see what was Mr. Ashburner's idea of pampering cattle, we asked his method of care and housing, and he informed us that the milk cows have been kept in the stable all night only five times this winter, these being stormy nights, when the ground was too wet for them to lie upon it. In raising the calves they are kept tied by the head every night till a month old, when they are put with the older calves, to go out in the fields in the day-time and come into the sheds at nights until they are fit to turn out to grass, or until the grass is fit for them. In the paper which Mr. Ashburner read at the last meeting of our Dairymen's Association, he advised giving calves, that are intended for dairy use, bulky yet nutritious food. Judging by the condition of those we saw, some 30 that are now being put away to grass, we should think that Mr. A. practices what he preaches, for their food must have been good and plenty of it. So far as we could see from our casual visits to Baden farm herd, all the cattle are handled so as to preserve vigor, which will enable them to make practical use of their good breeding.

## The Thoroughbreds.

Since our review of Mr. Ashburner's herd in the RURAL of August 5th, 1876, there have been

10 births—five bulls and five heifers. Two of the bulls are from the two-year-old imported heifers, "Oxford Minstrel II" and "Rose of Raby II." We made especial note of these heifers at our last visit, and their calves, being both by "Kirklevington Duke II," are creditable offspring of their highly-bred parentage. The two calves are of true outline, with the "parallelogram type" well developed, and with hair abundant, soft and silky to the touch.

The imported cow, "Dame Gwynne," is due to calve to the bull named above about March 1st; and the two yearling heifers, "Lightburne Gwynne" and "Oxford's Elvira," being of the "Princess" family, as their names indicate, are due to the imported "Grand Prince of Lightburne" about the last week in April. In our last notice of the herd we were made to say, by a typographical error, that this bull was "lacking" instead of "not lacking" in certain good qualities. We take the present opportunity of doing the animal justice and of saying that our first favorable impressions are confirmed by a second view of him.

Since our last visit there have also been three additions to the "Frantic" family, descended from imported "Frantic" by the "Fourth Duke of York" (10,167). These three are all heifers and all by "Kirklevington Duke II." The dams are "Constance," who brought twins, and "Gold Leaf." These calves give Mr. Ashburner 13 of this valuable family of Bates Short Horns, five of which are forward in calf to "Kirklevington Duke II." One of them is the cow "Camilla," now 16 years old, and considered good for at least one more calf. Her last calf was "Fragrant," now two years old, and expected to bring a calf within a week.

To the "Pansy" family have been added two heifers and one bull; the latter and one heifer being by "Kirklevington," and the other heifer being by a seven-year-old bull of the "Frantic" family, which his owner highly prizes for the beautiful form and useful dairy qualities of his offspring.

## Staying Qualities in Cows.

Although we believe in giving dairy cows a good chance to recruit before coming new in milk, and though the need of this depends greatly upon the care and feed which the animals receive, we believe that the dairymen of this State, generally, do not pay enough attention to the staying qualities of their cows in milk. By the failure to secure extra feed in the dry time and by keeping cows which are useful only during a short milking season, many of our dairymen miss the profit in having milk and butter just at that season of the year when these articles bring most money in the market. We were curious to interrogate Mr. Ashburner on this point, and were much gratified at the facts which he gave us. He pointed out to us four members of the "Frantic" family and gave us the following notes of each from his register: "Yellow Rose" calved her second calf February 31st, 1876, and was dried with some difficulty about January 20th, 1877, and is due to calve again February 20th, proximo. "Garland" calved her second calf when three years and three months old, December 20th, 1876, and is still milking, but is not due to calve again until May. "Gold Leaf" calved her first calf when two years and six months old, March 4th, 1876, and calved her second calf February 2d, 1877, being only three weeks dry. "Fidget" calved her first calf when two years old, March 16th, 1876; she is still in milk, and is due to calve in April. In the "Pansy" family, we have "Princess Royal," who brought a fine heifer calf when one year and 11 months old, and a second one at the age of three years and one month; having been only six weeks dry. Then there is her dam, "Princess" by "Water Prince," who has recently produced her fourth living calf at the age of five years and four months, and is now giving 20 quarts of milk a day. There are still two members of the same family, "Sarah" and "Cypress," who have, according to their ages at least, been equal to any of the others in the production of calves and milk. We have said that we were gratified at these data. They will serve to show how productive good cows can be when properly handled, and they will show, what we have been more and more convinced of since we have become acquainted with the stock and dairy interests on this coast, that for productiveness in animals California cannot be surpassed elsewhere. For it must be remembered that these cows are kept directly for their dairy value as practical milk-producers and none of the concentration of energy on calf bearing has been practiced as is in vogue in the thoroughbred herds of other States with which we have been familiar.

## General Remarks.

We have endeavored to deal only with some of the facts and doings of this herd as we gained them from Mr. Ashburner's register, without entering into any criticism about the breeding or qualities of the different families or individuals. There is, however, one peculiarity about the imported animals of Baden herd which we have not noticed in the most of such animals in this country, and that is the retention of their long coats of hair all during the last summer. It may be an interesting thing to notice how long they or their offspring will retain such a quantity of hair in this climate, which does not appear to be favorable to such growth in the native cattle.

We were much interested in our examination of Mr. Ashburner's cattle, and we expect, as opportunity may offer, to pursue a similar examination of the other herds of our prosperous stock-breeding State.



## SHEEP AND WOOL.

### Collie Dogs as Sheep Drivers.

An interesting trial of collies at work—between 20 and 30 entries having been made—recently took place at Alexandra park, and is reported at length in the *Standard* and other London papers. Pens half a mile apart were employed. The dog, standing with his master at the empty one, was directed by word toward the other, in which were three sheep (fresh from the hills), and these were unpened as the dog approached, and had to be driven and penned within the hurdles half a mile off. The man and dog walked together along the race course until the sheep were sighted, when he gave a sign or a word to his four-footed companion, and the intelligent brute at once started off at a gallop, and sought first to drive the sheep down the hill toward his master. When he had succeeded in doing this the man walked toward the pen, and the dog drove the sheep after him until they were near enough to co-operate in getting the sheep inside. Twenty minutes was the maximum time allowed, the prizes being won by those which succeeded in penning their sheep in the shortest time, while those which failed to pen within the allotted time were disqualified.

It was not difficult to discover that dogs and sheep were working under great disadvantages, and animals which have, no doubt, a well deserved reputation on their own hills failed to distinguish themselves under totally novel conditions, though enough was demonstrated to make it apparent that these collie trials are likely to become a very interesting annual performance. Though a space of ground was marked off by ropes and stakes, which were respected by the spectators, the sheep felt under no restrictions, and the poor collie, therefore, that had been used to the clear view of a Welsh hillside, with no human being but his master within miles of him, had to dodge his charges among visitors and round plantations, which frequently hid them altogether. The sheep were many of them very wild and ran like deer, their disinclination to proceed in the direction of the pen being increased from the main flock being in full view, and thus stimulating the natural ovine tendency to rejoin companions.

In several cases, on the dog nearing the three sheep, the nimble and independent wethers scattered and galloped in different directions out of sight, when the collie, after an honest attempt to bring them together, seemed to conclude that it was hopeless to complete the task in 20 minutes, so he philosophically dropped it altogether and trotted back to his master. Some of the triads of wethers behaved in a manner more in accordance with the gregarious traditions of their race, and when in addition to hanging together they happened to start in the right direction down hill, the first portion of the dog's work was easily and speedily done. The marvelous sagacity of the breed was seen when the sheep were near the pen and the dog had to overcome their natural disinclination to enter. Not only did the animal in this position obey every sign and word of his master, but he would exercise what might almost be called his own reason and discretion in the mode of carrying out his master's wishes, in a fashion that was astonishing.

Success, however, depended altogether on the behavior of the three particular sheep. One famous dog, named Handy, which won the Champion prize two years running in Wales, was very unfortunate in this respect. He succeeded in getting them to the pen in splendid style, but nothing could induce the sheep to enter. They broke away a score of times, and after a display of ability worthy of his high reputation, poor Handy failed to accomplish the task within the 20 minutes. The most successful performance was that by a slut named Maddie, belonging to Mr. John Thomas, of Bala. Favored by tractable wethers, she succeeded in a little over four minutes. A famous dog named Boy did the work in seven and a half minutes. Another called Laddie took nine minutes, and two others, Pentre and Tweed, 12 minutes each. There were 19 entries for the all-aged stakes, and these were tested.

### Shelter for Sheep.

A writer for the *Rural World* tells how he builds a cheap shelter for his sheep. His flock is small but sheds may be multiplied or enlarged. He says: I have 125 ewes and spring lambs. I have built a shed for them 20x60 feet; it is only a rude affair, made with forks put in the ground three feet and eight feet apart, covered with poles and brush on the west, north and east sides. I built pens of poles about two feet wide, and tramped old straw into them as firm as I could get it to the top of the shed. Not a ray of light can pass through the shed anywhere except on the south, and that is all open. The caves are five feet from the ground. The shed is on sloping hill-side, fronting south, in a wood pasture; against the wall on the north, west and east sides are the grain troughs. These are made with a 16-foot board, one foot wide, for bottoms. The sides are fence boards nailed on, giving a trough 16 feet long, one foot wide and five inches deep; they are set on blocks a foot from the ground; the litter soon fills up the stable; a sheep will eat out of a trough a foot high

easily. The end troughs are only 16 feet long, and set four feet from the th side, nor so that in eating grain the sheep in the north trough will not interfere with those eating out of the end troughs. My racks are made of fence boards; two 16-foot boards make the top and bottom; I saw other boards into two and a half feet pieces, and nail them on the top and bottom six inches apart. This gives a foot to each sheep. This space between the pieces allows a sheep to put its head clear into the rack. Some use long poles and bore auger holes and put in rounds every four or five inches. The fencing is cheap, so I use the boards. The racks are fastened up on the back edge of the grain trough, and tilted forward over the grain trough at an angle of about 45 degrees—just so the sheep cannot stand up in the trough nor drop their dung into it either. The trough is out of the way entirely and catches all the fine pieces of hay, so the sheep may eat it without picking it out of the litter. Then four feet from the south edge of the shed I have 32 feet of trough and rack. This has been made double, giving a trough and rack 32 feet long on each side—outside and inside. This double rack makes a most desirable wind and storm break when filled with hay. The 14-foot spaces at the ends of this double rack I can close up with a portable panel of fence. I do not feed corn or hay in the shed now, but will when the weather demands it. The expense of racks and troughs is trifling compared to the satisfaction and comfort the sheep and I take during the snows and rains that sometimes come for days and days; and I expect to save some lambs by the comfortable shed and fixtures.

This way of having no dry, warm place for ewes at lambing time has disgusted me time and again. I shall build me a log barn next month for sheep entirely. It will be 20 by 25 feet, with hay mow above.

## THE APIARY.

### An English Bee Show.

We read in the *Agricultural Economist* of an exhibition of "bees, their produce, hives and bee furniture," which was held at the Alexandra Palace, the show being arranged in the large hall, and 13 long tables or stalls being covered with the exhibits. The idea of bee-keeping in the mind of the ordinary city dweller appears to be that it is something practiced by the poor cottagers to help out their small incomes. But in America, Germany and Spain, there are "bee farmers," whose acres are covered with hives. The general idea of a hive is that it is a straw cap, something like a dish cover in shape, only round; that the bees make their honey therein, and that the poor cottager subsequently, to appropriate the sweets, stifles the industrious insects which have swarmed there. Such was, no doubt, the actual state of the case at one time; but such an idea is very far from the truth now-a-days. The straw hive has become a "house" of wood and glass, in which the temperature is regulated by a thermometer; the bees are dealt with as valuable property, not stifled recklessly, but "manipulated" by the "apiarian," and the honey removed without the loss of a single bee, and without the least damage to the "comb" which it costs the insect so much labor to make. An exhibition of this kind practically shows all this, and one begins to understand that bees, where properly "farmed," may yield a considerable profit when one hive alone, as shown by an exhibitor, can yield 111 lbs. 12 oz. of honey and comb, the value of which is nearly £8, market price. The exhibitors in the show were numerous, and many of the exhibits new and cleverly adapted to their purpose. There was a great variety of "houses," some as large and like nothing so much as dog-kennels; others like dolls' houses, with two or more stories; some like cupboards, with folding doors and shelves; and some again like dove-cots, and quite as fanciful. Inventions, too, for extracting honey from the "comb" were also numerous; exhibited, some worked on cog-wheel action, being called "express" extractors. The "furniture" exhibited was of great variety also, and much of it new, but necessary to those who "farm bees" for profit or pleasure. The specimens of honey, in comb and extracted, were also numerous, and to these may be added hives of bees to be seen at work, bees swarming, and so forth. There were entries for 33 out of the 35 classes into which the show was divided, and prizes of silver and bronze medals, certificates and money prizes, in sums of £3 and under, were offered. There were in all 244 entries, and the exhibition, which was under the management of the Beekeepers' Association, was well attended and examined with much interest.

### The Honey Prospect.

The propitious rains, though late, are in time to insure a good honey crop, and soon Dame Nature will unroll her verdant robes over mountain and plain, bedecked with thousands of flowers of every hue, that will mingle their sweet odor with the wide-spiced verdure, and as they open their dewy lips, as if in praise of Him who gave them birth, they will yield up their rich nectar to the humming bee, who is nuzzling in detecting sweetness and treasuring it up in his own sweet home, subject to the will of its keeper. Her royalty the queen is from her instinct now aware of the approaching labor, and has commenced her busy rounds of deposits to

augment her forces to gather in the approaching harvest. She acts as though she regarded the harvest great and the laborers few. And now will the careful beekeeper make his rounds of inspection and see that each colony is prepared for the coming work; see that the queen has ample room to enlarge her borders and increase her forces to the full extent of her capacity, and if any be found without a queen, he will provide them with eggs so that they may rear a queen by the time drones shall fly, so that the queen may be enabled to send workers into the field before the eleventh hour. The weak he will make strong by giving a few pounds of brood from those that are able to spare. If combs are crooked he will trim straight. Should he want to Italianize he will keep back the black drones by removing all drone comb from the black colonies and by giving the Italians an abundant supply of the same, and as the cells become capped over give a portion back to the black colonies, being careful that no drone cells are empty in which the black queen might deposit eggs. This he will continue to do until he has an abundant supply of Italian drones; when the work of Italianizing may be successfully accomplished after the usual method, which we may speak of hereafter for the benefit of the novices.—*Los Angeles Herald*.

## THE STOCK YARD.

### Prickly Comfrey as a Fodder Plant.

One of our large stock growers informs us that he has sent for some seed of the "prickly comfrey," a fodder plant which is now attracting considerable attention in England, and means to test its adaptation to this climate. As the plant is to be tried it will be interesting to read the following experience with it as reported by *Bell's Messenger*:

This plant, it says, is easily propagated by offsets or cuttings from the roots, and being perennial, when once established produces enormous crops without renewal for many years. Its advantages are, very great power of production, early fitness for use, its healthy and fattening qualities, and its adaptation as an article of food for cattle, sheep, horses, and pigs, and even geese. Its many cuttings in spring and summer, and in open seasons down to December, in this northern latitude, evince alike its heavy produce and its hardiness. Horses are not soft when fed on it, as they are on other green food. Cows and sheep devour it ravenously, and it does not produce hove in either, as sometimes happens with other succulent foods; neither does it communicate any bad flavor to cow's milk or butter.

It is a good food for affected stock, and has the repute of warding off pleuro and foot-and-mouth disease. Pigs prefer it to most other plants, and geese are very fond of it. For ewes and lambs it is valuable, as in early seasons it becomes fit to cut in the beginning of April, and its ordinary produce has been estimated at from 60 to 90 tons an acre. On the 17th November, this year, some of it was cut for the pigs after a snow storm and a good deal of frost. The plant thrives in dry and exposed soils, but to gain the most profit from it, it should be planted in a deep, rich, and friable soil, and will well repay a liberal manuring, as it yields an abundant and constant produce for many years.

It grows, if left alone, to the height of several feet, but it should be cut for use before it flowers. In making plantations the roots may be taken up at any time of the year, cut into small pieces (as the smallest part will produce a plant), and planted in a clean, rich, and deep soil. The rows are made two feet apart, and the same distance suffices between plant and plant. The roots also do well if planted in drills and dunged in the same way as potatoes; it only requires a little care to keep the ground clean, as, from the rapid growth of the comfrey, weeds have a poor chance. If the plantation is made in the autumn, or early in the spring, before the dry, cutting winds of April set in, so that the cuttings may begin to strike root and establish themselves, it will yield two cuttings the first season. If crown roots are planted they produce three, and sometimes four, cuttings the first season, and four or five cuttings annually afterwards, according to the quality of the ground and the care bestowed on them. We usually mow or cut with a reaping hook, but the most economical way is to take the most forward leaves from each crown. When the whole is taken at once, it will be frequently reproduced in the short space of 10 or 12 days in summer, and in spring and autumn a fortnight or little more supplies the place of what has been cut away.

It is now some 20 years since comfrey was cultivated by Mr. J. Greig, then manager of the estate of Westouing, in Bedfordshire, and his account of it does not differ materially from the foregoing. He thought that in a good season he would have a hundred tons an acre, and considered the crop a very profitable one. It was grown in rows about 18 inches apart, and about the same distance between plant and plant. Then a few inches above ground it was hoed, and the hoeing was repeated if weeds appeared. It is described as growing to the height of three or four feet, on that strong land, with stems of about the thickness of one's finger, and in some respects it was not unlike horse-radish; but it was not allowed to flower,

unless where it got ahead of the consumption. It was used for cattle only; the stems were thought to be as good as the leaves, and the animals took to it with a relish. When the season was showery four cuttings were got from it, and with a mild spring, abundance of juicy shoots came away early, which were extremely serviceable at a time when other food was often scarce.

### Grading Hides.

We read in an exchange that the National Convention for the classification of hides has adopted rules which may be of interest. It was a convention of farmers and dealers in hides and leather recently held in Philadelphia. The following rules for the classification of hides were adopted, and will therefore exert an influence in controlling the action of the whole trade until other conclusions are reached by the authority to which reference is made: Rule 1—All hides having one or more grubs shall be thrown out and classed as damaged. Rule 2—All hides and skins cut and scored on the flesh shall be thrown out and classed as damaged. Rule 3—All hides for currying purposes, having one or more brands, shall be thrown out and classed as No. 2 hides. Rule 4—All hides sold for sole leather, having more than one brand, shall be thrown out, and classed as No. 2 hides. Rule 5—All harness hides visibly damaged by hook or horn marks on the grain shall be classed as No. 2 harness hides. Rule 6—In the vocabulary of this trade, one letter, figure or mark constitutes a brand on a hide. The cattle raisers, in their own interest, are requested to make their brands of one letter, or mark, as small as possible, and so locate upon and down the leg as to produce the least possible injury to the hide. Rule 7—The above rules, concerning cuts, scores, grubs and brands shall be applied to all transactions in dried hides, as well as those that are fresh or salted; also to imported as well as domestic hides.

### The Wheeler Surveys.

A dispatch from Washington gives the following information:

The annual report of the surveys west of the one hundredth meridian, under the direction of Lieutenant Wheeler, United States Corps of Engineers, is now about ready to be issued. It will exhibit many interesting facts regarding the topography and resources of the regions examined in Colorado, New Mexico and California during the last fiscal year, under special instructions from the War Department. An examination was made to ascertain whether the waters of the Great Colorado River of the West could be diverted to the adjoining plains for purposes of irrigation. The report thereon is accompanied with illustrations and regulated data, showing the problem to be difficult if not impracticable. Special investigations have been inaugurated with a view to distinctively delineating in colors upon the atlas and maps of the survey the irrigable, grazing, mineral and mountain sections of the whole region hitherto explored by the Wheeler expedition, covering, since the year 1869, nearly 400,000 square miles. These expeditions have been sent out by the War Department principally for the purpose of gathering topographical data for the mapping of the country, and incidentally to report on the mineral, agricultural and other resources of the region west of the one hundredth meridian, and its geology, climate, etc. Maps of a large portion of the area have already been published. The matured results of the survey are to be published in seven quarto volumes. Two of these, viz., geology and zoology, have already appeared; the third, paleontology, is nearly ready for distribution, and the remainder well advanced. Topographical and geological atlas sheets will be issued from time to time. There will be also issued a monograph upon the routes of communication, showing distances between elevations, wood, water, grass, etc. This information is much sought for by parties contemplating the locating of colonies, the transfer of large herds to grazing grounds, etc. The appropriations for this work last year, although limited in amount and not available until late in the summer, have afforded gratifying results, several field parties continuing their labors up to December, and returning to headquarters in Washington well laden with data to be elaborated and submitted directly to Government and incidentally to the public. If Congress makes adequate appropriations during the present session, parties will be put in the field early in the coming spring, as skilled assistants, instruments and outfits are all at hand ready for camping at any time.

LEECHES AS WEATHER PROPHETS.—*The Journal de Medecine de Bruxelles* states that a leech will prove an accurate barometer: Into a flask of the capacity of 1½ liters (about 45½ fluid ounces) pour one liter (about 34 fluid ounces) of water, introduce a leech, cover the bottle with coarse linen and place it in the window. If the leech remains motionless and coiled up at the bottom, this indicates lasting fair and clear weather, in summer or winter. If the leech ascends into the neck, rain or snow will follow, during which time it remains above. If windy weather is approaching, it swims about restlessly, and ceases only to do so when the wind abates. A few days before a severe thunder-storm with rain, it remains entirely outside of the water, and throws itself about, apparently in convulsions, from one side to the other.



## Seasoned Timber May Shrink.

The *Manufacturer and Builder* says: Scraping off the paint from a panel in a door will cause it to shrink, even when it has been unaltered for years, and supposed to be perfectly seasoned. Even the various most valuable kinds of timber will shrink more or less every time the surface is dressed off even a small fraction of an inch. Wheelwrights, accustomed to work in oak, are well aware of this fact, and a correct appreciation of it often enables them to turn out work of a superior character, even of ordinary materials, by first blocking out the pieces roughly, then allowing the timber to season, and working the various parts by degrees, as the seasoning becomes more and more complete.

White oak spoke timber, for example, may be allowed to remain in a rough state for half a score of years, under shelter, without becoming seasoned so thoroughly that the timber will not shrink after the spokes have been dressed out. Carriage wheels have often been made of the choicest quality of oak timber after every spoke has been seasoned for several years, and to the great surprise of the wheelwright, every spoke would work in the joints before the vehicle had run three months. The defect in such instances could not be attributed to inferior timber, nor to perfunctory workmanship, but simply to this one circumstance, that the parts of the wheel were put together before the timber had ceased to shrink.

To prove that the best quality of oak will shrink after a spoke has been dressed out, let a tenon be made on one end and be driven immediately into a mortise; after a few days' exposure in a warm workshop the spokes may be withdrawn with little difficulty. The same fact will hold good in the manufacture of wood work of any kind where oak is employed for tenons. In order to make joints that will never start, the piece on which the tenons are to be made should be dressed several times, until the shrinkage has ceased; then let the tenons be made. After these have shrunk, while exposed to the drying influence of a warm workshop, the spokes or other parts may be driven into their respective places, with the assurance (especially if they are dipped in oil paint previous to driving) that timber will shrink no more.

Many kinds of farming implements, in the manufacture of which oak and ash are employed, render very unsatisfactory service, simply because the seasoned timbers were not allowed to shrink before the tenons were driven into the mortises. In like manner, oak chairs and other furniture will frequently shrink to such an extent that the pommels, rungs, dowels, pin and banisters will all work loose if the precaution we have described is not observed.

## Using Putty.

A wood-worker writes as follows in an exchange: A good joint is not all required in making a complete finish on wood-work, and one of the greatest troubles met with by unskilled workmen is the removing all appearance of nail or screw heads, having been sunk beneath the surface.

Putty, unless rightly put in, answers a very poor purpose, especially when the work is ever to be exposed to heat. Heat expands iron, and the nail or screw head will lift the putty and make it show a prominence on the surface of the work.

Tacks or small nails may be driven so deep that putty will not necessarily reach the head, leaving a vacuum for the expansion, but for large nails or screws the plugging mode is the best. Sink the screws at least one-fourth of an inch below the surface, then square the hole and insert a plug of the same wood, precisely, as that in which the incision is made, and have the wood exactly correspond, that is, the grains to run the same way. Fit the plug with slightly beveling sides, so tight that when it is driven in solid, it will not reach the head of the nail or screw.

Apply glue to the sides of the plug before driving, and when well set, plane off the surface and sandpaper until the surface is level and smooth.

When putty is used it will be found an advantage to sandpaper thoroughly before filling the cavities, as dust of wood will partly fill the holes and prevent the putty setting in a solid bed upon the iron heads, and will be less liable to get lifted by expansion. Where large checks or cavities are to be filled with putty, the use of hot glue will greatly add to its durability. Moisten the putty with glue, just as it is inserted, and do not attempt to smooth up until it is thoroughly hardened.

**BET SUGAR.**—Two eminent French chemists, Fremy and Deherain, have conducted a series of experiments to test the reasons of the decrease of richness of sugar beets grown several years in succession on the same soil in France, where the beet sugar culture is very extensive. They find two chief causes of the deterioration—the bad selection of stock or variety, and excess of nitrogenous manures. They conclude that argillaceous, siliceous and calcareous soils differ but little in their effects upon the sugar in beets. A sterile soil, with no other manure than phosphate of lime and nitrate of potash, was able to produce normal roots weighing from 700 to 800 grammes, (one and one-half to one and three-fourths pounds,) and containing a large amount of sugar (16%). Excess of nitrogenous manures injured the formation of sugar.

**THE POISONOUS PRINCIPLE OF SPOILED CORN.**—Professor C. Lombroso describes two poisonous principles derived from spoiled maize: an oil soluble in alcohol, and an alkaloid. From these may be derived a body closely resembling strychnia, possessing all of the chemical and most of the physiological reactions of the latter alkaloid. In frogs, not only tetanic symptoms, but also those of paresis and narcosis, were induced by administration of the oil. In chickens, after prolonged administration of the oil, only paresis and convulsive movements of the head, with inclination to retrograde movements, were induced. The administration to chickens of the alkaloid, on the other hand, induces death in a few minutes, with previous paralysis of the limbs and chronic convulsions. Administered to locusts, fish, mice, etc., the alkaloid gives rise to symptoms similar to those of strychnia poisoning. Professor L. concludes, therefore, that two distinct poisons are present in spoiled maize.

**TOO MANY SWALLOWS.**—Eating, like all other things, can be carried to excess. The requisite amount swallowed goes to build up the person; all other food eaten is superabundant, and goes to swell out the stomach. It is fallacious reasoning to say that a fine physique can be produced by gormandizing. The physique of the Scotch Highlanders is immeasurably better than that of the Germans, and yet the Highlanders are exceedingly abstemious. Heavy eaters are apt to be exceedingly dull people. They clog the brain in catering to the wants of the stomach. They are like a boa constructor; they eat until they can hardly see or move, and are compelled to loll about after a dinner, closely resembling a pig. It is impossible for such people to be possessed of acute reasoning powers.

**UTILIZATION OF SAWDUST.**—Sawdust can be converted into a pasty state, and afterwards into a solid, flexible, and almost indestructible mass, which when incorporated with animal matter, rolled, and dried, can be used for the most delicate impressions, as well as for the formation of solid durable articles, in the following manner: immerse the dust of any kind of wood in diluted sulphuric acid, sufficiently strong to affect the fibers, for some days; the finer parts are then passed through a sieve, well stirred, and allowed to settle. Drain the liquid from the sediment, and mix the latter with a proportionate quantity of animal offal, similar to that used for glue. Roll the mass, pack it in molds, and allow it to dry.

**COFFEE LEAF TEA.**—A correspondent, in a measure apparently prompted by the gradual deterioration in quality of Chinese tea, advocates the use of a decoction of coffee leaves, and the introduction of Mate or Paraguay tea. Mr. Alexander, of Redbank, as stated in the *Queenslander*, it appears, showed at the exhibition then recently opened at Brisbane some coffee tea, prepared from the leaves of trees growing on his estate, stating that the beverage prepared from these leaves was delicious, and far preferable to that obtained from the berry.

**SIZE OF WAGON WHEELS.**—Experiments made many years ago on the European continent, and recently repeated in England, verify practically the conclusion which a common sense mechanical theory suggests, that wagons are most easily drawn, on all kinds of roads, when the fore and hind wheels are of the same size, and when the pole lies slightly lower than the axle.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

## THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

## The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

## WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents. CLINTON BROS., Cliftonville, Ct.

## LEVI STRAUSS &amp; CO.,



Patent Riveted  
Clothing,  
14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

Practical  
BOOKS

—AT—

## BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

## CIVIL ENGINEERS,

## FARMERS,

## MACHINISTS.

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT &amp; CO.,

721 Market Street, S. F.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries.

**THE HIGH SCHOOL CHOIR.** (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older **HOUR OF SINGING**, (\$1.) by EMERSON & TILDEN, **CHOICE TRIOS**, (\$1.) for 3 female voices, by W. S. TILDEN, and **DEEM'S SOLFEGGI**, (75 cents) which has exercises in Italian style.

**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin,") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, **RIVER OF LIFE**, (35 cents,) **SHINING RIVER**, (35 cents,) **GOOD NEWS**, (35 cents.)

Either hook mailed, post-free, for Retail Price.

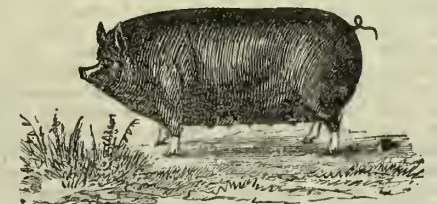
OLIVER DITSON &amp; CO., Boston.

C. H. DITSON &amp; Co.,

711 Broadway, New York.

J. E. DITSON &amp; Co.,

Successors to Lee &amp; Walker, Philadelphia.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,

NAPA, CAL.

## RANCH FOR SALE.

\$8,000. Splendid dairy or hog ranch; 800 acres in Lake county; all fenced substantially; 100 acres in cultivation; permanent water; title perfect; terms easy; no failure of crops; healthy climate. For further information write to

"W," Middletown, Lake Co., Cal.

## Wakelee's Bath for Sheep.

FOR THE PREVENTION AND CURE OF FOOT-ROT, SCAB, ETC., AND THE DESTRUCTION OF PARASITES INFESTING THE FLEECE.

H. P. WAKELEE &amp; CO.

Importing and Manufacturing Druggists,  
Cor Montgomery & Bush Sts., S. F.

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.. \$6,202,435.00	\$130,622.18
Less Amount Canceled..... 435,419.00	9,568.38
Amount in force, Dec. 31, '76.. \$5,767,016.00	\$127,053.80
Losses paid.....	\$16,330.00

## CASH PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.. \$3,005,935.00	\$71,805.16
Less Canceled and Expired.... 1,587,240.00	28,585.16
Amount in force, Dec. 31, '76.. \$1,418,695.00	\$43,280.00
Losses paid.....	\$12,718.71

## OFFICERS.

J. D. BLANCHARD.....PRESIDENT  
I. G. GARDNER.....VICE-PRESIDENT  
G. P. KELLOGG.....TREASURER  
A. W. THOMPSON.....ATTORNEY  
FERD. K. RULE.....SECRETARY

## TRUSTEES.

J. D. Blanchard.....San Francisco  
G. P. Kellogg.....Salinas  
I. G. Gardner.....San Francisco  
Chas. Laird.....Salinas  
Uriah Wood.....San Benito  
A. B. Nally.....Santa Rosa  
A. W. Thompson.....San Francisco  
A. D. Logan.....Colusa  
I. C. Steele.....San Mateo  
G. W. Colby.....Butte County  
A. Wolf.....Stockton  
C. J. Cressy.....Oakland  
J. C. Merryfield.....Dixon  
E. W. Steele.....San Luis Obispo  
C. S. Abbott.....Monterey  
Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## HEALD'S BUSINESS COLLEGE

No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## CAUTION.

To Farmers and all others who put Barbs upon Wire Fences, Making a Barbed Wire Fence, and to all Manufacturers and Dealers in Fence Barbs and Barbed Fence Wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent, Nos. 66,182, 67,117, 74,379, 84,062, 153,965, 157,124, 157,508, 164,181, 173,607; reissues, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914, and other patents. Copies of our claims can be obtained of our attorneys, Coburn and Thacher, Chicago, Ill., or of our counsel, Thos. H. Dodge, Worcester, Mass.

WASHBURN &amp; MOEN MANUFACT'G CO.,

Worcester, Mass.

I. L. ELLWOOD &amp; CO.,

De Kalb, Ill.

Sole owners and manufacturers, to whom orders for Barb Fence or for Loose Barbs should be addressed.

## NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal. JAMES W. WEBB, President.

CHARLES MALTBY, Secretary.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor Ninth St., S. F.



Continued from page 85.

speak, than we have had for 10 days past. Since the rains commenced on the 16th of January, indeed, the weather has been more uniformly warm and balmy than we generally have in March, and vegetation has sprung from its long sleep, into which the frosts of December had put it into complete wakefulness and life. Stock that seemed to despair of finding anything then to graze are now busy in nipping the fresh, new blades of grass and leaves of clover, and seem too happy for expression in the changed state of things. They do not get much to improve their condition, but they do get that which sustains life and prepares them for prospering when the feed shall become better and of more substance. A more welcome change of weather has seldom taken place in this State than we have experienced within the past three weeks, and greater changes in the prospects of the crops certainly have never taken place in this or any other State. The absence of dry north winds makes it pretty certain that we will have good crops, even with considerably less than an average of rainfall.

## SAN BENITO.

**CATTLE SAFE.**—*Advance*, Feb. 3: The continued mild weather, combined with the rapid growth of feed, has made the percentage of losses to the stock men much lighter than was anticipated a few weeks ago. Out of thousands of cattle belonging to Henry Miller in Peach Tree valley, we hear that less than 20 head have died, and but little loss has been sustained by other owners in adjoining valleys. The improved condition of stock generally has removed all apprehensions of further loss.

## SANTA BARBARA.

**LA GRACIOSA.**—*Guadalupe Telegraph*, Feb. 3: We understand the little town of La Graciosa is soon to be effaced from the map of our county. H. M. Newhall has had the land on which it stands confirmed to him and has served suits of ejectment on all inhabitants, besides claiming some \$40,000 damages. We believe a large number of the citizens of the vanishing town intend to locate in Guadalupe; and the balance will probably seek homes elsewhere in the county. We sympathize with our unlucky neighbors; but such is life among Spanish grants.

## SAN JOAQUIN.

**TULE FARMERS.**—*Independent*, Feb. 1: Messrs. Garwood, Snow and McIntosh, farmers residing near Collegeville in this county, are about to try their luck at farming in the tules. They have engaged a tract of land on Stayton island of Messrs. Mercer & McAfee, and will put in six or eight hundred acres of grain this season and as much more as possible. They have loaded the barge *Louisa* with hay, grain, groceries, agricultural implements, and all the requisite paraphernalia of the business, which is to be towed by the steamer *Alce* to their destination on the upper end of the island, which they reach via Webb's landing and the Mokelumne river. They have sown their farms on the highland to grain, which is now giving excellent promise, and with an additional crop on the tule land they will be pretty sure to have plenty of grain on either the high or low land whatever the season may be. We wish them success. They sailed with their outfit last evening.

**IRRIGATION.**—*Stockton Herald*, Jan. 26: About a year ago a number of gentlemen who are owners of land along the Mokelumne river formed a corporation for the purpose of constructing canals and ditches, by which a considerable section of the county in the northern part could be irrigated. The company is composed of Messrs. G. C. Holman, Ross Sargent, S. T. Treadway, David Kettleman, C. R. Ralph and others. A survey has been made, and it is found that water can be taken out of the Mokelumne river at Winter's bar, by the building of a dam and the construction of a canal, and led over into a slough running parallel to the river at the Five Mile house. Irrigating ditches will be taken out of the canal to supply water to the section of country adjoining it. This canal will be between six and seven miles long. It is proposed to continue a ditch from the point at which it empties into this parallel slough, down toward Lockford and Lodi to tide water, along quite a perceptible ridge, from which the land slopes to the west and south. Preliminary surveys have been made, and Mr. Holman, the surveyor of the company, to-day commenced a survey for the construction of the canal, extending from the river to the slough. The progress of this enterprise will be watched with great interest by others whose land lies in a position to make irrigation possible. When these ditches and canals are constructed that section of the country will be measurably independent of rain, since water can be obtained at all seasons.

## SONOMA.

**THE COAST.**—*Democrat*, Feb. 3: Among the farmers in the north and northwestern portions of Sonoma county the prevailing opinion seems to be that the present growing crop will be the best that has been raised for several years. The dry weather did not materially interfere with the farming interest on the coast, nor did it seriously affect the grazing.

## SISKIYOU.

**EDITORS PRESS:**—The weather is warm and showery. Considerable rain fell last night. Farmers are plowing and in good hopes. "Never have failures here," they say. The thermometer outside the house, exposed to the wind, marked 43° at seven o'clock A. M. to-day. Wind driving from the south pretty strong. The "Bills" ranch, on French creek, changed hands a few

weeks since; the new proprietor, Mr. Samuel Hans, died Tuesday last and was interred at Fort Jones yesterday evening. The new bridge over Scott river, near Callahan's ranch, is completed. The stage runs now on the west side, or on the opposite side to which it did. Cattle are fat, and there is plenty of hay on hand in the valley.—R. D. NUNNALLY.

## VENTURA.

**HOG RAISING.**—*Signal*, Feb. 3: Hog growers find the Santa Clara valley perfectly adapted to the hog. Nowhere in the world can a pig be grown so cheaply. He takes care of himself from the beginning. It is root hog or die, and he never dies till he gets fat and is sent to the city market. The hog is to the farmer a regular bonanza. He lives on green pasturage till the grain is ready to harvest, and then he becomes to the farmer a reaping machine and stores away in his hide in compact form many cents of barley that would otherwise have to be hauled to market. His hogship is a threshing machine as well, and sacks his own grain. He carries it on his own feet to market and thus saves hauling. He leaves the ground in a better condition when he has performed his labor and is ready to lie down to pleasant dreams than when he came. There is no straw to burn after a herd of hogs, and the ground is well manured.

## YOLO.

**CONTINUOUS VOLUNTEER.**—*Cor. Colusa Sun*, Feb. 3: I will tell you what has come within my own knowledge on the Buckeye ranch, in Yolo county, one mile south of the Colusa line, owned by W. J. Clark. He plowed 160 acres of land in 1862, and in the fall of 1864 sowed the same down to barley, and for the six succeeding years harvested 30 bushels to the acre, and in the dry year of '71 it seeded itself, and again in '72 harvested 72 bushels per acre on 40 acres of the same. The balance was cut for hay, as it had all fallen down so that it could not be profitably harvested for grain. And this succession of crops all from one plowing, one sowing and harrowing. It is nothing uncommon to see two or even three volunteer crops raised after one sowing. There are thousands of acres that produce equally with the foregoing. We may add to this that Dr. Robinson has a field of 130 acres on Sycamore slough, which has never been plowed, on which he has constantly kept for the last five years 500 head of sheep, 30 horses, about 30 cows and from 100 to 200 head of hogs. Nothing except the native grass of the State has ever been planted on it, and the stock kept fat all the while.

## State Board of Agriculture.

A meeting of the new Board of Directors of the State Agricultural Society was held at the Pavilion, Sacramento, President Biggs presiding, and there being present Directors Green, Bryce, Coleman, Shippee and Perkins. Before entering upon the election of Secretary, a resolution was presented and unanimously adopted to the effect that the salary of that officer should be fixed at \$2,000 per year, and that no extra clerk hire should be allowed unless especially ordered by the Board. Nominations for Secretary being then called for, Major Robert Beek, who has filled the office for several years, was put in nomination and elected unanimously, his being the only name suggested. Before electing a Treasurer, it was decided that the salary of that officer should remain as it has been for the last two years. Nominations were then declared in order, and L. A. Upson was unanimously re-elected.

Mr. Shippee moved that the Secretary be required to give a bond, as well as the Treasurer. The motion prevailed and the amount was fixed at \$5,000, bond to be filed within 10 days. President Biggs announced that the Committee on Finance would consist of the President, Secretary and Director Shippee. Committee on Library—Messrs. Green, Coleman and the Secretary. Visiting Committee—to visit all other societies, etc.—every member of the board. Committee on Printing—the President, Secretary and Director Boruck. President Biggs remarked that he would appoint Colonel Younger to act, at his own expense, as a committee to get all owners of Short Horn stock to become members of the society, and to exhibit it at its annual fairs. Director Bryce was placed in nomination as Superintendent of the Park and unanimously elected. On motion, Director Coleman was unanimously elected to act as Superintendent of the Pavilion during the next fair. On motion of Coleman, it was decided that the next annual fair of the society should commence on Monday, the 17th of September, and continue one week—stock for exhibition to be received on and after the 14th; entries to close in all departments on Tuesday, the 18th, at noon.

**THE RURAL PRESS IN SAN BENITO COUNTY.**—C. N. West, Esq., of Santa Cruz, traveling agent and correspondent for the *RURAL PRESS*, made us a call last Saturday. Mr. West's present mission was to settle up and straighten out in some satisfactory manner the unfinished business of his predecessor, after which he will make another canvass of the county, recording the result of his observations for the columns of the paper for which he is agent. Mr. West seems an active and intelligent person and well adapted to the business in hand. The *RURAL PRESS* is one of the best publications of the class in the country.—*Hollister Enterprise*, February 3d.

## Whip-Making and the Effects of Steady Employment.

Simple as it appears, a first-class linen-plaited whalebone whip is constructed in an exceedingly interesting and ingenious manner, and it requires careful and honest management to uniformly produce a perfect and durable article. The stock for manufacturing must be judiciously chosen and the liquid or sticking material correctly compounded and applied in proper condition. The American Whip Company, of Westfield, Mass., well known in the trade in all American cities, is undoubtedly the largest factory in the world. In no other establishment is so large a variety of whips made in such perfection and great numbers.

Thirty years ago, says Mr. H. J. Bush (one of the leading founders of this company), a knife and plane were all the tools employed by a journeyman whip-maker. Now, we should judge that \$50,000 would not pay for the improved tools and machinery in this single establishment. The most ingenious in construction and operation is the plaiting machinery with its dozens of wheels revolving and carrying different strands of thread in an amazing number of different ways, rapidly forming perfect fitting braid to the varying surface of the whip-stock. One of the latest invented machines plait the buttons on the stocks more evenly than, and as perfect as, the human hand.

The American Whip Company occupy a large four-story brick building, employing from 40 to 50 men when in full operation. One hundred and fifty dozen or about 2,000 whips can be turned out daily. Although the largest, this factory is only one of many equally well-deserving factories in the vicinity.

Westfield, for more than a quarter of a century, has been noted as being headquarters for whip and cigar-making in the United States. During the past 10 years the town has, from appearances, doubled in wealth if not in population. The braiding of horsehide and buckskin lashes, snaps, and the working of buttons, etc., on whips taken into the industrious homes of the villagers, has given the town a thriftiness rarely enjoyed of late years by their neighbors in other parts of New England. This exemplifies the great benefit to any community of having some light employment for women and children. Although the remuneration may be very low, such employment tells largely in its general results. Some such employment universal in California would produce a wonderful change in the happiness and prosperity of our people.

## Sheep at the Centennial.

We have not heard much of the sheep show at the Centennial, and if present reports are true very little was great plenty. Mr. Jacob Funck writes as follows to the *Rural World*, and his words are not mealy-mouthed, whatever else may be said of them:

"As you have published my reflections on the Centennial sheep show, under the caption of 'Is it a fraud?' I will try and answer your question, and I do most emphatically say, yes, it is a fraud! And that the very worst kind of a fraud. The sheep that is stubble sheared, or blacked, is, to all sheep breeders who understand anything about their business, simply a monument of the rascality of the owner. Why, sir, I would just as soon have a label printed on it, in large letters, as to take one of these 'doctored' sheep to the Centennial and show it among a lot of honest breeders. Yes, sir, if I had to show such sheep, I should want some darkey to take charge of them, who had forgotten my name and never could think of it again, until he got away from the Centennial ground. Just think of it! A man claiming to be an honest breeder of Merino sheep, and then go to the sheep show and try to impose on a set of judges, who have, perhaps, forgotten more about fine wool sheep than this fraud ever knew! Why, sir, as a certain judge said, is not every sheep an advertisement of his rascality? True, he may deceive the ignorant, and by his tricks drive some honest beginner out of the business by his deception, and create an opinion in the mind of his victim that all sheep breeders are frauds. Why, sir, I would rather a man would put his hand into my pocket and take my money out, than to deceive me in this way. Of all breeders' tricks, I consider this the meanest."

Will some California flock-master who saw the Centennial sheep show tell us if this criticism be just?

**WINDMILLS.**—We are pleased to state that we have received new evidence of the satisfaction given by the famous Enterprise windmills. Several parties who have purchased them from Horton & Kennedy, of Livermore, Alameda county, have told us of the good working of the apparatus, and we hear no complaints whatever. We are glad to announce that our advertising patrons at Livermore are doing well.

SEE advertisement in another column of this paper headed "The Nurseryman's Directory," of special interest to all nurserymen, florists, seedsmen, horticultural implement makers, etc. Send order at once for a copy.

## General News Items.

UNEMPLOYED workmen in mass meeting in New York Saturday night, called upon the Legislature for an appropriation of \$2,000,000 to give work to 55,000 idle men in the city.

THE Cincinnati Chamber of Commerce have passed resolutions heartily approving the bill appropriating \$30,000 for an expedition to the north pole on the plan suggested by Captain Howgate.

THE legislative appropriation bill as passed by the House on Saturday reduces the President's salary from \$50,000 to \$25,000, and fixes the annual salary of Senators and Representatives at \$5,000.

THE Secretary of the Treasury says he has sufficient silver to meet the legitimate demands, and declines to re-exchange United States notes for silver brought to the department in sums varying from \$10 to \$100.

A CALL has been issued for a meeting of the National Teachers' Association, to be held in Washington on the 1st, 2d and 3d of March. Subjects of interest to the cause of education have been arranged for discussion.

IN the Senate on Saturday, Hamlin offered an amendment to the Postoffice Appropriation bill appropriating \$500,000 for steamship mail service between San Francisco and China and Japan for one year, and authorizing a contract with the Pacific Mail Steamship Company for transporting a monthly mail between the ports designated.

THE *North German Gazette* reverts to the anti-German articles in the *Revue des Deux Mondes*, and says: These expressions are significant in France, because a renewal of war against Germany is considered by every one only a question of time and constitutes a permanent factor in all political calculations.

**POTATO PESTS.**—This is the title of a valuable pamphlet by Prof. C. V. Riley, State Entomologist of Missouri, published by the Orange Judd Company, of New York, and for sale by A. Roman & Co., of this city. The leading place in the monograph is awarded to the Colorado potato beetle, which has made such a complete sweep of the potato fields from the Rocky mountains to the Atlantic, but, fortunately, has not come westward. This insect, its insect foes and means for overcoming it, are all treated fully with text and illustrations. Besides this, 12 distinct insects infesting the potato plant are carefully described. The book has all the characteristic marks of Prof. Riley's thorough research and able authorship.

**THE POETRY OF THE FARM.**—For a dash of genuine poetry we can hardly conceive of anything finer than the following sentence which we read in a Los Angeles paper: "He can fatten his pigs where the perfume of the orange blossoms will annihilate the effluvia of the sty."

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING JANUARY 30TH, 1877.

VETERINARY SCROGAL INSTRUMENTS.—Lewis Woods Hamilton, Pendleton, Ogn.  
SELF-ACTING STRIPS FOR MINING BUCKETS.—Henry S. Craven, S. F.  
COIN WRAPPERS.—Ethan A. Scott, S. F.  
METHOD OF SAWING LUMBER.—Jason Springer, S. F.  
CAR STARTERS.—Samuel S. Vollum, S. F.  
BOOK CLAMPS.—George F. T. Wood, S. F.

RE-INJURES.—Egbert Judson, S. F.  
—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

A MOST effective remedy for the PHYLLOXERA is a weak solution of carbolic acid, one gallon of the strength of Calvert's Sheepwash, with about 450 gallons of water sprinkled over the stem and roots of the vine. The same wash is useful for preserving WET HIDES, even after it has served for SHEEP DIPPINGS. For the latter purpose its advantages over tobacco and other remedies are now beyond question. A sheep farmer in Ireland, Captain Laprimandays, of Newport, Mayo, writes on the 26th December last: "I find my savings in a flock of 2,000 to be about £30 (\$150) a year, merely for dressing (not to speak of dippings), as against tobacco juice and spirits of tar." Those who have used it most in California speak equally highly of its merits, finding it not only the cheapest, but decidedly the most efficacious remedy they have tried. As a disinfectant for stables, etc., it is as useful as the more expensive preparations of carbolic.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

THROUGH the length and breadth of the land the celebrated SILVER TIPPED Boots and Shoes are sold by the million, for parents know they last twice as long as those without tips.

Also try Wire Quilted Soles.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Feb. 7, 1877.

The trade of the week has disclosed considerable fluctuation in prices, some articles showing considerable weakness and some improving. There has, however, been little of general interest, except, perhaps, the downward movement in Wheat, which may be attributed to the prospect of a large crop in this State, or to the dissipation of the war prospects in Europe, or to both of these indications combined. The weather has been fine and some kinds of Produce have arrived faster than the dull demand would take them. The liveliest places in the city are perhaps the seed stores, which are doing a good business.

The foreign demand for Wheat has slackened during the week, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CL. AVERAGE.	CLUB.
Thursday.....	10s 7d@10s 10d	11s —@11s 4d
Friday.....	10s 6d@10s 9d	10s 8d@11s 3d
Saturday.....	10s 6d@10s 9d	10s 8d@11s 3d
Sunday.....	10s 6d@10s 9d	10s 8d@11s 3d
Tuesday.....	10s 5d@10s 8d	10s 8d@11s 2d
Wednesday.....	10s 5d@10s 8d	10s 8d@11s 2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	9s 2d@9s 5d	9s 6d@10s —
1876.....	10s 2d@10s 4d	10s 6d@11s —
1877.....	10s 5d@10s 8d	10s 8d@11s 2d

## The Foreign Review.

LONDON, February 5th.—The *Mark Lane Express* says: Farmers are still much delayed by the abundant rain. The present state of agricultural prospects are very disheartening, if not alarming. The Wheat plant, in districts uninjured by the recent floods, is said to be vigorous and healthy. Threshing has been almost stopped lately, and the supply of home-grown grain therefore is still limited. Where threshing has been done the result is unfavorable, as shown by the inferior grain, although a few samples which were offered have brought late rates. The quotation of dry English Wheat, on sale in Mark Lane, has been so insignificant that it scarcely affected prices, which fell one shilling per quarter on the week. Despite unusually light imports into Great Britain, the dullness in trade continues, with only a retail consumptive demand. Foreign Wheat fell sixpence to a shilling per quarter. The less threatening aspect of the Eastern question was doubtless the principal cause of the decline, but the fall will probably be slight. Possibly the alteration of the political situation has affected the Continent more than England, for until recently Continental buyers have competed with us for Wheat at all positions. Now, the competition seems to have ceased, and a portion of their purchases are re-offered for sale. French Flour has also appeared in some of our markets. Some consider that this shows that the Continental wants have been exaggerated, though, on the other hand, a deficient crop on the Continent is indisputable. The demand for seedling kinds has been slow; Barley, Oats and Maize declined sixpence to a shilling per quarter. Business in floating cargoes has also been very quiet. Wheat has receded two shillings to sixpence per quarter from the recent highest point. Maize and Barley flat, with a turn against sellers.

## Freights and Charters.

There was, says the *Post*, a fair movement in the ocean freight market during the week and rates have had a slight hardening tendency. Quotations for wooden vessels for Cork for orders are nominally £2 3s 6d, while for iron £2 6s 6d is a bottom figure. We have now in port 29,846 tons of tonnage secured for Wheat, and 9,364 tons for miscellaneous purposes. The disengaged tonnage in port foots up 25,681 tons. Following are the engagements for the week: Br ship Mary Blundell, 822 tons, Wheat to Cork, U. K., private; ship Thrasher, 1,512, Wheat to Cork, U. K., £2 2s 6d, Continent, £2 8s 6d; Br ship Sarah Bell, 512, Wheat to Cork, U. K., £2 6s 6d; Br bk Tenby Castle, 588, Wheat to Cork, U. K., prior to arrival, £2 5s; Br ship Paterdale, 1,270, Wheat and Maize to Liverpool, owner's account; ship Three Brothers, 2,972, Wheat to Liverpool, £2.

## Shipments and Foreign Receipts.

During the past month 19 cargoes of Wheat were shipped from this port, the smallest monthly number since the opening of the season. The January fleet carried 739,100 cts, valued at \$1,561,900. For the corresponding month in 1876 only 14 cargoes of Wheat were cleared. Up to Saturday evening 260 cargoes of Wheat and Flour had been cleared from San Francisco since July 1st, 1876, of which 73 have been reported as having reached their destination, leaving 187 cargoes now afloat. The arrivals for the next three months will average two cargoes per day. During the first five days of the current month 12 cargoes have arrived out, per cables already received, and there are from 15 to 20 more already due.

## New York Grain Market.

NEW YORK, February 3d.—Wheat declined a little in the early part of the week, but toward the close the market recovered its tone through renewed speculative purchases for Chicago account, No. 2 spring selling at \$1.41@1.44, and No. 3 at \$1.35@1.36, in store. There has been scarcely any export trade, prices still being higher here than at Liverpool. Small supply and cheap money are the basis of the firm and inflexible attitude of the holders. Corn is a trifle higher, at 50¢@62¢ for good to prime shipping. Shipping Flour is easier and very dull, prices continuing higher at home than abroad. The bulk of business in spring Wheat extras has been at \$5.80@6.25, though fancy brands command \$6.50@7.

## Chicago Grain Market.

CHICAGO, February 4th.—The past week has developed but little new in the Breadstuffs market. Though there has been a general weakening, and in some instances lower prices have been paid than for some weeks, the trade has been freely active. Cash Wheat closed at 1.26½; Corn, 42½; Oats, 35½; Rye, 65; Barley, 58¢. Receipts for the week—Wheat, 85,000 bushels; Corn, 538,000; Oats, 145,000. Shipments—Wheat, 60,000; Corn, 275,000; Oats, 75,000. Receipts same time last year—Wheat, 253,000; Corn, 484,000; Oats, 116,000. Shipments—Wheat, 106,000; Corn, 317,000; Oats, 76,000. The movement of Wheat is remarkably slow, and some have even gone back into the country this week to supply the millers, who are growing in the belief that the short crop will leave them idle a portion of the time between this and the next crop.

## Eastern Wool Markets.

PHILADELPHIA, Feb. 6th.—Wool is quiet and firm, supply light; California fine and medium, 15¢@30¢; coarse, 15¢@20¢.

NEW YORK, Feb. 3d.—During the week there has been a fairly active inquiry for wool from manufacturers, due in a great measure to the improved condition of the market, and the prices realized have been generally satisfactory. There is a notable absence of speculative inquiry; but this can be traced to the fact that holders of fine Wools, which are at present attracting most attention, show no disposition to recede from the point that has been established, owing to the reduced supply of all kinds. Speculators,

therefore, avoid purchasing these descriptions, and inferior grades are at present considered too high to operate in. Advances from London state that the new Australian clip is in fair condition, but owing to unfavorable weather the staple is weak and a decline is anticipated. At the London sales of Colonial, to open in the latter part of this month, about 200,000 bales of Port Phillip will be offered. Sales for the week are: 61 bales Buenos Ayres at about 33¢; 13,000 lbs free spring California, 20¢@31¢; 66,000 lbs slightly burry do, 22¢@26¢; 155,000 lbs fall do, 13¢@18¢; 2,000 lbs black do, 17¢; 8,000 lbs Oregon combing, 30¢; 5,000 lbs do valley and lambs, 25¢@34¢; 45,000 lbs Western Texas, 25¢@26¢; 1,500 lbs low do, 15¢; 40,000 lbs Eastern do, 25¢@27¢; 70,000 lbs X and XX Ohio fleece, 46¢; 2,500 lbs washed combing and decline do, 50¢; 15,000 lbs fine unwashed Western, 27¢; 1,000 lbs Wisconsin, 26¢; and 4,000 lbs California lambs, 1,000 lbs Oregon, 7,500 lbs do scoured, 50,000 lbs Georgia, 25,000 lbs Lake, 22,000 lbs Western Texas, 3,000 lbs black do, 4,000 lbs super pulled, 1,000 lbs No. 1 do, 5,000 lbs do, 6,000 lbs Ohio and Michigan, 10,000 lbs unwashed State, 2,000 lbs Wisconsin, 1,500 lbs unwashed unmerchantable, on private terms.

Boston, Feb. 3d.—Wool is in fair demand. Holders are very indifferent about selling, being confident that prices will be sustained. Prices of fleeces continue to be maintained, but sales have not been made to any extent. California more active; fall is salable only at low prices, but there has been more inquiry than there was last week. Sales of this description, 272,000 lbs, principally at 16¢@18¢; some good lots selling at 20¢, and poor lots as low as 10¢. Sales of Spring, 178,500 lbs, mostly at 28 to 34¢.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Jan. 17.	WEEK Jan. 24.	WEEK Jan. 31.	WEEK Feb. 7.
Flour, quarter sacks.....	75,076	62,081	23,226	55,377
Wheat, cents.....	132,827	131,191	159,181	133,553
Barley, cents.....	13,788	10,439	11,336	4,873
Beans, sacks.....	401	2,219	1,391	919
Corn, cents.....	5,325	4,841	2,027	2,586
Oats, cents.....	1,345	6,723	1,852	5,854
Potatoes, sacks.....	11,338	11,910	12,984	9,567
Onions, sacks.....	588	936	1,064	1,586
Wool, bales.....	162	89	63	36
Hops, bales.....	66	17	2	87
Hay, bales.....	1,042	553	826	920

**Bags**—The Grain Bag market is firmer and rates are quotable at an advance. Sales of standard Wheats are reported at 9c, and the rate, usual time, is 9½¢ for jobbing lots. A notable advance in Flour Sacks may be seen in our table below. The railroad has advanced freights, and this tells directly upon cotton materials.

**Barley**—Barley is firmly held and prices are maintained. We note sales of 1,000 sks good Feed, \$1.25, silver; 2,000 sks choice Bay Brewing, \$1.25, gold; 5,000 do good Feed for Chicago, private; 400 do good coast Feed, \$1.22½ per cwt, silver; 300 sks Feed, \$1.22½, and 800 sks extra choice, \$1.25, both silver; 2,000 sks choice Bay Brewing, \$1.25, gold; 300 sks choice Bay Brewing, \$1.30, gold, on 30 days' time; 350 sks dark Coast, \$1.22½ per cwt, silver.

**Beans**—A few fluctuations in special kinds may be seen in our table below.

**Buckwheat**—The rate is unchanged.

**Corn**—Prices are without change. We note sales of 500 sks large Yellow at \$1.30 per cwt, silver.

**Dairy Produce**—Prices are without improvement. Dealers report a tendency to accumulation in Butter, and anticipate a still further decline in price from the increased make. Cheese is stationary.

**Eggs**—Eggs are unchanged, with 26¢@28¢ obtained for fresh California.

**Feed**—The downward movement in ground Feeds is continued this week. The improved prospect of Grass and Hay in abundance has put the millers on the back track. Bran is now quotable at \$16; Corn Meal, \$30; Middlings, \$27.50; Oil Cake Meal, \$32.50; all of which are lower than last week. Hay is reduced in price and hard to sell. We note transactions as follows: 11 tons Chevalier Barley, \$13; 42 do good Volunteer, \$13; 150 bales Wheat and Wild Oat mixed at \$15 a ton; 42 tons fair Volunteer at \$12. Straw is just now in good demand at 75¢ per bale.

**Fruit**—The Fruit market is chiefly going on Apples and Oranges, which are plenty. Pears are scarce. Fruit prices are unchanged from last week.

**Hops**—There are reported sales of 116 bales California Hops at 16¢@21¢, which must be considered the range of the market. There are still some lots firmly held above the price of buyers. Emmet Wells reviews the New York market for the week ending January 26th as follows:

Market quiet and prices unchanged. Exporters are taking all the choice Hops offered of California and New York State growth, but they are extremely exacting in quality. The Hops must be strictly choice in every sense of the word, otherwise they are not wanted. Very low grades, such as are quoted at 12¢ to 16¢, are still in demand. The hardest thing to sell is a medium quality of Hops, such as ought to bring 18¢ to 22¢, and when this class of goods are any way forced to sale, buyers want them at the price of the poorest Hops; in short, the demand runs entirely on very choice and very low grades. Our foreign letters would indicate that stocks are getting very low, both in England and in Germany, but we take but little stock in the reports from the latter country, for the reason that no two reports from there seem to be of the same tenor. First, we hear stocks are entirely exhausted and prices advancing. Next, the report comes that the markets are overladen with English and American Hops, for which there is no demand at any price. All we hope for now is a continued lively demand from England. The only drawback is we are asking 25¢ @ 30¢ to-day for poorer Hops than we shipped to that country a year ago at 15¢, and, in our opinion, without anything to warrant it. Quotations: New Yorks, good to choice, 20¢@25¢; New Yorks, low to fair, 12¢@18¢; Eastern, 18¢@23¢; Wisconsin, 12¢@17¢; Yearlings, 10¢@15¢; Olds, all growths, 4¢@8¢; Californians, 23¢@25¢; Oregon, 23¢@25¢.

**Oats**—Receipts of Oats for the week have been light. The price is still affected by the decline in Feed Barley and ground Feed. We note sales of 200 sks choice heavy Oregon, \$2.35; 600 sks Oregon, \$2.30; 100 sks Feed, \$2.12½.

**Onions**—Onions have undergone a reaction from the late advance. Sales were made on the wharf at \$1.25 for the best Union City; Stockton not exceeding \$1.12½. Lower quotations are neglected.

**Potatoes**—Potatoes are again in excess of requirements and sales are only effected at a marked decline from last week's prices. We note nothing to-day above 80¢, and a low mark of 50¢ per cwt.

**Provisions**—Fresh Beef is firmer and for the best carcasses commands an extreme of 8¢. Other grades are advanced in proportion. Mutton is lower and the market is over supplied. Pork is firmer and the supply is moderate.

In cured meats the trade is moderate and prices unchanged.

**Poultry and Game**—Although Eggs are cheap, there is some recompense to those who have birds to sell in the advance which is noted in our tables. Hens, Roosters, Broilers, Turkeys and Ducks have all taken a flight. The rise is doubtless due to the immediate demand for the Chinese New Year, which is approaching.

**Rye**—Rye is still ruling at \$2.05 per cwt.

**Vegetables**—The rains have brought in a flood of Mushrooms and the price has fallen. Asparagus is more plenty. Carrots are cheaper. Garlic is a drug and almost unsalable. One dealer reports to us that he had five sacks on the wharf and the best offer he could get was \$2.50 for the whole lot. The first Tomatoes have sold at \$2 per 25-lb box.

**Wheat**—The transactions in Wheat are, as noted above, at a reduced rate. We note sales: 5,400 sks good Shipping at \$2; 1,700 cts choice Milling at \$2.10 ½ cwt, 10% payable in silver; and 1,200 cts choice Shipping at \$2; 400 sks fair Milling at \$2.10; 400 sks Milling at \$2.02½.

**Wool**—The local market is without transactions; our quotations are nominal.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., February 7, 1877.

<b>BEANS.</b>		<b>Brazil.</b>	
Bayo, cts.....	2.75 @ 3.00	Cal. Walnuts.....	14 @ 16
Butter.....	1.50 @ 2.00	Cal. Walnuts.....	8 @ 10
Pea.....	2.00 @ 2.12	Cal. Walnuts.....	11 @ 12
Red.....	2.75 @ 3.00	Pecans.....	17 @ 18
Sm'l White.....	2.50 @ 3.00	Peanuts.....	4 @ 6
Lima.....	2.75 @ 3.00	Filberts.....	15 @ 16
<b>BROOM CORN.</b>		<b>ONIONS.</b>	
Common, lb.....	2 @ 2½	Union City, cts.....	1 25 @ —
Cibola.....	3 @ 4	Stockton.....	1 12½ @ —
<b>POTATOES.</b>		Petaluma, cts.....	50 @ 75
California.....	1 50 @ —	Humboldt.....	50 @ 80
German.....	1 50 @ —	Early Rose, new.....	75 @ 85
<b>COTTON.</b>		Sweet.....	75 @ 100
Cotton, lb.....	15 @ 18	<b>POLTRY &amp; GAME.</b>	
<b>DAIRY PRODUCE, ETC.</b>		Hens, doz.....	8 00 @ 9 00
Cal. Fresh Roll, lb.....	27 @ 30	Roosters.....	8 00 @ 9 00
Point Reyes.....	30 @ 32	Broilers.....	7 00 @ 8 00
Pickled Roll.....	25 @ 27	Ducks, tame.....	50 @ 12 00
Parkin.....	22 @ 24	Geese, pair.....	2 25 @ 2 75
Western Reserve.....	16 @ 18	Wild Gray.....	1 50 @ 2 00
New York.....	— @ —	White.....	1 00 @ 1 50
<b>CHEESE.</b>		Turkeys, Live, lb.....	20 @ 25
Cheese, Cal., lb.....	12½ @ 15	Dressed.....	22 @ 23
Old.....	12½ @ 15	Quail, doz.....	1 00 @ 1 25
Eastern.....	12½ @ 15	Snipe, Eng.....	2 00 @ 2 25
N. Y. State.....	15 @ 18	Hare.....	2 00 @ 2 50
<b>EGGS.</b>		<b>PROVISIONS.</b>	
Cal. fresh, doz.....	26 @ 28	Cal. Bacon, Lb, lb.....	14 @ 15
Ducks.....	30 @ 32	Medium.....	13½ @ 14
Oregon.....	25 @ —	Heavy.....	13½ @ 14
Eastern.....	— @ —	Lard.....	13 @ 14
<b>FEED.</b>		Cal. Smoked Beef.....	10 @ 10½
Bran, ton.....	10 00 @ 16 00	Eastern.....	10 @ 10½
Corn Meal.....	30 00 @ —	Hams, Cal.....	14 @ 14½
Hay.....	10 00 @ 16 00	Armour.....	16 @ 17
Middlings.....	27 50 @ —	Dupe's.....	17 @ —
Oil Cake Meal.....	32 50 @ —	Davis Bros.....	17 @ —
Straw, bale.....	75 @ —	<b>SEEDS.</b>	
<b>FLOUR.</b>		Alfalfa, Chile, lb.....	8 @ 13
Extra, bbl.....	6 50 @ 7 12½	California.....	16 @ 18
Superior.....	4 75 @ 5 12½	Canary.....	10 @ 12½
Graham.....	5 50 @ 6 00	Clover, Red.....	22 @ 25
<b>FRESH MEAT.</b>		Clover, White.....	50 @ 55
Beef, 1st quality, lb.....	6 @ 8	Cotton.....	6 @ 10
Second.....	4 @ 5½	Flaxseed.....	35 @ —
Third.....	3½ @ 4	Hemp.....	5 @ —
Mutton.....	3 @ 4	Italian Ry. Grass.....	25 @ 30
Pork, undressed.....	5½ @ 6	Perennial.....	20 @ 30
Dressed.....	6 @ 7	Millet.....	10 @ 12
Veal.....	5½ @ 6	Mustard, White.....	10 @ —
Milk Calves.....	7 @ 8½	Brown.....	3½ @ 4
<b>GRAIN, ETC.</b>		Rape.....	3 @ 4
Barley, feed, cts.....	1 20 @ 25	Ky. Blue Grass.....	30 @ —
Brewing.....	1 22½ @ 27½	Sweet V. Grass.....	75 @ —
Buckwheat.....	1 80 @ —	Orchard.....	30 @ 35
Chevalier.....	1 25 @ 40	Red Top.....	25 @ —
Corn, White.....	1 25 @ 30	Hungarian.....	8 @ 12
Yellow.....	1 25 @ 30	Lawn.....	50 @ —
Oats.....	2 00 @ 2 30	Mezquite.....	20 @ 25
Milling.....	2 30 @ —	Timothy.....	10 @ 10½
Rye.....	2 05 @ —	<b>TALLOW.</b>	
Wheat, shipping.....	2 00 @ 2 05	Crude, lb.....	6 @ 6½
Milling.....	2 05 @ 2 10	Refined.....	8 @ 8½
<b>HIDES.</b>		<b>WOOL, ETC.</b>	
Hides, dry.....	17½ @ 18	<b>FALL.</b>	
Wet salted.....	17 @ 18	Free.....	12 @ 14
<b>HONEY, ETC.</b>		Choice.....	14 @ 16
Beechway, lb.....	25 @ 27½	Northern.....	17 @ 21
Honey in comb.....	10 @ 12½	Burry.....	10 @ 16
Strained.....	6 @ 8	Oregon, Eastern.....	25 @ —
<b>HOPS.</b>		Valley.....	25 @ —
New Crop.....	16 @ 21		
Almonds, hd shl lb.....	7 @ —		
Soft shl.....	15 @ 17		

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., February 7, 1877.

<b>FRUIT MARKET.</b>		<b>Plums.....</b>	3 @ 4
Apples, bx.....	50 @ 1 50	Pitted.....	12½ @ 13½
Crab, lb.....	2 @ 3	Prunes.....	12½ @ 17
Bananas, buch.....	2 00 @ 3 50	Raisins, Cal, bx 150 @ 2 50	
Cocoanuts, 100.....	5 00 @ 6 60	Malaga.....	3 00 @ —
Cranberries.....	15 00 @ 17 00	Zante Currants.....	9 @ 10
Limes.....	10 00 @ 15 00	<b>VEGETABLES.</b>	
Lemons, Cal M. 10 @ 10 00		Artichokes, doz.....	40 @ —
Kelly, lb.....	9 00 @ 10 00	Beets, ct.....	60 @ —
Oranges.....	— @ —	Cabbage, 100 lbs.....	55 @ 65
M.....	— @ —	Carrots.....	37½ @ —
Tahiti.....	— @ —	Cauliflower, doz.....	50 @ 75
Cal.....	10 00 @ 35 00	Celery.....	75 @ —
Pears, bx.....	1 00 @ 3 00	Garlic, lb.....	1 @ 2
Pineapples, doz 6 @ 8 00		Letts, doz.....	1 @ 2
<b>DRIED FRUIT.</b>		Mushrooms.....	5 @ 6
Apples, lb.....	10 @ 12½	Parasols, lb.....	1 @ 1½
Apricots.....	28 @ 30	Squash, Marrow.....	— @ —
Citron.....	5 @ 7	Fat, tn.....	12 50 @ —
Figs, Black.....	5 @ 7	Tomatoes, lb.....	8 @ —
White.....	6 @ 8	Turnips, cts.....	60 @ 75
Peaches.....	7 @ 10	White.....	1 00 @ —
Pears.....	7 @ 8		

## LUMBER.

WEDNESDAY M., February 7, 1877.

CARGO PRICES		OFFICET SOUND PINE.	
REDWOOD.		RETAIL PRICE.	
Rough, M.....	18 00	Rough, M.....	22 50
Refuse.....	14 00	Fencing.....	32 50
Clear.....	30 00	Flooring and Step.....	32 50
Clear Refuse.....	20 00	Narrow.....	35 00
Rustic.....	32 50	2d quality.....	25 00
Refuse.....	22 50	Furring, lineal ft.....	3 50
Surfaced.....	30 00	REDWOOD.	
Refuse.....	20 00	RETAIL PRICE.	
Flooring.....	28 00	Rough, M.....	22 50
Refuse.....	18 00	Refuse.....	18 00
Beaded Flooring.....	30 00	Pickets, Rough.....	18 00
Refuse.....	20 00	Pointed.....	20 00
Half-inch Siding.....	20 00	Fancy.....	30 00
Refuse.....	18 00	Siding.....	30 00
Half-inch Surfaced.....	25 00	Surface & Long Beaded.....	37 50
Refuse.....	20 00	Flooring.....	35 00
Half-inch Battens.....	20 50	Refuse.....	25 00
Pickets, Rough.....	1 00	Half-inch Surfaced.....	32 50
Refuse.....	18 00	Fancy.....	40 00
Fancy, Pointed.....	36 00	Battens, lineal ft.....	3 50
Shingles.....	35 00	Shingles, M.....	32 50



## Nurserymen.

## STOCKTON NURSERIES.

Established in 1852,

W. B. WEST, Proprietor,

FRUIT AND ORNAMENTAL TREES,

EVERGREENS,

SHRUBS AND GREENHOUSE PLANTS,

Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons,  
And Other Tropical Fruits.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and the public on the

Most Reasonable Terms.

FRUIT, EVERGREEN, NEW AND RARE  
TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Prichardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF  
ALL PALMS.

## FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

FRUIT AND ORNAMENTAL  
TREES,Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,

516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.TREES,  
TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG &amp; CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

200,000

## Australian Gum Trees For Sale,

-AT-

## STRATTON'S GUM TREE FOREST NURSERY,

HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

SANTA BARBARA NURSERY,  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

## PETALUMA NURSERIES.

Established - - - - - 1860.  
We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.HANNAY BROS.' NURSERY,  
SAN JOSE, CAL.FRUIT, SHADE AND ORNAMENTAL TREES, APPLE,  
PEAR, PLUM, CHERRY, PEACH, APRICOT,  
ALMOND, QUINCE, OLIVE, FIG,  
GRAPEVINES, AND SMALL  
FRUITS.EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER,  
ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

Trees. Plants. Bulbs. Fall Price List and Bulb  
Catalogue GRATIS. Address, F.  
K. PHENIX, Bloomington Nursery, Ill.

## Seedsman.

My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refund the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. *New Vegetables a specialty.*JAMES J. H. GREGORY,  
Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-NIA ALFALFA, Etc.  
Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AU-  
STRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST AND ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## SPANISH CHUFA

Address

## SEED FOR SALE.

L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.  
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON &amp; WILLIAMSON,

Stockton, Cal.

## LOOK!

ALBERT E. BURBANK, importer  
and breeder of Fancy Fowls,  
Pigeons, Rabbits, Dogs, Birds, Etc.,  
Eggs for hatching from the finest of  
imported stock. Eggs and Fowls  
at reduced prices. Send stamp for  
Price List.ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lumbago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 60 Sacramento Street, S. F.

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,

Ceres, Stanislaus County, Cal.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,



Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

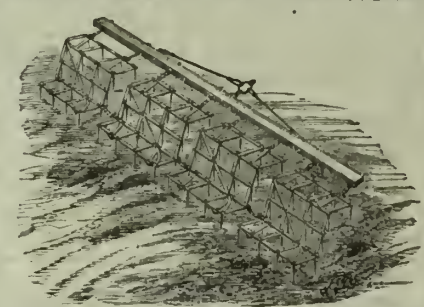
## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## IRON SECTIONAL HARROW.

This Harrow was Awarded the First  
Premium at the California  
State Fair in 1875.

The undersigned, having purchased the patent right of this Harrow for California, are now manufacturing them in Roseville, Placer County, and would call the attention of Farmers to the superior merits of this Harrow over all others now in use.

As its name indicates, it is made in sections of about three feet in width, each section having four bars, in which the teeth are inserted, and by connecting the sections with links, the Harrow is formed.

Should a farmer require a Harrow upon his farm to do all kinds of work, he should purchase six sections, which would be suitable for four horses, and would cut 18 feet in width; by disconnecting two sections he will have a two or three-horse Harrow, cutting about 13 feet. One section alone is complete in itself, and suitable for garden work, with one horse. The Harrows are made of the best quality of iron, and with teeth warranted to be steel.

We give a few of the many reasons why we claim superiority for these Harrows over all others in use on this Coast:

First—By the lightness of the draft, taking into consideration the amount of work it does.

Second—By working uneven or rolling ground just as well as and as evenly as if it was entirely level.

Third—They are made of Iron and Steel, and therefore are not affected at all by sun or rain, or by heat and cold; they are always tight, and ready for use; they are also durable. A farmer purchasing one has a Harrow that will last a life time.

Fourth—The teeth being fastened with a nut and screw into the cross bars, should one break, another can be inserted in a moment. We are making three sizes, all being the same in width, but different in depth and weight only.

Prices, from \$12.50 to \$15.00 per section.

All orders sent to

BREWSTER &amp; CO.,

Roseville, Placer County,

Will be promptly attended to, and satisfaction guaranteed in all cases.

## CAUTION.

It has come to our notice that certain parties are now making this Harrow in this State, and that several of them have been sent here from the East. Now this is to caution all persons against making, selling or buying them, so made and offered for sale, as we shall enforce our rights in relation to the matter, and would call the attention of all persons infringing upon our patent, to the law in regard to it.

BREWSTER &amp; CO.

Roseville, July 15th, 1876.

## INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 &amp; 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES:—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM &amp; RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTPELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## EXTRAS.

## EXTRAS.

## For the Kirby Machines.

D. M. OSBORNE &amp; CO. ARE READY TO SUPPLY

ANY DEMAND FOR EXTRA PARTS FOR ANY

"KIRBY" EVER MADE. ORDERS

SHOULD BE SENT IN BEFORE

THE HARVEST SEASON

ADVANCES.

Address, D. M. OSBORNE &amp; CO.'S

BRANCH HOUSE,

254, 256 Market St. }  
and } SAN FRANCISCO, CAL.  
8, 10 Front St., }

## The Patron's Almanac for 1877.

Second year of Issue. Greatly enlarged and Improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,

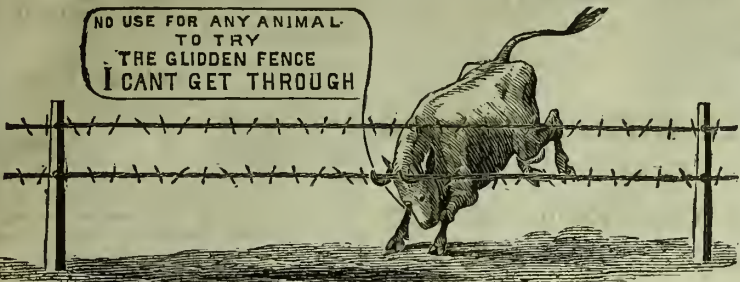
Mechanicville, Bucks Co., Pa.



After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.

NO USE FOR ANY ANIMAL TO TRY THE GLIDDEN FENCE I CANT GET THROUGH



About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
7. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
8. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

H. W. JOHNS' PATENT  
ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS,  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,  
EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

**GRANGERS' BUSINESS ASSOCIATION.**  
Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).	AMOS ADAMS, (SECRETARY).	THOS. FLINT.
R. C. HAILE, (VICE PRESIDENT).	THOS. UPTON.	G. P. KELLOGG.
JOHN LEWELLING, (TREASURER).	I. C. STEELE.	W. L. OVERHUISER.
O. HUBBELL.	D. CAMPBELL.	

SHIPPING AND COMMISSION HOUSE,  
Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

**PACIFIC OIL AND LEAD WORKS,**  
SAN FRANCISCO,  
Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

**BEWARE OF ADULTERATED LINSEED OIL.**

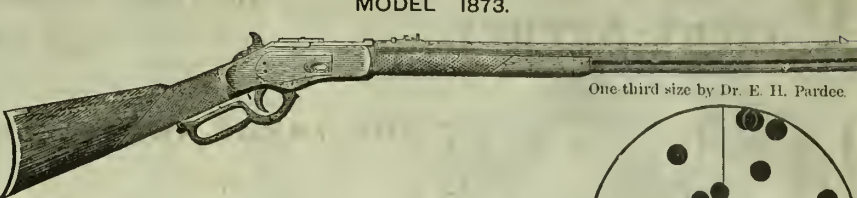
Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

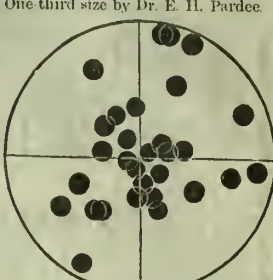
For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.  
KITTLE & CO., Agents.

**Winchester Repeating Rifle.**  
MODEL 1873.



One third size by Dr. E. H. Pardee.



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9/100 inches.

The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**  
SOLE AGENT FOR THE PACIFIC COAST.

**CALIFORNIA YEAST CAKES,**  
MANUFACTURED BY  
F. M. LEEF & CO., - - - SACRAMENTO, CAL.

Ask Your Grocer for Them.



Use None Other.

TRADE-MARK.

B. B. SCOTT, General Agent, - - - Sacramento, Cal.

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco,	A. P. Whitney, Petaluma,	Adams, McNeil & Co., Sacramento.
Taber, Harker & Co., San Francisco,	Luther & Schroeder, San Jose,	T. M. Lindley & Co., Sacramento.
Newton Bros. & Co., San Francisco,	Chas. Jones, Oakland,	Booth & Co., Sacramento.
J. A. Folger & Co., San Francisco,	J. H. Seymour, Los Angeles,	H. S. Sargent, Stockton.

*In consequence of spurious imitations of*  
**LEA AND PERRINS' SAUCE,**  
*which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,*

*Lea & Perrins*

*which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.*


Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

**TYPE FOR SALE.**

A LARGE QUANTITY OF BREVIER AND NONPAREIL TYPE, FORMERLY USED ON THIS PAPER FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,  
224 Sansome Street, San Francisco.




TRADE MARK.

**CALVERT'S CARBOLIC SHEEP WASH,**  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

NOTICE—Wm. J. Lawrie is no longer agent for us in this State.  
Jan. 31st, 1877.



FOR FINE HATS GO TO  
C. HERRMANN  
NO 402  
KEARNY ST. NEAR PINE  
SAN FRANCISCO, CAL.  
T. J. PETTIT S.F.

**DAVIS & SUTTON,**  
75 Warren St., New York,  
Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.









Volume XIII.]

SAN FRANCISCO, SATURDAY, FEBRUARY 17, 1877.

[Number 7.]

### California Sunflower.

The accompanying sketch exhibits the true characteristic features of the California sunflower (*Helianthus Californicus*) as found in this vicinity. The outline drawing was made by Dr. A. Kellogg, of San Francisco, directly from a growing specimen brought from the other side of the bay of San Francisco by Mr. Dunn of Oakland.

This sunflower has mostly a simple stem—although in very rich open situations we believe it is sometimes seen with spreading branches. It usually grows to about four to eight feet in height, with a loose open top of golden flowers, radiant as little suns, blooming late in September and October. Dr. Kellogg writes of this plant as follows:

To us, few flowers have such an honest, candid, open-hearted, good old home-like countenance as the sunflower. We never see one without wishing to press it to our bosom—and we always stop to admire it and do homage to its virtues.

We have observed this class of plants for more than 20 years past, with a view to ascertain whether they were justly entitled to their reputation for preventing the effects of malaria, and rendering the atmosphere around them more salubrious. During many years' residence in Georgia and Alabama we had better opportunities for this kind of observation than since our residence in the comparatively healthy climate of California. But we were then, as we are now, persuaded there is much truth in the observation.

Doubtless if we studied the higher and more useful laws that govern the great ocean of atmospheric fluid in which we live, with as much care and skill as the keeper of an aquarium does his reservoirs, we should find it equally as easy to understand and avoid any ill-balanced culture, and thus be able to supply the needed natural compensating vegetable life exactly suited to purify the air by absorbing injurious exhalations and effete accumulations consequent upon stagnation and excess; and also counteracting their baleful influences by balsamic and ethereal exhalations in such abundance as to supply the brain and nervous system with its appropriate pabulum and consequent vital force—sufficient at least to counteract the temporary tendency and preserve a general state of healthy equilibrium.

The time is drawing nigh, we would fain hope, when we shall need the physician less, because we are more willing to search out and submit to the divine laws of Nature. Those who may be skeptical on these points, and too ready to dismiss the subject without investigating for themselves, would do well to consider, that with regard to this plant, it is one of the most remarkably absorbing and exhaling properties. The perspiration of the sunflower is 17 times greater than the human body, and its exhalations are peculiarly balsamic and healing in mucous irritations.

This plant appears to be an intermediate form between *H. Californicus* (D. C.) and *H. Californicus* (Nutt.) which are distinct species in T. & Gray's Flora. In Nuttall's description, his plant has leaves "narrowly lance-linear," or "four to six inches long" and only "two to five lines wide," *H. Nuttallii* of T. & G.

In De Candolle's description the leaves are "entire"—ours, it will be observed, are slightly serrate—the cup scales of the flower (*involucre*) are spoken of as "rigid" and a "little longer than the disk," and "not ciliate," in which respect it also differs. Notwithstanding these discrepancies, we believe this is the plant alluded to—at least with facilities here offered the scientific reader will be better enabled to form an opinion.

Technical description: Stem smooth, leaves broadly-lanceolate, entire or crenate-serrate, strongly triplinnerved toward the base, feather veined, tapering into a short winged petiole, ciliate, apex elongated, acuminate, slightly scabrous. Branch leaves mostly opposite. Involucral scales ovate, ciliate, three-nerved at the base, apex attenuate, long-linear, squarrose two or three times the length of disk, unequal. Rays 14—pappus of two broadly subulate awns, achenia smooth and shining, anthers of disk florets dark brown or black, florets nerved, five toothed, scabrous externally. Chaff of receptacle acute, entire, short, villous above.

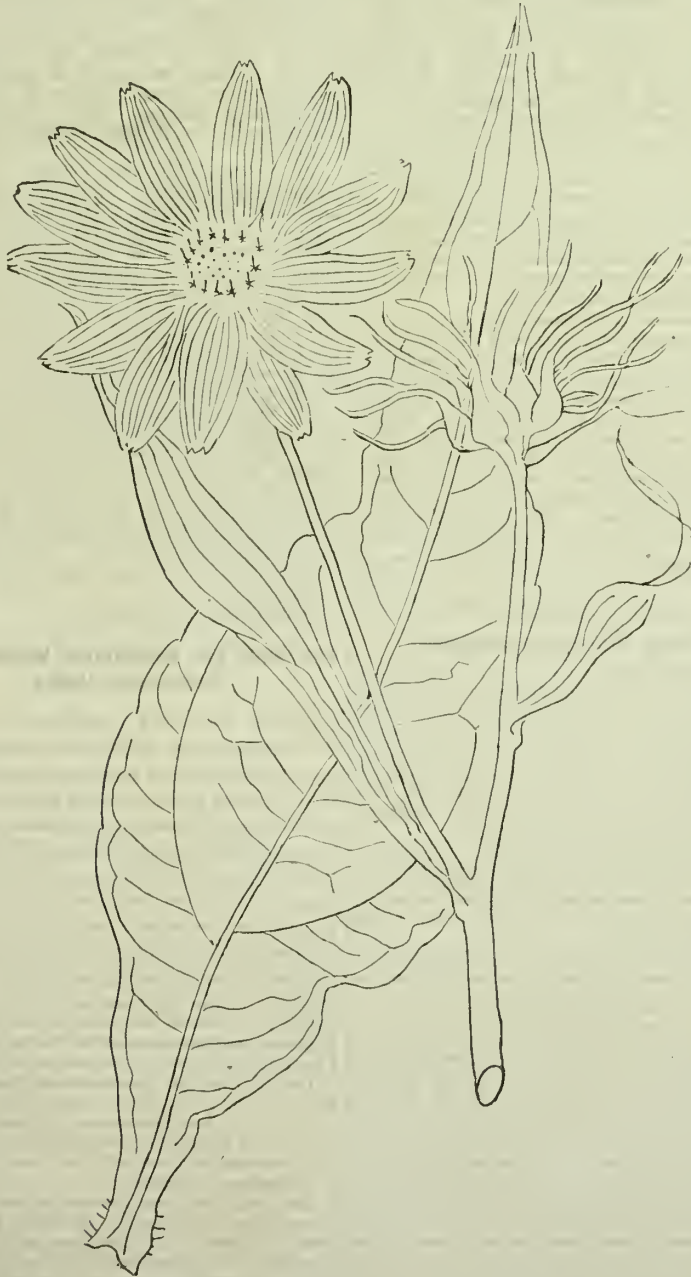
### "Potato Bugs" in Arizona.

EDITORS PRESS:—Could you inform me through the medium of your valuable paper the best way to exterminate the potato bug? Of late years we, of this valley, have been unable to raise any potatoes in consequence of them. Paris green is spoken of by some, but as to the best method of applying it, all are in the dark. Some also think it dangerous. You would be conferring a lasting benefit on this community, if you could answer this before planting time.—D. W. MOONEY, Williamson's valley, Yavapai county, Arizona.

We are not aware which of a dozen insect foes of the potato is destroying our querist's crops. The Colorado beetle has not yet been reported from Arizona. Prof. Riley notes the

in the soil, so that at the end of the season it does not exist any longer in poisonous form.

There are two ways of applying the poison which may be recommended. The first is to mix the Paris green with wheat flour, in the proportion of one part poison to 20 parts of flour. Put the mixture in a small sack of coarse cotton cloth, which will hold about a quart. Tie this sack to the end of a rod four feet long, and dust the mixture upon the vines when the dew is on them. The second way is to put a tablespoonful of the poison in a bucketful of water. Apply the liquid with a sprinkling pot or dash it against the vines by dipping



THE CALIFORNIA SUNFLOWER.

fact that races of insects almost identical with the Colorado beetle are found in Arizona and Mexico, but they have not shown any desire to feed upon the potato. It may be that this insect has found out what is good, or that some of the other insects, which are known to exist in this western country, may be doing the damage.

The use of Paris green as an insecticide has been the subject of much dispute and careful investigation. The result of it all is that there is no need to fear it if used with care and in the proportions which are necessary to destroy the insect. It has been shown, first, by careful chemical analysis, that the plant does not take up a particle of the poison, and therefore the tubers cannot become impregnated with it; second, that the poison which falls upon the ground becomes transformed by the substances

an old broom in the liquid. Either of these ways will prove effectual if diligently applied. If the fields are large, it might be well to use an arrangement by which a large can, containing eight or ten gallons of the liquid, may be strapped upon the shoulders and permitted to run out through pipes and sprinkling nozzles, which are held in each hand as the man walks between two rows of plants. Great care must be had in handling the poison. It must be stirred as little as possible, so that it will not reach the lungs through the air, and it should not be permitted to touch the skin. If these precautions are observed there need be no fear in its use.

THE Alexandra palace has been put up for sale. The highest bid was \$445,000, but the building remains unsold.

### Oil of Peppermint.

EDITORS PRESS:—Can you give me some information, also, or indicate where I can find it, regarding the production of the oil of peppermint as an article of trade, the culture of the plant, soil, management, time of securing the oil, and mode of extraction?—T. Smith, Oakland, Cal.

There have been experiments made with the growth of the peppermint plant in this State, but so far as we know they have not resulted in such a way as to put the production upon a permanent basis. One venture of which we were informed was undertaken near San Jose, and if we mistake not, a distillery was erected and some of the oil extracted. Just before a crop was grown, to put the matter to a complete test, there was a wash-out of the lowland on which the plants were set, and the enterprise was, for a time at least, abandoned. If experiments have been since resumed, we should be pleased to be informed of it.

We lived for a number of years in Lyons, Wayne Co., New York, which is the headquarters of peppermint production in this country. The plant is propagated by sets of the roots. The ground is prepared by thorough culture. The surface is then marked off in parallel lines with a "marker" drawn by a horse. This marker consists of a cross piece filled with handles and spurs to gauge the rows, and is the counterpart of the "corn marker." The rows are placed far enough apart to admit the passage of a one-horse cultivator. The roots are drawn upon the field by the wagon load and are planted by hoc power. During the growing season the mint is kept clean of weeds by a cultivator with three sharp flat teeth, which run along just beneath the surface of the ground and cut off the weeds. The plant grows rank and thick, and according to the richness of the soil and the favor of the season, is from one to three feet in height. It is cut when in bloom and drawn directly to the "still."

The mint was grown first on lowlands near the river which were subject to spring overflow. A few years ago the price of the oil was greatly increased for a year or two, and then the crop was put in on higher lands, and better results were attained than were expected. The heaviest crops are, however, attained on low, moist and very rich lands.

The distillery is a simple affair, consisting of a steam boiler connected with pipes and valves to a set of tubs, generally two in number. These are similar to the windmill tanks used in this country, and are fitted with a steam-tight cover. When the tub is filled with mint the cover is fastened down and steam is admitted near the bottom. This steam, forcing its way through the mint, carries off the oil with it through another pipe near the top, from which it is taken to a large tin worm, which is placed in a tank of cool water. The steam here condenses, and the oil runs out on the top of the water and is collected in a tin receiver. The tubs are fitted with a duplex connecting valve, so that one tub may be filled while the steam is passing through the other.

We have thought very favorably of the production of the oil in this country. It is true that the local consumption of the oil at present would not exceed the value of \$1,000 per year; but the oil is considerably used by the Chinese, and perhaps might be made an article of export hence to China. There might also be such a thing as producing it so cheaply in this country that it could be sold in the East. These things are, however, altogether untried and cannot be spoken of with any certainty.

There are some points in the growth of the plant in this State which must be made the subject of experiment. There will be no trouble in getting heavy growths of the plant and we think in favorable localities two crops can be cut in the year to one at the East. But to do this it must be irrigated during the dry season. The point then arises for test as to whether the plant would secrete the essential oil in as great amount and of as great strength as under Eastern conditions. We are not aware that this has been demonstrated as yet. We are told by some of our wholesale druggists who have tried the oil which has been produced in an experimental way in this State, that it does not show this desirable strength, but we do not consider the matter thoroughly tried. The true test will be an accurate analysis of the oil as compared with the article which is now used by the trade.





## CORRESPONDENCE.

## Scott Valley, Siskiyou County.

EDITORS PRESS:—Some weeks since I promised you some "facts" concerning Scott valley, which I intended to obtain of the Assessor in the shape of the statistics of the county. So far I have not been enabled to obtain the "facts" of him, and so must beg further time. As I am in receipt of a good many letters making inquiries about this valley from parties at a distance, who profess to be generally readers of RURAL PRESS, I came to the conclusion, if you allow me room in the valuable columns of the PRESS, to answer some questions through it.

First, a gentleman writes to me from Princeton, Colusa county, saying that I had written the PRESS: "There was still room for rich and poor," and asking, "if there is Government land still to be taken up that a man could make a home on? What are wages? How do sheep do there? What lands are worth? What sheep, hogs and cattle are worth? What is your market, etc.? What can a poor man do there? I am a poor man and would like to get a good home cheap." Well, I'll begin at the first. I asserted there was room for rich and poor, and I repeat it, there is! There is also Government land yet to be taken up that a poor man could make a home on. There is land surveyed and unsurveyed, but of course the best lands are taken up. Scott valley is like all other valleys in the State, a poor man may come here, take up a quarter section, go to work and not only make a fair living for himself and family, but at the same time improve his land and make a good, comfortable home that will increase in value, get stock around him, and in a few years be in easy circumstances. Another man, equally situated every way, good health, etc., comes into the valley, sees no chance for a home, remains long enough to obtain money by "working out" to leave on, pulls up stakes and goes somewhere else. Or if he takes up land he comes to the conclusion it is too far from markets—"out of the world," or something else and deserts his claim, possibly to return in 10 or 20 years to find a pleasant and valuable piece of property. The best of California is now settled; that which can now be taken up is of course inferior in quality, but there are thousands of acres yet to be taken upon which we can make a living and a home. In this valley there is no land but that is claimed, but outside the valley, on the little creeks back in the mountains, are still to be found claims. Wages in the valley range from \$25 to \$50; the average about \$30. Mechanics, of course, obtain more. We are well supplied with hands, I think.

Of sheep I can say but little. Those I have seen look very well and stood this winter well; so have all kinds of stock. Beef is now being killed out of the woods, but this is an exception. The winter has been one of, if not the, lightest winters for the past 10 or 15 years; so I am informed by old settlers. If a man is prepared, sheep raising is one of the most profitable out. I cannot advise a poor man to come here and engage in sheep raising. I will make inquiry upon this subject.

As to the prices of lands, it is hard to say. One of my neighbors recently sold 240 acres (I think), about 30 head of cattle, several head of horses, hogs, chickens, wagons, farming implements, etc., for \$7,000. It was deeded land and had an abundance of good water, wood, etc. If a man has \$5,000 to \$15,000 to invest in a home in this valley, they can be accommodated to the letter I think. There are cheaper lands and merely possessory claims with but little improvements (generally consisting of log house and a few acres fenced and cultivated), and are valued at from a few dollars to several hundred, and some of them can be made good homes. Hogs are worth on foot, fat, six to seven cents; dressed, nine to ten cents. Beef cattle three to six cents on foot, generally about four cents, and dressed five to 15 cents per pound. Milch cows generally about \$25.

The principal markets are at home; the Salmon River, Sawyer's Bar, Black Bear, Klamath and other mines are only 20 to 40 miles distant. I am informed there are 1,000 to 1,500 men at work, and about all of our own little creeks and streams are gold-bearing. Quartz is being extensively prospected for with good results.

A friend called this evening who is mining only about a mile distant, who said he would not take \$20,000 for his claim. He has been to an expense of about \$4,000 this season, having pipe, etc., preparatory to commencing work with hydraulic pipe. Several quartz claims that have been prospected for years are not making a good showing. Of course these are only prospects, but straws sometimes show the way the wind blows.

Now for prices: The farmer obtains for his beans 6 cents per pound; cabbage, 2½ to 3 cents; potatoes, this season, only 1 cent, generally 1½ cents; onions, 2 to 2½ cents; oats, 1½ cents; hay, \$7 to \$15 per ton, mostly timothy. I have not seen a pound of barley for sale, though I've tried to purchase. The same is true of bacon. I gave for salt pork 12½ cents per pound. Now for that you have to buy: For 20 pounds coffee,

I paid 30 cents per pound; 142 pounds brown sugar, 15 cents, crushed, 17 cents; 5 gallons Downer's kerosene oil, \$6.25; tea, 70 cents to \$1 per pound; tobacco, by the box, 80 cents, \$1.25 per pound; flour, \$2.50 (lately risen to \$3); rice, 10 to 20 cents; syrup, \$1.50 per gallon or \$6.50 per keg of 5 gallons; calicoes, 10 to 12½ cents; clothing, blankets, etc., about the same as the lower valleys. Horse-shoeing, \$3 per horse. There are some articles I can ship from San Francisco cheaper than buy here, others not enough to justify. Freight from San Francisco is about three to four cents per pound, and in the winter higher. Why there are not more hogs raised and more bacon made here is something I do not understand. One of the drawbacks to this part of the county is the scarcity of water, and the old settlers say and believe that crops cannot be made without irrigation. Well, I differ with them, though it seems like their judgment should be the best, as I've been in this county but about five months. Concerning other matters, I will inform myself the best I can and write accordingly.

R. D. NUNNALLY.

French Creek, Scott Valley, Feb. 7th.

## What the Alden Company is Doing.

EDITORS PRESS:—Knowing that your columns are open for news concerning the industries of this coast, I send you a few notes on the progress of our company. Quite a number of new Alden factories will be started in 1877, and several old ones enlarged. The one at Santa Rosa, of three machines, is nearly completed, and the Auburn and Riverside factories have been commenced. The Riverside factory will be built with special reference to raisin curing, that locality producing several hundred tons of excellent raisin grapes as well as great quantities of apricots, peaches, etc. It will have two evaporators of double the capacity of those heretofore built, and with a finishing chamber, will cure about five tons of grapes every 24 hours, of better quality than heretofore produced, as a lower degree of heat will be used and a longer time given to the grapes in the finishing chamber without any additional expense for labor or fuel. We have secured several patents for using solar heat in connection with our apparatus, which will save about one half the fuel now required. The solar heat apparatus is not expensive and can be applied to the Alden factories already built.

Our evaporators heretofore built have been too small for raisin curing—the work was too slow; but the factory at Riverside, of two machines, will turn out more raisins, and we hope to produce a better raisin, and prove that superior raisins can be made by artificial heat, and at less cost than by the old methods, with their expensive cement floors. By the latter methods the yield is only one pound of raisins from five pounds of grapes, while by the Alden process and perhaps some other artificial heating processes the yield is one pound from three pounds of grapes. With grapes at one cent per pound, the difference is \$40 per ton of cured raisins in favor of the Alden process, which is quite a handsome margin of profit.

## Fruit Dried by Sun or Artificial Heat.

The question which our fruit growers must decide is concerning the superiority of fruit dried by the sun or by artificial heat. For the results of the Alden process over the sun drying we have very direct evidence, points of which have been laid before the readers of the PRESS at different times. The latest evidence in this connection is a letter written by Prof. Hilgard of the State University, as follows:

George W. Deitzler, Esq., Dear Sir: I have been actively engaged investigating the most essential properties of the samples of Alden dried articles submitted to me. I am surprised at the sweetness of the fruit, which will certainly save housekeepers all the sugar they have to put into the ordinary sun-dried.

I regret very much that untoward circumstances have thus far prevented me from seeing an Alden factory in active operation, so as to enable me to study in detail the progress of the drying process. There are several possible modes of accounting for the difference in regard to sweetness, which is so remarkably in favor of the Alden product as compared with ordinary sun or still-dried fruit. It might, *a priori*, be ascribed either to a less amount of acid to cover the sweet taste, or to an absolute increase of sugar through the agency of the drying process; or finally to the concurrent effect of both causes. The latter I should consider the more probable view of the case, in accordance with what we know of the chemical processes occurring in ripening of fruits; and it is sustained by the analysis of Dr. Krackowizer, in so far as a single experiment can determine a question of this sort. He found in the Alden-dried apple not only more sugar but also less acid than in the fresh or steam-dried article. The sweetness of sun-dried fruit suffers in two ways: First, by the direct formation of acid during its long exposure to the sun and air, and that, partly, at the expense of the sugar; second, by fermentation and consequent loss of sugar transformed into alcohol. It also assumes a dark tint, loses flavor and is almost inevitably contaminated largely with dust, and especially with the eggs of insects. In kiln-drying, on the other hand, it is almost impossible to avoid a loss of sweetness through a partial "caramelization" of the sugar, accompanied by a serious injury to the flavor.

All these difficulties seem to be most effectually overcome in the principle of the Alden process, in which, if conducted with ordinary care, all these causes of injury are reduced to a minimum. In view of the important bearing of the subject of fruit drying on one of the most prominent industries of the State, its application to the several fruits so as to secure the best possible result with each, is deserving of close and systematic study. E. W. HILGARD, University of California, Nov. 13th, 1876.

The above facts concerning the progress which the Alden Company is making in the general effort to put our grand fruit crop into imperishable and marketable form will, I trust, be found of interest to your readers.

GEORGE W. DEITZLER.

San Francisco, Feb. 10th, 1877.

## San Jose Nurseries.

EDITORS PRESS:—On yesterday I treated myself to a flying visit to some of our splendid San Jose nurseries. This at any season of the year is a rich treat; but just now, after our late fine rains, with the face of all nature bright with sunny smiles, the green-robed, quiet, fruitful earth and the calm, blue arching sky, with smooth, dry drives and roads, and singing birds in every hedge and tree, the drive was a lovely one.

At Mr. John Rock's place I found all activity in every department. Some men were busily engaged in taking up and removing trees and shrubs from the nursery row to the packing yard, where a busy gang were packing, boxing and billing them for customers far and near. Mr. Rock is fully up to the times in his business in introducing new and desirable trees and plants from all parts of the world. He has a very large and varied stock of fruit and ornamental trees best adapted to this climate. He is making quite a specialty of a very desirable palm, which I propose at some future time to write up for the RURAL PRESS; I have not the time just now.

At Mr. B. S. Fox's beautiful place I always see such a host of bewildering beauties that I feel at a loss just what to say. Besides a large and general assortment of fruit trees, etc., suitable for this coast, Mr. Fox has several large plant-houses just teeming with the rare and beautiful trees, plants and flowers of many if not all lands; and all arranged and kept in the most tasty manner. Everybody was busy here, and Mr. Fox reports his orders for trees numerous and satisfactory.

The Hannay Brothers' nurseries always look business-like. They keep some choice novelties and ornamentals, shade trees, etc., but their aim is to keep fully up to any and everybody else in choice, well-grown and healthy fruit trees of all kinds; and yearly to keep pace, increasing their acreage of growing trees, with their growing business. They can yet fill orders both large and small with healthy, well-grown trees.

Mr. Newhall's Los Gatos nursery, as a popular institute, is always before the people; it is now before the readers of the PRESS in another column. Mr. N., as a practical, straight-forward business man, keeps an eye close to business, aiming more at thoroughness in every branch of his business than extensive dealing. Every year Mr. N. adds a purchase of the famous willow land to his nursery and orchards. I noticed, yesterday, his purchase for this year looking splendidly; thoroughly prepared for planting, and the grading smooth as a floor.

I noticed in every direction, on the farms, in the orchards, the gardens and the vineyards, busy hands were at work plowing and sowing, pruning and trimming, planting and dressing. The soil never was in a condition to pulverize and cultivate more nicely than at present, and never have I seen vegetation come forward so rapidly as since the rains. A few more seasonable showers will secure fine crops for Santa Clara valley.

G. W. M.

Santa Clara, Feb. 10th, 1877.

## The Rule for Descriptive Writers—San Bernardino Valley.

EDITORS PRESS:—A paper that is free from the contaminating influence of politics, is one that should be highly appreciated by the public. While passing down the coast aboard the beautiful steamer *Orizaba*, my attention was called to a copy of the quarterly series of the PACIFIC RURAL PRESS, which I perused with great pleasure. I was impressed with the claims such a paper has, or should have, upon the public. A paper that can sail clear, and rise above the political foibles of the day and devote its entire effort in giving information of the great and varied resources of our coast, should meet with unprecedented success and universal patronage. I have no doubt this is the case with the PRESS.

Though I am not known among your readers, and as there is but little written or known of the valley of San Bernardino, I thought a brief article with partial reference to the valley might be of interest to those who have the pleasure of perusing your columns.

The valley of San Bernardino has not, like some other locations in southern California, overdone itself with newspaper puffs and exaggerations of its superiority of climate, soil, etc. Such exaggerations are well calculated to do injustice to the public as well as injury to the place of which they are written.

It is difficult to write or speak of a place without being more or less governed by prejudice, either in favor of or against the place referred to. Therefore, as our people are a reading people, it is of the greatest importance that trustworthy information should only be given through the press. Such I believe is the object and aim of the RURAL PRESS, and it has gained the confidence of the public. How frequent is the expression from people visiting those localities to which they have been attracted by overdrawn descriptions of writers; as, "This is no such place as such and such writers have represented it to be." All the excellences a country or location possesses can only be determined for an individual but by personal observation. No one locality can possibly suit

the tastes of all, for all have not the taste; what is admirable and beautiful to one has no admiration or beauty for another. A climate that is adapted to one constitution may be injurious to another. In writing of

## San Bernardino.

I believe I speak within bounds when I say it is a place of gradual, but sure and slow growth, that its natural resources are unsurpassed by any valley in Southern California. The valley abounds in many very rich and productive farms; its oranges and other fruits are unsurpassed by any other of the southern sections of California. It possesses much land that is susceptible of producing two crops a year without irrigation—while the valley has a superabundance of water for irrigation, which is eventually to be utilized and brought into requisition. Parties owning large farms are disposed to part with small tracts, from five to 10 or more acres; giving all an opportunity who may desire to purchase small farms for homes in the immediate vicinity of good established schools.

Though we have many places in our valley called excellent resorts, yet, what we so much need and solicit here is men of enterprise, tillers of the soil, men deserving homes. To such we feel justified in saying, come and see for yourselves. I will give any information desired to individuals, by letter or through the PRESS, without exaggeration. I will give facts that may be relied upon. I communicate to you this brief article, believing that through the PRESS the people look for and expect to receive interesting and reliable information. Allow me to add that the first inquiry made by strangers visiting different localities in Southern California is: What are your resources? I answer, so far as regards San Bernardino, its resources are in the soil. We have a rich, productive soil, and all enterprising tillers of the land make not only a good living but money.

A. SWIFT.

San Bernardino, Cal.

[Our correspondent defines the method which should prevail in all letters descriptive of localities, and we assure him that what we desire to publish for public information is the truth as embodied in facts of plain observation. Of course the thinking mind must draw conclusions from facts, but the reader should distinguish between statements of fact and conclusions drawn from them and weigh the latter in his own best judgment.—EDS. PRESS.]

## HORTICULTURE.

## Points on Handling Fruit.

EDITORS PRESS:—In accord with a promise made some time since, relative to fruit handling, suggestions are now offered, which may be of benefit to your readers engaged in its culture.

From the isolated position of our State, as also the want of consumers, it is necessary to convert the surplus of the orchards and vineyards into forms easily handled, preserved and transported.

It is not possible, in the limits of a newspaper paragraph, to more than touch upon the main features of a subject requiring volumes to do it the justice which its merits deserve. I shall attempt nothing beyond what experience has shown to be best suited for the Eastern markets. Considered alphabetically,

## The Apple

Stands first, as it also does in popularity and general use. The varieties are beyond naming, the quality is affected materially by climate, soil, exposure and cultivation. A rigorous climate being essential for the development of its excellencies, those grown below the snow-belt in California are inferior to those of the Northern and Eastern States. Apples should be pared, cored and sliced, dried in the shade or by an evaporator and packed as soon as possible in barrels or boxes, pressed and covered closely. Exposure to the light and atmosphere darkens and toughens the fruit when dried. Discretion should be used in selecting the tarest apples for drying. When properly handled, there is always a market. Michigan and Western New York furnish superior samples, which are sold at our doors at from 10 cents to 14 cents per pound, while California cured go begging at four to eight cents. For medium and inferior grades, strong cotton sacks will answer; those that will hold, when well pressed, from 40 to 60 pounds. Prices east of Utah are seldom sufficient to warrant shipments, as long as labor and freights remain as they are.

## The Apricot

At the East, ranks among the fancy fruits, and finds ready sale at paying figures, dried or canned. California can claim a monopoly of this splendid fruit, from its exemption from sudden and extreme atmospheric changes, as also that plague of pomologists, the curculio. This is one of the few fruits improved by drying in evaporators. Packages should be neat boxes, lined with white paper; the halves put in carefully and pressed, not pitched in as coal into a



bunker. Mark the name of packer and variety of the fruit with stencil on each package.

#### Cherries, Currants and Berries

Find a home market or are taken by the city canners, who make fine profits in handling them. The false value put upon labor prevents competition with the Eastern and Southern States, from whence come our supplies of these fruits when dried.

#### Pears

Should be treated the same as apples. As they are rated among the fancy fruits of the East, commanding a wide range of prices, more care is necessary in selecting. None but the best of the choicest varieties should be used for canning or drying. Evaporator or sun cured are equally popular, provided they show bright and clear and are equally rich and tender. Neat packages are no detriment. Packages holding from 40 to 50 pounds, and another class of smaller, say of 10 to 20 pounds, which can be made of paper, are desirable sizes.

#### Prunes and Plums

Will be treated under one head. For drying they should be selected and carefully handled, pitted and dried in the shade or by an evaporator, which tends to improve their flavor. Different varieties should not be mixed in packing. For the best samples use light boxes holding 50 or 60 pounds. For common and inferior, heavy cotton sacks or boxes will do. Turkey supplies us with the best of the cheap prunes, which come in hogheads or casks, containing from 300 to 400 pounds. The prunes we see in the confectioner's windows are a French product. The greatest care is taken throughout their preparation. Picked when the dew is on, each prune is laid by itself upon a rack, turned by the hands again and again before they are put up in the neat boxes that come to us, and are purchased for holiday presents or tokens of esteem. Whether California will ever find pay in such outlays of time and trouble is problematical. It is not expected that we will compete with Monsieur le Francaise in fancy articles. There is room enough for exercise in meeting the wants of the great unwashed of our country, who can and are willing to pay liberally for all we will have to spare for generations to come.

#### Peaches

Should be halved, dried thoroughly by solar heat, put up in good, strong cotton sacks and covered by one of burlaps. When packed in boxes they are liable to ferment and spoil. Wormy-dried fruit can be cured, if not too far gone, by spreading it upon a riddle over a heater, and agitating the riddle or sieve until all the surfaces or portions of the fruit are exposed to the heat. Delaware, Maryland and Virginia are supplying the Eastern markets with very fine samples of this fruit. There is no limit to the demand, at prices ranging from 12 cents to 15 cents per pound. Nothing pays better than an outlay of care and labor in preparing this or any fruit for market.

#### The Grape

Is par excellence the fruit of California. Growing, as the poet says of the ivy, "where no life is seen," a rare old plant is, not the ivy, but the grape so green. It appears to flourish throughout the length and breadth of the State. With this in our favor, we are nevertheless drawing upon Asia Minor and Europe for our Zante currants, for our raisins and our wines. Spain, benighted and befogged as it is in superstition, manages to furnish this year a surplus for the world's consumption of over 3,000,000 boxes of raisins. She also exports from 50,000,000 to 60,000,000 of pounds of what are termed "Valencias," a raisin that is stemmed and shipped in barrels and boxes. Those known to the trade as "Dehesas" are first in quality, worth, at last quotations, \$2.80 per box of 25 pounds. Then come the blue brand "Layers," "Blackbasket" and the "London Layers," worth respectively \$1.80 and \$1.40 per basket and box. Turkey furnishes the "Sultanas," which are sun-cured and slightly sprinkled with oil when packed. The "Eline" raisins are also from Turkey. They are carefully selected and put up for ship stores and long voyages. The "Chune" is also from Turkey. It is a small, dark and inferior raisin, and largely shipped to German ports.

There need be no apprehensions on the part of our viniculturists of overstocking the markets of our country, much less those of the world, so long as they confine themselves within the bounds of moderation. Our little contribution of 30,000 boxes this year cuts a sorry figure in boasting of our abilities and of having overstocked the market. Compared with the importations of the United States for the year 1876, amounting to 1,291,500 boxes, the difference, 1,261,500 boxes, would incline one to believe there is yet an outlet, and that the dubious-minded may find cheer in their fruitful vines, which have been regarded as a delusion and a snare, simply because the proper attention has not been given to turning to account nature's generous bestowals. The assertion that we have reached the surfeiting point in grape growing would sound strangely to thousands of our countrymen, whose palates have never been refreshed with the taste of a California grape or raisin.

G. C. PEARSON.

South Vallejo, Feb., 1877.

A WORD FROM FLORIDA.—The *Semi-Tropical*, of Jacksonville, Florida, says: "The PACIFIC RURAL PRESS is ably conducted and a valuable representative of the industrial interests of California."

## THE STABLE.

### On Draft.

EDITORS PRESS:—Any person, after a judicious perusal of the following article, can by standing on any of our public thoroughfares for a few minutes convince himself of its truth. With the harness commonly in use it is by mere accident that the draft is in its proper place. If the draft is too high the collar rises and presses against the wind-pipe below and against the prominent dorsal vertebrae in front of the shoulder, the neck being raised curves the vertebrae of the back, making it hollow, which detracts very much from the power, because in curving the back and raising the whole front in a degree prevents him from using his front feet as he would do, but on the contrary, forces undue bearing on the hind. High draft is the parent of the numerous defects in the hind feet and legs. When the draft is too low we have an opposite result, the top of the collar leans forward and presses against the crest of the neck, forcing the head down and raising the lumbar vertebrae, or back over the loins, thus throwing all the burden on the front feet, the most prolific source of producing serious disease in these members. Place the draft so that the whole vertebrae are kept free from unnatural curves, strains or twists, and you enable the horse to use his whole strength without injury to himself, in speed or otherwise. Were the draft properly adjusted, we should not see so many horses hobbling and swaying along in pain, unable to bear up under the task, which should be easy, and a constant object of pity to those intelligent enough to detect the cause.

The rim of the collar should follow as close as possible the form of the neck, and should not be pliable, but firm, so as to retain its proper shape under the strain of heavy draft. With a loose fitting collar, with the draft attached to the outside of the hames, over the outside point of the shoulder, concentrating the labor upon that point, is something like a man attempting to lift a great weight with a slender pole on the point of his shoulder. Cab and coach horses suffer the most, as they draw the heaviest burdens at the most rapid rates and their hames are the least adapted to steadiness in their work, and are consequently the prolific cause of interfering, etc.

Those who understand the formation of a horse will readily see the point aimed at in these remarks, which is first, to economize his strength, secondly, to save his feet and legs as much as possible from all the evils domestication makes him heir to, and thirdly, to prevent his structure from being malformed, as we so often see him, through being improperly harnessed. The structure of the horse is just as susceptible of change as is the human form. The shoemaker turns in a man's toes and knees, while the tailor turns his out, and so on among the crafts, from the fashionable to the rustic. As all the parts bear a certain proportion and degree of harmony to each other, the back bone and other cervicals should act in perfect unison and case, the safer and more powerful are the horse's actions; but with a wiggling, twisting, swaying motion, the consequence of irregular attachment, he is sure to strike his fetlock or knees at some time or other on rough surfaces, such as cobble stones, etc. In order to prevent this the draft should be on the inside of the hames, which would give increased power and steadiness to the horse.

I saw a valuable gray team, four in hand, driven, I was informed, by an ex-governor, on the Cliff road some time ago, and the manner those horses were harnessed and attached to the vehicle reminded me of Dickens's description, in *Bleak House*, of Chesney Wold stables. He says: "There may be some notions of fancy among the lower animals at Chesney Wold, they may contemplate some mental pictures of fine weather, and may be better artists than the grooms, while these human helpers know little beyond the pitchfork and birch broom. The gray impatiently rattles his halter, wistfully looking to the door when opened, and in reply to the 'Whoa, gray, steady, no one wants you to-day,' knows it quite as well as his attendant if raining."

Could those gray horses which I saw on the Cliff road speak, they could teach the principles of adjusting their harness so that they would have no occasion to be constantly pulling at cross purposes, the leaders hauling the wheel horses, while the latter are holding back by the neck and pulling apart like ungainly oxen. But should a gentlemanly owner draw comparison between Dickens, the novelist, and the large-experienced grooms, the knowing ones would say it is an impossibility for a literary man to detect and correct any error in the management of these notable experts. "The companionable half dozen pass the long hours when the door is shut in livelier communication than is held in the servant's hall or at the 'Dedlock Arms.'"

Was the patriarch Job's description of the iron horse in any way superior to that of Dickens's comparison between the meager brains of eye servants to that of intelligent horses? Would not the society for the prevention of cruelty to animals employ their time to more advantage by seeking the knowledge of adjusting the many appliances erroneously used on the domestic horse than by prosecuting the few cases of extreme cruelty which they do? The driver, whether proprietor or employee, who can take pleasure in riding behind horses un-

comfortably attached, or who cannot detect by the ear when a shoe becomes loose, much less being torn off by extreme violence, his judgment when compared to an intelligent horse must be puny indeed, and Shakespeare's opinion of the man who has no taste for music would apply to him.

## SHEEP AND WOOL.

### The Wool Industry in California.

EDITORS PRESS:—It would be a pleasure, and I would very willingly give a portion of my leisure hours for the PRESS, upon the general industries of California, and especially that relating to sheep and wool culture, in a series of articles. But I look upon this as an unfavorable time to choose this subject as my theme, because of the general depression of this leading interest throughout the whole coast country. It has been said "there is a time for everything," and the best time to take up a subject for discussion is when you can call out the minds and interests of the people to investigate and hear what you have to offer.

It is well understood that there is a general depression everywhere in the sheep industries, from various causes. Since the commencement upon this coast to grow wool for the market, there have been a few years when it paid the shepherd for his toil. But as many years have passed when the herdsman has barely brought the year round in a manner to balance accounts, while using the strictest economy in every branch of his calling, and a good many have made total failures, as they have and must this present year.

#### Essentials to Success.

There is no branch of business where the capitalist is so liable to suffer many trials and inconveniences and perplexities as may be found in the sheep and wool culture over a great portion of this State, as it has been conducted from year to year. The animal itself is a delicate subject to tamper with. When in experienced hands, properly fed and cared for from day to day, the results are generally favorable. But the least neglect always tells on the wrong side of the scales, as losses are sure to be the reward. Many flock-masters when they embark in this enterprise are either unacquainted with the business, or incompetent to carry it on judiciously. A life's time of experience, and a life's time of incessant care, all other things favorable, will make the business pay. The careless herder may have new trials turning up every day or month that were least expected, and the most judicious manager often meets with losses unforeseen. These ups and downs require pluck, and often more than ordinary skill and attention, to battle with triumphantly.

Take a strong flock, and graze them in fields, or on the plains within reach of a plenty of good, nutritious food and water, with security against intrusion from neighboring bands, dogs, coyotes, etc., and each flock so situated may be easily and successfully managed. But these annual drouths, such as occur in this and in some other of the grazing districts on this coast so frequently and often accompanied with high wind and sand-storms, such as we are now experiencing, while the flocks are all day diligently hunting for a scanty meal, from most anything which they can find within their reach, just sufficient to keep soul and body together; the weather so dark and hazy that an object cannot be seen distinctly 30 rods ahead—and the pleasure and profits of the flock-master are anything but flattering, enchanting or agreeable. How often may the faithful shepherd be found trailing along in the dust made by 2,000 sheep, and so thick that he can hardly draw in a breath of air, or see the direction he is steering, even in a clear, hot, sunshiny day.

It requires the perseverance and patience of a Job to follow out the pursuit to any kind of reasonable success under the present regime.

#### Kern County.

This county covers an area of land exceeding in breadth several of the Atlantic States. Within the past few years, every nook and corner of this hill and prairie country has been hunted out in search of pasture for the numerous and increasing flocks, until the country is full and running over with sheep walks.

There is no certainty of continued favorable seasons to supply forage for these superabundant flocks, and therefore the owners, as well as the beasts, must now and then suffer in the extreme. Some parties, foreseeing the necessity of preparation, have put into cultivation large tracts of land, and are raising sufficient grain and grass to take their stock well through these serious, pinching times. At best, serious loss must come, and have occurred, in a majority of interests, among both sheep and lambs. Many breeders have ordered all of their lambs put to death at once, as soon as they drop. Of course those shepherds who are least prepared are suffering the most.

#### The Coming Clip.

Although more wool-bearing animals have entered the winter months in this State than ever before, there will be less wool clipped for market this coming shearing than last year, and the count will be materially reduced, in consequence of the long-continued drouth, and the overstocking of the grazing lands. The interest of the flock-master is being paralyzed; many have become discouraged and disgusted with the business, and will be obliged to abandon the sheep interests altogether.

In hunting for a wool market this last season an offer of 10 and 15 cents a pound by the manufacturer was anything but stimulating. Its influence acted more as a diarrhetic than a tonic everywhere. One flock of 600 old sheep and 300 lambs changed hands, in this neighborhood this last week, at the nominal sum of \$600, sold on time.

#### The Method of Assessing in Kern County.

Provided the season had been a favorable one, the county assessor listed the flocks about one-third higher than they could find a price in the market. Another new feature, all wools baled and delivered at the railroad depot were assessed before shipment for taxes. Thus strangling this important and laudable enterprise in our midst affected the general welfare of every citizen who makes a home in this newly settled country, where many are struggling along between "land and water" or "wind and weather."

In my native State a board of three assessors are chosen by ballot each year in every town, to take an inventory of all taxable property therein. Thus a State, no larger than Kern county, employs more than 600 assessors yearly, while here in this Kern county one assessor only is elected and acts for the whole county, placing the estimated value of all personal and real property at the will of the one man power. The limit in his official capacity is beyond powers granted to the late emperor of the French, or to any of his subjects in office. Moneys paid into this county treasury up to the 4th instant, amounted to the sum of \$123,000 in gold coin, not including delinquents yet to fork over, increasing the collections very considerably, and to this amount the assessor contributes not one dollar by tax. It would appear that so important a trust extended to the judgment of one person, in estimating the value of millions of dollars in neat stock, real estate, etc., that a property qualification should be affixed to make the officer eligible to hold so important a commission. We know there is a "board of equalization." But having taxed your time and patience now beyond reasonable limits, I will subscribe myself, yours very respectfully.

S. W. JEWETT.

Merino Farm, Kern County, Feb., 1877.

[The evils in the productive part of the wool industry must have some remedy in the reduction of the flocks to the grazing capacity of the lands, or in the production of cultivated crops to feed the sheep. Cannot Mr. Jewett tell us of a new regime which would be a rescue from the evils of the old? The statements concerning the action of the Kern county assessor we give as we receive them, upon Mr. Jewett's authority. He is responsible for his statements. The question is a local one upon which we have no knowledge except as above.—EDS. PRESS.]

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Poultry for Farmers.

The enterprising farmer now improves his poultry as well as his other farm stock, and for the same reason, that is, because the improved breeds pay best. But to make poultry pay they should be regularly and properly cared for, supplied constantly with plenty of fresh water, a variety of food, comfortable quarters, kept clean with a supply of lime, a good dust bath, and a good run on a grass lot. When the hens are not molting in July and August, you will be sure of a good supply of eggs all the rest of the year, if you have almost any of the improved breeds. The Asiatics are the best adapted to the farm. Either the Light or Dark Brahmas are hardy, good large size and mature early. They make great improvement in size when crossed with the common fowls, as is shown by a great many of these young half-breeds coming into market. When compared with the little scrub chickens they are so much larger and bring more money at the same age. And the farming interest to-day is greatly benefited by the introduction of improved poultry; a direct gain of thousands of dollars to the West, where the improved breeds have been most generally introduced.

Farmers who adopt the improved breeds of poultry should not attempt to get fancy prices for their chickens, as that takes experience and liberal advertising to establish a reputation. But it will pay to have only the improved breeds for eggs and market poultry, and no farmer can afford any other than a full blood rooster on the place, even if it does cost from \$5 to \$10; it will pay two-fold in a single year.—*Western Agriculturist*.

LADY DOCTORS IN EUROPE.—The London *Medical Record* says that 40 lady medical students are pursuing their studies in the schools of the faculty, and in the hospitals of Paris, of whom fourteen are English. Of the rest the majority are Russian, and the remaining number are American, German and French ladies. Several ladies have already graduated M. D. of the University of Paris, including Mrs. Garrett Anderson, Mrs. Putnam Jacobi, Madame Bres and Madame Ribard; the last three all graduated with great distinction, their theses being honorably noted by the faculty. Three lady graduates of Zurich are now practicing in England, Mrs. Hogan and Mrs. Atkinson, in London, and Mrs. Walker Dunbar in Bristol.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Sacramento Granges and General Grange Interests.

EDITORS PRESS:—Attendance on three more California Grange meetings has, in addition to those at Vallejo and Yountville, so clearly proved to me certain facts that I cannot forbear to tell your readers about them. This time the work witnessed was in Sacramento county, where Granges and Patrons abound, and where a new Grange or two will soon be organized. Your last issue gives a graphic and pleasing account of our installation services at Franklin Grange, Feb. 3d, and for its very kind words I owe fraternal thanks to its Worthy Secretary. Accepting the highly appreciated invitation to install their officers, led me unexpectedly to meet with Florin Grange, Friday the 2nd inst., and with Sacramento Grange and visiting members Saturday the 10th inst. All three of these were most satisfactory and gratifying meetings. The themes discussed related to our general Grange interests, but especially to the rich and increasing fruit interest of our State, in which parts of Sacramento county so largely share. Bro. Earl, having taken a most active and successful part in our fruit shipping enterprise, accompanied and aided me most acceptably at each of these meetings.

The facts for which I see proof in my late experience of little more than three weeks in these pleasant re-unions with the working Granges of Solano, Napa and Sacramento counties, are as follows: 1st. Those who oppose and work against our Granges openly and secretly, are gravely mistaken, as they will soon be convinced themselves, when they say the Grange cause is dying out, and our thousands of faithful members in California are losing interest in its good work. The truth is the Grange cause is stronger—has more power to-day than it had a year ago. The proofs of this are that Granges, which from carelessness of Secretaries or other causes, had allowed themselves to become delinquent and had to be so reported officially, are now paying up their dues. They are again in good standing. For the quarter ending Dec. 31st, some \$200 more dues were paid into the treasury of the California State Grange than in the corresponding quarter for 1875. We now have some 12,000 earnest members in this State. Bro. Hatch, Deputy for Nevada, reports the Granges there in good condition. Throughout the United States the Grange cause is stronger than last year, in spite of the powerful and subtle efforts of many foes, outside and inside the gates, to divide and break down the strength of this farmers' organization.

Worthy Master Jones, of the National Grange, writes me these cheering words in a letter dated Jan. 5th: "The action of the National Grange upon our co-operative plans has given a new impetus to our Order." This proves that our business plans, founded on true principles of co-operation, and managed with fidelity to those principles, must go hand in hand with our social, educational and benevolent features to give the prosperity and power merited by our great agricultural brotherhood.

The National Grange at its last session did more decided and systematic work to develop our co-operative plans of business and to give our members a safe guide in establishing them than it ever did in all its past history. Our members should make it a point, as soon as they get copies of its full Journal of Proceedings, to learn, appreciate and apply the principles there developed. If Masters of Subordinate Granges have not yet received their copies, they soon will, for Worthy Secretary Adams informed me he received them for distribution more than a week ago. Those people, including some newspaper editors, who think the Grange is a sinking ship, and like rats would desert it, will find themselves sadly mistaken. Fellow-Patrons, will we join these rats, or shall we not rather stay in the good old ship and help to steer and weather the storm?

2. Reunion and converse with our stanch members in California have proved to me that our active enemies, who are known to have formed a new, or at least to have strengthened the old combination against our farmers' efforts for freedom and independence, will have harder work and less success in trying to break down our Grange enterprises this spring, and this whole year, and next year, than they seem to expect. Yes, fellow-Patrons, look out! be vigilant! gird on afresh your peaceful but invulnerable armor—harmony, numbers and united action! Look well to your peaceful weapons!

Keep them in good condition and under your own control! What are they? Justice, truth, information, vigilance, your labor of hand and body and brain, your wealth of products, which the mouths and bodies of the world must have! Yes, we are well-informed, farmers in the Grange and friends of the Grange, that our foes who have fought us, either directly or "on the sly," from the beginning of our work in this State, are quietly chuckling and predicting that they will crush the Grange work in California this spring, or this year at farthest! Will you rest idle in fauicid security, fellow-Patrons, because you think we are strong, and permit these active combinations to break down what has been so well done? Assuredly not. I find no evidence of it in our ranks, so far as I have seen. Exactly where the powerful, though quiet attack is to be made, we do not yet know. Where is it to be? Is it to be among our members at home and in our Subordinate Granges—

#### The Mainstay

Of this great work? Are our enemies seeking to poison their minds by false statements, cool their zeal, make them give up this contest for their rights, give up their charters, dissolve their Granges, and thus destroy their power for co-operative action? God forbid! This cannot be! California farmers know too well their wants and their rights, and have too much sense and "grit" to let this happen. Well, then, is the attack to come through the sacks we need? or ocean freights? or will farmers so unfortunate as to be in debt to their merchants be forced to sell their crops early? or what is it that threatens? Will an onslaught of some kind be made on our business enterprises? Will the interests of our splendid Fire Insurance Company be attacked? Oh! no, that is so strong, and deservedly enjoys so much the confidence of members and outsiders that it is in no danger. Will it be against the Grangers' Bank? Hardly, for although it has not, in all respects, met the wants of its stockholders, it has been so carefully managed and has done so much good, we may consider it safe, in spite of some unavoidable defects.

Can it be through our Business Association our enemies intend to injure our cause? Will they try to break it down directly, or will they try to have such changes made in it, or to have its stock so monopolized under forms of law, as to destroy the confidence of our members in it, drive from it their support, and break it down in this way—the most certain of all others! Surely, our members and the shareholders in this truly valuable and strong association know their vital interests in trade too well to permit this. The permanent and growing success of our Grangers' Business Association, which has already, directly and indirectly, worked such improvements in the farm-trade of our State, and which has done such a good business in purchase and sale, the past year—in spite of the startling fact that only about one-third of its shareholders have done any trade through it—rests in the hands of its shareholders and other Grange members. Brothers, don't let its efficiency be weakened or destroyed. Its stockholders meet in San Francisco, February 21st. Be sure to attend in person or by proxy, to look after its best interests; to see that it accomplishes what you desire it should. If you feel there are defects to be remedied in its laws, remain entitled to representation by paying your assessments, be there and vote for such changes as may best adapt it to the wants of our people.

To every danger that threatens our good cause, let us all WAKE UP, fellow-Patrons. Believe me, there is before us a greater work than any yet done, with better means and information to do that work well, than we ever controlled heretofore.

"Let us, then, be up and doing,  
With a heart for any fate;  
Still achieving, still pursuing,  
Learn to labor and to wait."

J. W. A. WRIGHT.

Sacramento, February 12th, 1877.

### From the Granges.

#### ML Whitney Grange.

EDITORS PRESS:—The officers-elect of Mt. Whitney Grange were duly installed on the 13th ult., by Bro. Jeffard, Past Master of Farmersville Grange (with the exception of the Master-elect, who was detained at home by sickness, and two of the lady officers). The ceremony was very interesting and impressive to the invited guests and all present. A nice dinner was prepared by the sisters and all seemed in the height of enjoyment. Bro. A. F. Thompson, Secretary-elect, declined to be installed and will probably withdraw from the Order; thereupon Bro. O. Osborne, a worthy and efficient brother, was elected and installed Secretary of this Grange. We intend that this Grange, though few in numbers, shall live and do service in the aims and objects of our noble Order. The condition of the Order in this county, I am sorry to say, is not all that could be desired, and if the Worthy State Lecturer could visit this county he would find a broad field wherein to labor, and I believe much good would be done.

G. W. DUNCAN, Master-elect.

#### Deep Creek Grange.

EDITORS PRESS:—The officers of our Grange were installed on Saturday, January 20th, 1877, by Past Master F. G. Jeffers, after which a feast was spread and Patrons and friends partook thereof, and all was joyous. So may it ever be. F. G. JEFFERS, Sec'y.

Farmersville, Tulare county.

#### Paso Robles Grange.

EDITORS PRESS:—I have been looking over your most valuable paper, handed to me by Mr. Philip Klipple, one of our neighboring Grangers, and see the reports of other Granges, and will send a few items from ours. I am not a subscriber, but think it would be a welcome visitor to our home and every other; for Grange proceedings and general good reading it has no equal. Our Grange has been poorly attended the past year, and has been thought by some about to depart the Grange life, but we have turned over a new leaf, and have no idea of giving up for discouragements. We contemplate building a new hall next summer, which will make it much more pleasant. We would like very much to have a visit from the Worthy State Lecturer, as we need instructing in the secret work, and think a good, sound lecture on the evils of non-attendance would be beneficial.

MRS. A. I. BLAYNEY, Secretary.

Paso Robles, January 30th, 1877.

#### San Jose Grange.

EDITORS PRESS:—By invitation of this Grange, Bro. Pilkington will meet with us in his official capacity as State Lecturer on Saturday, February 24th. Santa Clara Grange is invited to meet with us and all farmers not Grangers, and every one interested in the work of the Grange are cordially invited to attend this meeting. At the close of the lecture, which will begin at 11 A. M., will occur our monthly harvest feast. This Grange and Santa Clara Grange have joint meetings once a month, alternately at San Jose and Santa Clara, on the fourth Saturday in each month, to which members of other Granges are cordially invited, and here let me say that visiting brethren may find that these Granges, which say but little, are doing their good work without show, slowly but surely.

H. G. KEESLING, Sec'y.

#### Badger Flat Grange.

EDITORS PRESS:—As items of interest are scarce, I will not intrude at present in your valuable columns. Farmers here are generally doing seeding and turning their attention now to gardening, planting potatoes, etc. There has not been much rain in this vicinity—ground not over three inches wet. Some of the farmers irrigated to plow, others plowed dry. Since the rain grain is coming up and looking well, but will be late.

SECRETARY.

Los Banos, Cal., February 6th, 1877.

#### El Dorado Grange.

EDITORS PRESS:—Our installation came off on the 20th of January. The Worthy Master, Wiltsey of Placerville Grange, officiated. The sisters having spread the tables as only sisters can, after the installation it was surrounded by as jovial a band of brothers and sisters as you generally see on such occasions. All enjoyed themselves hugely and went home feeling that it had been good for them to be there. Our Grange is looking up and I think that a year of prosperity is before us.

J. BRYAN, Sec'y.

#### South Sutter Grange.

EDITORS PRESS:—We are in receipt of the chromo sent by you to our Grange, our Past Worthy Master, Thomas Boyd, delivering the same. By vote of the Grange I send you our sincere thanks for the beautiful picture, which now adorns our hall. We shall ever look upon it with pride, and give you a kind remembrance in our Grange.

BENTON HUDSON, Sec'y.

#### Little Lake Grange.

EDITORS PRESS:—I am happy to state that our Grange is reviving. Our attendance is improving, showing a revival of interest in the Order.

A. P. MARTIN.

Willits, Mendocino county.

FAIR IN EL DORADO COUNTY.—The *Republican* says: We understand that the Placerville Grange have commenced agitating the question of inaugurating a county agricultural society. We hope other Granges in the county will take up and discuss the matter, and co-operate with the Placerville Grange in inaugurating this much needed auxiliary to our agricultural and horticultural industries. There is now no time to lose in "masterly inactivity," if we are to have a fair next fall.

#### In Memoriam.

DEEP CREEK GRANGE, No. 136, Farmersville, Tulare Co.

WHEREAS, Our divine Master, in his All-wise Providence, has seen fit to remove from our midst our Worthy Brother, F. L. CASTELL, a resident of Farmersville, Tulare Co., be it, therefore,

Resolved, That in the death of Brother CASTELL we are reminded of the uncertainty of life and the assurance of death.

Resolved, That we extend our deepest sympathy to his afflicted wife and relatives.

Resolved, That a copy of these resolutions be spread on the minutes of this Grange and a copy be presented to his wife, and one sent to the *RURAL PRESS* for publication.

Committee: W. G. Pennebaker, C. Van Loan, F. G. Jeffers.

SUNOL GRANGE, No. 163, February 3, 1877.

WHEREAS, By the interposition of a Divine Providence, one of our number, our beloved sister, Mrs. N. ARNET, has been suddenly removed from our midst, therefore be it

Resolved, That in the death of Sister ARNET this Grange has lost a good and worthy sister and her family have met with an irreparable loss.

Resolved, That we tender her bereaved family our heart felt sympathy in their affliction.

Resolved, That these resolutions be entered on the minutes of this Grange, a copy be sent to her afflicted family, also published in the *RURAL PRESS*, California *Patron* and *Alameda Independent*.—Committee: Mrs. Black, E. M. Carr, S. W. Millard.

#### Election of Officers.

CAHITO GRANGE, No. 202, MENDOCINO Co.—J. H. Clarke, M.; G. N. Grubb, O.; R. M. Wilson, L.; S. E. Wilson, S.; O. R. Bennett, A. S.; J. G. Burns, C.; J. G. Wilson, T.; J. H. Braden, Sec'y; Thos. Ray, G. K.; Mrs. E. L. Ray, Ceres; Mrs. C. C. Bennett, Pomona; Mrs. E. A. Wilson, Flora; Miss F. A. Wilson, L. A. S.

DEEP CREEK GRANGE, No. 136, FARMERSVILLE, TULARE Co., CAL.—W. G. Pennebaker, M.; A. W. Mathewson, O.; C. Van Loan, L.; W. F. Pennebaker, S.; E. M. Jeffers, A. S.; Mrs. Nellie Jeffers, C.; Logan Teague, T.; F. G. Jeffers, Sec'y; John Teague, G. K.; Mrs. C. M. Allen, Ceres; Miss S. E. Pennebaker, Pomona; Miss Laura Allen, Flora; Miss M. A. Buckman, L. A. S.

ELKO GRANGE, No. 9, NEVADA.—J. A. Tinker, M.; James Brain, O.; George Bobier, L.; Robert Hunter, S.; Thomas Hunter, A. S.; Joseph Cox, C.; John Hunter, T.; John S. Mayhugh, Sec'y; G. W. Litton, G. K.; Mrs. Belle Kniesly, Ceres; Mrs. L. M. Hunter, Pomona; Mrs. John S. Mayhugh, Flora.

ELK RIVER GRANGE, No. 104, HUMBOLDT Co.—Election, Dec. 1st: George Shaw, M.; A. J. Knapp, O.; A. C. Spear, L.; W. Turney, S.; W. Orton, A. S.; F. Shaw, C.; S. B. Zane, T.; D. A. DeMerritt, Sec'y; W. Fields, G. K.; Mrs. E. S. Southmayd, Ceres; Mrs. A. A. Knapp, Pomona; Miss S. Shaw, Flora; Mrs. F. L. Meyer, L. A. S.

FRANKLIN GRANGE, No. 135, TULARE Co., CAL.—William L. Morton, M.; W. W. Boyd, O.; L. C. Hawley, L.; F. S. Herrington, S.; F. Rodgers, A. S.; I. F. Betts, C.; I. Chambers, T.; Mrs. M. A. Morton, Sec'y; Mrs. E. Boyd, Ceres; Mrs. N. S. Wyruck, Pomona; Mrs. N. E. Herrington, Flora; Mrs. M. B. Chambers, L. A. S.

HOLLISTER GRANGE, No. 11, SAN BENITO Co.—Election, December 9th. E. Nason, M.; W. H. Oliver, O.; Thos. Flint, L.; H. F. Haver, S.; R. Rucklidge, A. S.; J. Molsbury, C.; Uriah Wood, T.; M. Pomeroy, Sec'y; J. A. Reed, G. K.; Mrs. P. L. Wood, Ceres; Mrs. Martha Reed, Flora; Mrs. M. A. Nason, Pomona; Mrs. M. E. Cowan, L. A. S.; Bro. R. Rucklidge, Trustee.

INDIAN SPRINGS GRANGE, No. 246, NEVADA Co.—Election, Dec. 16th: H. L. Hatch, M.; F. A. Horton, O.; L. Horton, L.; W. Emery, S.; C. W. Constable, A. S.; S. F. Ball, C.; T. J. Robinson, T.; Mrs. E. M. Horton, Sec'y; D. J. Dunham, G. K.; Mrs. E. W. Hatch, Ceres; Mrs. M. E. Ball, Pomona; Mrs. M. L. Davis, Flora; Mrs. J. Hatch, L. A. S.

KEYSTONE GRANGE, No. 244, TULARE Co.—Election, Jan. 13th: E. Axtel, M.; W. N. Barker, O.; W. L. Prior, L.; I. Coffey, S.; M. E. Griffiths, A. S.; A. I. Burdy, C.; J. J. Cole, T.; A. Child, Sec'y; N. R. Goldin, G. K.; Sister N. Axtel, Ceres; Sister N. Prior, Flora; Sister A. Daggs, Pomona; Sister M. E. Coffey, L. A. S.

MORRO GRANGE, No. 27, SAN LUIS OBISPO Co.—A. J. Mothershead, M.; F. Riley, O.; A. B. Spooner, Jr., L.; J. H. Cooke, S.; T. J. Stephens, A. S.; Walter Church, C.; F. Parker, T.; H. Y. Stanley, Sec'y; Sister H. G. Riley, Ceres; Sister Stephens, Pomona; Sister Mothershead, Flora; Lizzie Riley, L. A. S.; George Alvord, Trustee.

NORTH BUTTE GRANGE, No. 196, SUTTER Co.—Election, December 31st, 1876: B. R. Spillman, M.; H. S. Graves, O.; Joshua Stafford, S.; T. A. Clyna, A. S.; Edwin Bigelow, C.; C. Williams, T.; G. W. Riley, L.; Otis Clark, Sec'y; John Spillman, G. K.; Mrs. Thos. Lamm, Pomona; Mrs. Wemple, Ceres; Miss Belle Fairlee, Flora; Miss Mary Alhert, L. A. S.

PACHECO GRANGE, No. 264, CONTRA COSTA Co.—Alexander Boss, M.; John Martin, O.; —Hays, L.; Wm. Clark, S.; Chas. Clark, A. S.; Wm. Hendricks, C.; R. B. Hathway, T.; Wm. McDonald, Sec'y; Wm. Morgan, G. K.; Della Downing, Flora; Elitha J. Boss, Ceres; Mrs. Hays, Pomona; Olive Morgan, L. A. S.

RUSTIC GRANGE, No. 83, LATHROP, SAN JOAQUIN Co.—Henry Moore, M.; Fred Brownell, O.; Daniel Casey, L.; Joseph Heintz, S.; L. W. Howland, A. S.; Thomas Wilson, C.; H. S. Howland, T.; H. B. Dunn, Sec'y; J. A. Buchanan, G. K.; Sister Margaret Casey, Ceres; Sister Mary Heintz, Pomona; Sister Barbara Rowland, Flora; Sister Cecilia Dunn, L. A. S.; Trustees, Joseph Heintz and Fred Brownell.

SONOMA GRANGE, No. 53, SONOMA Co.—Election Dec. 16th: Leonard Goss, M.; Isaac Harding, O.; William McPherson Hill, L.; James M. Cheney, S.; A. S. Edwards, A. S.; Obed Chart, C.; Oliver B. Shaw, T.; D. C. Young, Sec'y; George E. Watriss, G. K.; Miss E. Watriss, Flora; Mrs. Craig, Ceres; Mrs. Harding, Pomona; Mrs. Chart, L. A. S.

WATERFORD GRANGE, No. 57, STANISLAUS Co.—John Fagan, M.; F. A. Beausang, O.; J. W. Jones, L.; J. W. Brown, S.; R. H. Davis, A. S.; John Hally, C.; T. S. Row, T.; W. C. Collins, Sec'y; R. R. Warder, G. K.; Mrs. T. Johnson, Ceres; Mrs. M. A. Burgess, Pomona; Miss N. Search, Flora; Miss M. Fagan, L. A. S.

WOODVILLE GRANGE, No. 199, TULARE Co.—O. K. Jones, M.; R. McKee, O.; J. A. Slover, L.; T. B. Fuquay, S.; Wiley Spence, A. S.; G. W. Herndon, C.; J. Hensley, T.; J. N. Herndon, Sec'y; J. S. Johnson, G. K.; Mrs. M. E. Jones, Ceres; Miss Clara Hensley, Pomona; Miss Dora Dennis, Flora; Mrs. Mary Roach, L. A. S.; Trustee for three years, J. A. Slover.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**THE GUM TREE TRADE.**—*Washington Independent*, Feb. 10: Perhaps no other town in the county ships more gum trees than Hayward. In looking towards the foothills, the large forest of gum trees would lead a person to think they grew wild. Messrs. Stratton, O'Neill and Baxter are doing a thriving business with their nurseries and are shipping thousands of gum trees to different parts of the State. The C. P. R. R. Company have already appreciated the value of these trees, have purchased 40,000 trees from G. C. Baxter, and have contracted with private parties to plant these trees on both sides of their track from Brooklyn to Niles. This new demand will probably make the gum tree market firmer, as they can be purchased for almost nothing at present.

## COLUSA.

**CROP PROSPECTS.**—*Sun*, Feb. 10: Prospects for a good harvest were never better at this season of the year than they are at present. The drouth of December and January injured the volunteer somewhat, but the summer fallow and winter sown grain look splendid, and the ground is wet down to the moisture below.

## EL DORADO.

**RAISINS.**—*Republican*: C. W. Albright, whose vineyard is in Coon hollow, near this city, has presented us with a box of raisins cured by him the past season, that are exceedingly fine. Mr. Albright lost heavily, as many others did, in consequence of not being prepared to protect his raisins, while drying, from the early rain. He intends to be prepared for any such emergency next fall.

## FRESNO.

**RAINFALL OF FRESNO.**—*Republican*, Feb. 10: We have received from Mr. Frank Jensen, of Big Dry creek, a tabulated statement of the rainfall at his place for the last six years. We have no space for the entire table in this issue, but will give it in full another time. Beginning with October, 1871, there fell during November and December 10.70 inches, and during the balance of the season, 10.72 inches, making 21.42 inches for the year. During the season of '72 and '73, 16.03 inches. Season of '73 and '74, 19.37 inches. Season of '74 and '75, 14 inches. Season of '75 and '76, 21.73 inches. Season of '76 and '77, up to date, only 2.18 inches have fallen, which is probably less than has ever been known before. Judging from the record it is not yet too late for considerable rain this season.

**PANOCHÉ.**—Farmers are busily preparing the soil for the seed. The ground is wet down, on an average, about ten inches. On account of the lateness of the rain, there will probably not be as much grain sown as last year. E. S. Keith has in the greatest number of acres, about 200. In passing that way, we notice that he has built a good dam across the creek, with the intention of turning the water out on his land, a good idea we think, and one that gives rise to the query, if Panoche could not be made a successful farming country if all the surplus water was utilized.

## KERN.

**STOCK FARMS.**—*Californian*, Feb. 10: It is something new in southern California to talk of stock farms. It has been considered unprofitable to raise stock unless the land was to be had for nothing, and was to be free from taxation. The change from this wild way of raising stock has been forced upon us by the general change in the uses of the country—a change from ranges to farms and from a wilderness to cultivation. The lands bordering upon Kern lake, near the northern end, are among the most attractive in the county. Messrs. Haggin & Carr have set apart six sections in a body, which they are now enclosing for a stock farm. Live posts are used, which will grow to ornament the place. They have about 3,000 head of stock cattle, some of them thoroughbred, imported during the past year. They have a large number of brood mares, suited to all the needs of the country, from the heavy Clydesdale to the thoroughbred American trotters. A portion of the farm is to be set apart for raising of hogs, a large number of superior breeding animals having already been collected on their grain farms, under the general management of Dr. G. F. Thornton. The farm is to be under the direction of Col. Keys, whose experience will render the test of the utility of stock farms, as distinguished from stock ranges, absolute, and before the year is passed the result may be foreseen.

## MONTEREY.

**THE CROPS.**—*Index*, Feb. 8: Without any more rain there would be fair crops in some portions of the Salinas valley; but with three or four inches more (which we may reasonably expect), properly distributed, the latter part of this month, and the fore part of next, a beautiful harvest would result. We are informed that they have had an abundance of rain throughout the entire southern portion of the county below Soledad. There has been considerable more rain on the mountains and in the foothills than in the main valley, which is very encouraging to stock-men, as the grass is growing splendidly and will make an abundance of excellent feed. Our farmers are very busily engaged in plowing and seeding all over the valley, every available team being employed. Should we have more

rain soon, there will be a far greater acreage under crop this year than ever before.

## NAPA.

**LATE SOWING WHEAT.**—*Register*, Feb. 10: Wheat has been sown in this county as late as the 16th of March and 40 bushels to the acre realized—a fact which should allay all apprehension of short crops in consequence of the drouth having delayed the seeding on some ranches beyond the date at which seeding has generally been done, especially in the past few years. Early seeding is considered advisable, and the custom has been to sow earlier the past few years than was previously done. It is this comparatively recent practice of early sowing which makes February and March seem late, for good crops can be realized here when the seed is put in late in the season. The spring rains are needed both for the early sown and the late sown. The frosts which are following the late rains are beneficial in several ways. They not only prevent the fruit trees from coming forward too rapidly and blossoming prematurely (to be nipped by frosts by and by), but they also cause the wheat to store better by temporarily checking the rapid growth that would result from the very warm weather following the late copious rains.

## SACRAMENTO.

**SACK HOLDING.**—*Record-Union*, Feb. 8: Yesterday at noon a number of prominent farmers of this and Placer county assembled at the Golden Eagle hotel to form a manufacturing association to make and introduce Daniel S. Wing's (Rome, New York) patent sack holder. Similar companies have been formed at Stockton, Salinas and Napa. Dr. Manlove was called to the chair, N. Mentis made Secretary, and W. E. Bryan Treasurer. The inventor was present and the members of the new company purchased and received from him the right to make and sell the implement in the following counties: Sacramento, Placer, Sutter, Yuba, Butte, Sierra, Nevada, Plumas, Tehama, Shasta, Lassen and Modoc. There are 22 incorporators, namely, W. S. Manlove, Nicholas Mentis, W. E. Bryan & Son, J. G. Morrison, E. G. Morton, John Studerus, John Hanlon, A. M. Plummer, Jas. M. Fray, F. B. Fitch, J. M. Bell, W. V. Miller, L. H. Fassett, Thomas Edwards, H. H. Fassett, John McClung, T. C. Warwick, J. G. Gould & Son, Joel Gardner, G. W. Cole. It was resolved to call the new company "The Grangers' Sack Holding Company of the Sacramento Valley." The election of Directors resulted as follows: Messrs. Manlove, Morton, McClung, Morrison and Fassett.

## SAN JOAQUIN.

**IRRIGATION.**—*Stockton Independent*, Feb. 10: A correspondent in Lodi sends us the following: The executive committee of the Mokelumne Ditch and Irrigation Company are now in the field making the final survey of the route of their canal. The object of the company is to furnish irrigation to that portion of our valley lying between the Mokelumne and Calaveras rivers and between the foothills and the tule lands. The present directors are Hon. R. C. Sargent, S. V. Tredway, D. Kettleman, C. R. Ralph, J. Ellison and J. E. Spencer. The completion of this enterprise will be of vast importance to the farmers in that locality, as it removes all fear of failure of crops from a protracted drouth.

**AGRICULTURAL SOCIETY.**—The board of managers of the San Joaquin Valley Agricultural Society held a special meeting yesterday afternoon, when L. U. Shippee tendered his resignation as the President of said society. Mr. Fred. Arnold was chosen to fill the vacancy made by the resignation of Mr. Shippee, and Mr. A. Wolf was elected to fill the vacancy made by the promotion of Mr. Arnold. Mr. A. W. Simpson was chosen a Director of the society. The time for holding the next annual fair was fixed for September 25th to 28th, inclusive. Messrs. Arnold and Wolf were appointed a committee to let the back pasture, and announced that bids would be received for the same by Mr. Arnold until the 17th. A vote of thanks was tendered Mr. Shippee by the board for his able and valuable services rendered as President of the society.

**TULE PLOWS.**—Messrs. Matteson & Williamson are filling an order for tule plows for Dr. A. F. Thornton, of Bakersfield. The plows they are constructing are designed to cut a furrow 12 inches wide and are much like the old style of prairie breaking plow. It is found, however, that the sods of tule are too light to fall over readily when set up on edge by the ordinary plow, and accordingly the mold boards of these plows are given an extra cork-screw twist that lays the sods flat on their backs before letting go of them.

## SAN LUIS OBISPO.

**BOUNTIFUL.**—*Tribune*, Feb. 10: The total rainfall since the 16th of January is 4.64 inches. The indications this Friday morning are that Pluvius will again topple his water jug from the perpendicular and scatter the life-giving showers upon the bosom of Mother Earth, to replenish the fountains thereof and feed the young vegetation with that nourishment without which all living things must die. The prospects for a bountiful harvest were never better.

## SANTA BARBARA.

**EFFECTS OF THE RAIN.**—*Press*, Feb. 10: Before the rain came, the farmers on the Mesa were very despondent and anxious, fearing that the rain would not come, and they certainly had more cause for anxiety than their neighbors of the plains, because they are mainly dependent for moisture on the rain. The water supply is

not nearly sufficient to allow of irrigation. Now they are jubilant, the look of care has vanished from their faces, and they see that their labor has not been lost, and that their crops are growing with promise for a rich harvest. The soil of the Mesa is wonderfully rich, and the crops raised there are above the average crops of the valley. The prospects for the hay harvest this spring are very good. All available land has been put to seed with the exception of that used for pasture.

**WILD FLOWERS.**—In all directions wild flowers can be seen in bloom already. On the hillside, in the valleys and, in fact, all over the land, these wild beauties are nodding their heads to the breeze and filling the air with their fragrance. Most common among them is the wild convolvulus and the bee-flower. These can be seen wherever a piece of land is uncultivated, and even in the streets where the traffic is limited.

## SANTA CLARA.

**RAIN AT LOS GATOS.**—*San Jose Mercury*, Feb. 1: During the present season 10½ inches of rain have fallen at Los Gatos, in this county. This is nearly two-thirds more rain than has fallen at San Jose, but the difference is easily accounted for. Los Gatos is situated in the foothills at the mouth of a deep canyon, a position most favorable for rain, while San Jose lies in the center of a great valley. The rain in the foothills, on the western side of the valley, is always much heavier than at San Jose. The crops around Los Gatos, and in fact in all parts of the valley, are looking well, and we may expect a good harvest.

## SANTA CRUZ.

**LOSS OF STOCK.**—*Courier*, Feb. 9: Mr. Shaw, one of the lessees of the place known as the Alcorn ranch, on Bear creek (now the property of R. E. Wood), has been having bad luck with his stock, having lost 12 head since the setting in of winter. Twelve head are not many, perhaps, but when it is about all one has, the loss becomes of consequence. I have noticed before that fine blooded stock raised in the large valleys when turned on these hillside pastures are apt to come to grief. They don't display the "savey" of those raised here and are much given to walking off precipices, falling into holes in the creeks or breaking their legs and necks in some other outlandish way. Besides they display a penchant for starvation which would never enter the noddle of a born mountaineer.

## SOLANO.

**THE SEMI-TROPICAL BELT.**—*Record-Union*, Feb. 10: We received this week from E. Dole, near Vacaville, Solano county, samples of wheat two feet from the roots to the ends of the leaves, with a statement that there are thousands of acres in that neighborhood that will average as large as the samples. Also stalks of corn one foot from the roots to the end of the leaves. The corn was volunteer, but had grown in the open air where corn was harvested last summer. Mr. Dole says one of his neighbors has green peas large enough to pick, and that they did pick a mess for use the last week in January. Fresh ripe tomatoes on last year's vines are common. The semi-tropical belt is a few hundred feet above the plains or level land between Putah creek and the foothills of the Coast range, and on these foothills, while there are frosts quite severe on these plains, at this elevation there will be none. While the plains are enshadowed in a thick cold fog, the sun shines out brightly and warm at this elevation, and thus at two points, a half mile apart, the climate of the one is that of the temperate zone, while that of the other is almost the torrid zone. Ordinarily as we ascend an elevation, the temperature grows less, but in this locality the reverse is the rule, at least up to a certain point. What causes this exception to the general rule in this respect we do not remember ever to have seen explained. There are several localities along the foothills of the Coast range where this same peculiarity exists, but we think that at no other point is the semi-tropical belt so extensive or so marked as in Solano county. From Putah creek canyon to Vacaville the country is the earliest in the State. This locality sends vegetables and fruit to market from three weeks to a month earlier than any other locality in the State, and the cultivators possess a great advantage over those of any other locality. Corn a foot high in January, and that, too, in a season when the balance of the State has experienced an unusually cold, frosty December, is one of the strongest proofs of the semi-tropical character of the locality.

## SONOMA.

**PEANUTS.**—*Russian River Flag*: The few experiments made near Healdsburg in the cultivation of peanuts have been attended with very encouraging results. I have been informed that light sandy soil, of good depth, is perhaps the best for this crop. I see no good reason for sending to San Francisco for peanuts, when our farmers have the facilities for producing not only enough for home consumption, but also a surplus for shipment. Early in April, 1875, I planted two rows of peanuts, twelve rods in length, cultivated them well during the summer, and notwithstanding the depredations committed by gophers, I dug two wheat sacks full, of the size that holds 140 pounds of wheat each. The only drawbacks I find in raising this crop are caused by hares and gophers. The former seem to be especially fond of the leaves and young shoots of the plant, and the latter, when numerous, burrow under the plants and destroy many of the nuts. But rabbit-proof fences and poisons for gophers will remedy the trouble.

**EXPERIMENTS WITH ALFALFA.**—S. Soules, of Soules's mill, about three miles below Healdsburg, has been experimenting with alfalfa for the last three years, and now has 25 acres growing. A portion is on upland, which has succeeded well, but the best results have been obtained on the rich bottom lands—the best corn land in that section—from which he has taken four tons of hay to the acre at one cutting, and pastured it with an average of four cows to the acre for the rest of the season. He considers it best to pasture it close in the fall. If the fall growth is allowed to stand when the rains come it falls down and the new crop grows up through, making it impossible to cut it clean. In case of a failure to catch well at the first sowing, it may be remedied by cutting late that which does catch, or by pasturing late, so that the fall crop will be short and go to seed with but little straw; then just before the rains, harrow it thoroughly. Harrowing will not injure the roots of that already set, but will mellow the surface of the ground and cover the seed. In this way the new plants will not be choked out by the more vigorous growth of that already rooted. The best time for sowing depends entirely on the season. If rain comes early in the fall, so as to give a good growth before the frost comes, it will be better than if sowed in the spring. Either frost or drouth will injure alfalfa when the plants are young.

**GRAPES FOR HOGS.**—*Russian River Flag*, Feb. 1: It has been demonstrated by several farmers in the vicinity of Healdsburg and Geyserville the past season, that the raising of grapes for the feeding of swine is a paying business. Several of our farmers gathered none of their grapes except for family use, but turned their hogs into the vineyard with satisfactory results. We will give one experiment. Mr. Joseph G. Dow, living some five miles south of town, on the west side of the river, wishing to ascertain the increase of weight in a given time, weighed one hog and turned it into the vineyard. When turned in it weighed 160 pounds. It remained in the vineyard 27 days, having nothing to eat during that time except the finest table and raisin grapes, such as Flame Tokay, Black Hamburg, Muscat of Alexandria, etc. It was then slaughtered, and weighed 163 pounds net, equal to 203 pounds gross, showing a gain of 43 pounds, or one and a half pounds per day.

[We do not see that this result is a very high price for the "finest table and raisin grapes," but the state of the market last summer perhaps warranted the makeshift of the hogs.—*Ensign Press*.]

## TULARE.

**POINTS ON MUSSEL SLOUGH.**—*Cor. Merced Express*: We are not fretting about water; the ground is now wet and there is an abundance of snow banked up in the mountains, seemingly stored away for our use in the summer to make corn, beans, potatoes, alfalfa, etc. The land irrigates by seepage or percolation, so that a quarter section may be sufficiently saturated simply by a stream of water passing through it. The land is very rich and the climate genial, in consequence of which all the cereals, the semi-tropical plants and some of the very tropical grow with vigor and grandeur, and in many instances to a prodigious size. We have no severe winds. The summers are warm, but not so severe as in many localities in the San Joaquin valley.

## VENTURA.

**GRAIN AND FRUITS.**—*Free Press*, Feb. 10: The grain crop throughout the county is coming forward nicely. All the conditions having so far been favorable, an abundant fruit crop is expected this season.

## YOLO.

**NORTH GRAFTON.**—*Mail*, Feb. 10: Horse flesh is put to a good use, and there is not an idle plow outside of the warehouse. While some of the fields look beautifully green, others look gray and smooth, being pulverized ready for the reception of the seed. There is no time to lose now, for seed time will not last much longer. The area which will be planted in North Grafton this year exceeds any former year of its history.

**BRIGHT PROSPECTS.**—The prospects for a first-class grain crop in Yolo county are very bright. The ground is in splendid condition to receive the seed, and farmers are putting it in with energy and hope. The ground which looked desolate and barren two weeks ago is now green, and we can almost see the tender grass and weeds growing. Wheat and barley have taken a new start, and instead of heading out very short or dying, as many thought it would do before the late rains, it now bids fair to grow to the usual length. In many places barley has headed out, but in such cases there was yet a sufficient amount of moisture to cause it to grow almost its usual length. The probabilities now are that the growth of the summer fallow and early sown grain will be too rapid, unless we should have cooler weather, for the heat of the sun has been very strong during the past ten days. We even see buds on the trees swelling almost ready to burst into green foliage.

## Washington.

**BUNCH GRASS.**—*Mountaineer*: Mr. H. T. Levins brought us a specimen of bunch grass that he gathered from the pasture of Mr. Thomas Connell, of Rockland, Klickitat county, Washington Territory, in which the new grass is fourteen inches long, and the old grass 26 inches long and well cured.





### A Dutch Picture.

Simon Danz has come home again,  
From cruising about with his buccaneers;  
He has singed the beard of the King of Spain,  
And carried away the Dean of Jaen  
And sold him in Algiers.

In his house by the Maese, with its roof of tiles,  
And weather-cocks flying aloft in air,  
There are silver tankards of antique styles,  
Plunder of convent and castle, and piles  
Of carpets rich and rare.

In his tulip-garden there by the town,  
Overlooking the sluggish stream,  
With his Moorish cap and dressing gown  
The old sea-captain, hale and brown,  
Walks in a waking dream.

A smile in his gray mustachio lurks  
Whenever he thinks of the King of Spain,  
And the listed tulips look like Turks,  
And the silent gardener as he works  
Is changed to the Dean of Jaen.

The windmills on the outermost  
Verge of the landscape in the haze,  
To him are towers on the Spanish coast,  
With whiskered sentinels at their post,  
Though this is the river Maese.

But when the winter rains begin,  
He sits and smokes by the blazing brands,  
And old sea-faring men come in,  
Goat-bearded, gray, and with double chin,  
And rings upon their hands.

They sit there in the shadow and shine  
Of the flickering fire of the winter night;  
Figures, in color and design  
Like those by Rembrandt of the Rhine,  
Half darkness and half light.

And they talk of their ventures lost or won,  
And their talk is ever and ever the same,  
While they drink the red wine of Tarragon,  
From the cellars of some Spanish Don,  
Or convent set on flame.

Restless at times, with heavy strides,  
He paces his parlor to and fro;  
He is like a ship that at anchor rides,  
And swings with the rising and falling tides,  
And tugs at her anchor-tow.

Voices mysterious far and near,  
Sound of the wind and sound of the sea,  
Are calling and whispering in his ear,  
"Simon Danz! Why stayest thou here?  
Come forth and follow me!"

So he thinks he shall take to the sea again  
For one more cruise with his buccaneers,  
To singe the beard of the King of Spain,  
And capture another Dean of Jaen  
And sell him in Algiers.

—Henry W. Longfellow, in *Atlantic*.

### Offices of Reason—No. 2.

[Written for the RURAL PRESS by J. G. LEMMON.]

#### The Director of Research

Looking out of the windows of our mind in childhood, we see but little. Only the most brilliant objects are noted. As we grow older, we increase in perception; we look closer and see more. Advancing, we put this and that together, compare, combine, deduce and project. This is the work of intelligence, until then dormant in the human mind. Gradually superseding instinct, which now relapses to inactivity, its characteristics soon become immeasurably different. Under the direction of intelligence, the perceptions grow sharper and stronger, until every cognizable thing is seized and stored away, forming conceptions. But these conceptions are mere acquisitions. To make them into systems of related objects, they must be arranged and classified, forming knowledge. This is done by the reason, dormant until a later period in life, and through its deliberate action were formed the vast libraries of knowledge which the ancients have bequeathed to us. In time the limits of the powers of the perceptive, taxed to their utmost, were reached, and assistance was demanded. Reason turned inventor, and thousands of instruments were formed and brought into use, multiplying the powers of the eye, the ear, a thousandfold. A constant increase of the powers of the mind caused a vast accumulation of results, and the records were too numerous and bulky for the store-houses. Another limit was reached. Condensation of the records was necessary, or the growth of the mind must cease. The art of printing, swiftly brought to perfection, afforded the relief necessary, and the grandest strides of intellect followed. Other inventions produced revolution after revolution in the theories deduced from previous knowledge, until revolution is conceived to be the normal action of mind as well as matter.

The eye is the chief organ of the perceptive, the noblest of them all. The optic nerve, without ramification, proceeds directly from the brain, the only instance to be found in the whole animal economy. The eye is a most curious and intricate, yet purely mechanical organ. By studying its mechanism closely and

imitating its structure, man has invented two instruments to assist the eye, so powerful in their operation and extensive in their revelations that they have been called the creative eyes of science. These creative eyes are the telescope, bringing universes down, and the microscope, bringing universes up to man's conception.

#### Revelations of the Telescope.]

Let us recall a few of the astonishing revelations of the telescope. It has changed the conception of the earth from a flat, motionless sun-encircled table into a round, revolving sun-encircling globe. It has discovered the solar origin, the well-nigh eternal age, the unity of plan, the harmony of motion and the vast distances of our sister planets. It has discovered systems of satellites encircling these planets in the same manner and direction. It has watched the transits of these satellites across the disk of their primaries, and predicted within a few seconds any phase of such transits centuries in advance of the fact. It has lately resolved (a sub-revolution) the supposed solid rings of Saturn into millions of satellites. It has put the parent sun himself into a crucible, as it were, and resolved him into a mass of molten minerals, each distinguished by the kind of light it emits, and shown their identity with the primary elements of the earth and sister planets. It has discovered and demonstrated the origin of our solar system from a mass of attenuated matter existing in space—known as the nebular hypothesis, and believed to be the order of creation in the universes of stars. It has shown the baleful comets of their fiery terrors and proved them the merest ethereal films, too light to penetrate our atmosphere if, out of a million chances, one should approach it. It has peered out at our neighboring stars, and determined that, though the nearest is over 19,000,000,000 of miles distant from us, and each is undoubtedly as distant from any other, yet they, with our sun, constitute a compact cluster or universe in the form of a flat oval comprehended with the unassisted eye by noting the galaxy spanning our skies at night, seeming a belt of starry sheen—really a universe of suns, in the south end of which our sun is placed.

It has reached through immeasurable space and separated nebulous films of light into distinct stars, the members of universes like our galaxy. It has fixed with its keen eye the exact position of the myriad stars of our firmament, and in the course of a hundred years it has detected an infinitesimal apparent motion in a few of them and therefrom deduced the amazing fact that our sun and system of planets with all their attendant satellites is wheeling through space at an inconceivable velocity, around an immeasurably distant central sun, and on an orbit so vast that ages upon ages will be required to obtain the elements of an appreciable curve in the grand sweep.

At present this is the utmost and amazing extent of knowledge, but Reason, unbounded and unabashed, goes farther. Reason declares that the planetary motions, so faithfully observed in the revolutions of satellites around their primaries, of these planets on their vast orbits around the sun, and of the sun on an inconceivable orbit around the central sun, holds true also in the economy of the universes of space, looking the merest specks of light, even with the aid of the telescope, but which are immense systems of suns arranged in uniform order and wheeling around a grand center invisibly distant, of orbits immeasurably great, through cycles eternally long!

#### Revelations of the Microscope.

Within a few years, in fact since the dawn of the present century, the microscope has been brought by the agency of reason to its present marvelous power and usefulness. Its revelations in the examination of minute atoms have produced an entire revolution in the old theories of the origin and constitution of organic beings. The magnifying lens skillfully applied reveals the astonishing fact that all forms of organic structure, either vegetable or animal, however diverse or complicated, are alike composed of similar microscopic cells called primordial utricles. These contain, some of them, air or water only; others, an infinitesimally minute globular atom—the cytoblast, the nucleus of life impulses, the earnest of new cells and of growth. Around it circulates a nourishing semi-fluid, the protoplasm, which, with the enclosed atom, is ever in motion, flowing, acting, combining, transforming, etc., so that cell life is an epitome of the general life of the plant or animal.

In fact, the vital energy of these primordial utricles is sufficient for independent, solitary existence, and such cells actually compose the minute plants known in the Polar regions as "red snow" (*Protococcus*) and the microscopic one-celled animalcules of protean shape, the *Amoeba*. It is found that growth in the largest organisms results from the enlargement and subdivision of these life-teeming cells indefinitely.

The materials and operations employed in the procreation of plants and animals are seen by the eye of a microscope to be entirely analogous, or, as believed by some eminent scientists, to be exactly identical. In plants the grains of pollen, each a cell containing minute molecules, exhibiting, some authors affirm, a tremulous motion when transferred from the stamen to the pistil, are seen to be first speedily enlarged by imbibing the fluid of the stigma, then to form themselves into tubes, which sink into the stigma and extend within the style, however long, affording canals through which some of the animated molecules of the pollen grain

travel to the ovary, seek out the ovules, they turning to favor the attack, penetrate by way of the micropyle the two envelopes, traverse the glutinous protoplasm and establish themselves in (say some close observers) or upon (according to most authors) the embryo sac, when at once the dominant ovule, the future seed, is thrilled with a life-impulse—is fertilized and grows to perfection.

The genesis of animals, more positively known from its plainer observation, differs mainly from that of plants in this particular only: other names are applied to the same things.

But one of the most astounding achievements of Reason is the discovery by the aid of the microscope that not insects and frogs alone undergo metamorphosis, but every other animal as well, including man, undiscovered until lately, because it occurs during pre-natal existence. This wonderful and instructive fact was suspected by philosophers long ago, but was not distinctly proved and published until our late lamented Agassiz, as the result of 30 years' research, discovered that "there is a correspondence between the succession of fishes in geological times and the different stages of their growth in the egg." This correspondence was soon found to exist in all the other groups of animals, and the grand phenomenon of universal metamorphosis and similarity of all animal existence is now fully established.

Let us trace with a microscope the pre-natal history of an animal, correcting all optical illusions by the agency of reason, and learn a suggestive lesson.

First, a microscopic molecule, or zoon, enters an infinitesimal cell, or embryonic vesicle. The zoon becomes the brain and nervous system; the cell, the body of the future animal. Nourished by the surrounding fluids, or protoplasm, the zoon begins its mysterious life career. The cell enlarges; numerous nucleate bodies form within; all is in motion, revolving round and round. "At this point of growth," says Agassiz, "the appearance of the egg bears a wonderful resemblance to our firmament of celestial spheres and systems. This is no fanciful simile," he adds, "it is simply true, and the idea cannot but suggest itself to the mind that the thoughts which have been embodied in the universe are recalled here." The cell, or egg, next divides, subdivides, develops organs and limbs, assumes the character of each type of animals in their order, dropping the old and taking on the new at each stage, ever urged onward by the original impulse until it arrives at the theater of its typical idea, when, assuming the habiliments clothing that idea, the animal is born, but retains through life vestiges of every one of its former states.

How wonderful, surpassing the wildest romance, and how superlatively instructive is the pre-natal history of a human child—to-day sitting on its parent's knee, its features clothed with the exalted idea of humanity, and impressed with the probable proofs of angelic existence through eternity, yet bearing in its person and disposition vestiges revealing an analogy with, if not relationship to, every other animal on the earth. Once an infinitesimal cell; then presenting a microscopic universe; then a globular, ciliated body; then a radiated polyp; then resembling a pulpy mollusk; then an articulated insect; next bearing the form of a fish with gills, fins and a two-celled heart; next that of a reptile with webbed feet, a caudal extremity and three-celled heart; next a bird with wings, bill, a third eyelid, and a four-celled heart complete; then a series of changes corresponding with every type of the five orders of mammalia; arriving at birth at the culminating apex of creation—the elaborated excellence, the concentrated energy, the perfected intelligence, the accepted monarch of the earth, a microcosm, a miracle, a model, a man!

Webber Lake, Cal., Jan. 20th, 1877.

HANDY MEN.—Miss Ruby says in the *Maine Farmer*: Next to a good mousing cat, a good watch dog, and a good family chestnut-colored horse, is a handy man. Now don't misunderstand me, and say that I compare a man with either of my favorites in the speechless world; not at all, man is the noblest work of God, except a woman; but really a handy one I am unable to class. Conceive of anything about a home more desirable when circumstances have compelled you to neglect home duties, or rather postpone them, than for a man to fulfill the surcease by being able to wash dishes, make beds, sweep, make bread, and in straightened times darn his own stockings, sew on his buttons, and preserve his habitual good humor. If so, there is no ruffle or splash in the home life, in consequence of inability to maintain the order and comfort of the household. Of course the season of the year favors the demonstrations of handy men. We should not expect him to leave his plow, harrow or mowing machine to help in the kitchen, but if he came to eat and had a mind to place the chairs, fill the ice-pitcher, or pare the potatoes, it might contribute wonderfully to the comfort of the tired housewife; not only by saving steps, but the feeling of appreciation that cheers up many a tired worker, and braces them up for the numberless duties about a home. Handy men are generally fortunate in getting good wives, and any woman is fortunate who has a handy husband.

Bring distinctly before your own mind the well-known fact that children delight as much in exercising their minds as their limbs, provided only that which is presented to them be suited to their capacities and adapted to their strength.—*Dunn's Principles of Teaching*.

### Effervescence of Current Events.

[Written for the RURAL PRESS by MRS. C. I. H. NICHOLS.]

It is expected of members of a home circle when they have been away on a holiday or other excursion, that they will render an account of themselves; in other words—add to the entertainment of the home-stayers by a recital of whatever of use or interest may have come under their observation. Members of the Home Circle of the RURAL have visited the Centennial exposition—the central curiosity shop of all Christendom for 1876—and given us rich treats in the shape of chatty correspondence.

By the way, Brother Berwick says, "Mary Mountain has given us up," but as he gives no intimation of having interviewed her on the subject, I venture the suggestion that she is only sweeping down "cobwebs," sewing on buttons, mending rents and "putting to rights" things that had gone to wrongs in her long escapade from household cares. And when the lassitude that is sure to succeed a season of unwonted enjoyment—social and intellectual—releases her sprightly pen from its thralldom, she will make rich reprisals for Brother B.'s threatened appropriation of her cozy corner, by a spicy joint occupancy. [Mary Mountain returned to her welcoming place in the RURAL of February 3d.—Eds. PRESS.]

Well, "Sister Nichols" has been abroad too—not in the Centennial throng, but in charming homes and sunny nooks; by surf-washed beach and fern-shadowed brook, where nature and a genial humanity conspire to get up "benefits" for tired, heart-hungry wayfarers, and she would fain contribute from these to the enjoyable abundance that ushers in the RURAL for '77. But ah me! how can one think or write of anything else with the executive head of the nation hanging by a single strand, more or less, that threatens to give way at any moment—and nothing that she can do about it.

"Out of woman's sphere," is it? Look at the piles of newspapers on our sitting-room tables for family reading. Their columns are filled with exciting political correspondence; reports of investigating committees; and a perfect avalanche of prophecy, explanation, threats and counter threats, that have made their way, unquestioned and unhesitating, into the sacred precincts of woman's sphere.

The "gods" must be preparing for an unusually destructive foray, for the great mass of the body politic seem to have been "made mad"—so mad that only wooden women could possibly remain indifferent to the political involvements of our Presidential election. Indeed, why should we be less alive to the political struggles of 1876 than to those of 1776, which are held up to us as legitimate cause for womanly pride and rejoicing?

Demoralizing is it? If government is of God, it is men's fault if in the exercise of its functions they are not brought into closer sympathy with Him and ennobled! If only God had put man at enmity with the serpent as He did woman, it might have been good for the world that he should be alone in its government. Possibly as woman had proved her power to win man to evil, God thought by putting her at enmity with the author of evil she might be trusted to win him to the good which she had learned at so great cost, not calculating that man would discard her as his helper; or foreseeing that if he did so, his necessities and her persistence would eventually re-instate her co-possessor and co-sovereign with him over all the earth. Who can say? That women have an irrepressible inclination to catch hold of the "reform" budget somewhere and give it a lift is in evidence. Even the black women of the south, as we learn from Congressional investigations, have been practicing the intimidation policy on their Democratic husbands to control the presidential vote. The *modus operandi* is not stated, only that the men "were afraid of their wives." Being in the direct line of descent from old Adam, these black voters may be excused for dodging behind their Eves. But it reminded me of a negative vote cast in Vermont in 1852 by a farmer's wife. She paired off with her husband by putting a cellar door between them. After coaxing him in vain to cast a "no license" vote, as her representative, she got him down cellar after potatoes for "an early dinner," and seating herself on the trap-door kept him there till too late for a six-mile ride to his voting precinct. Contrary to the predictions of peace-loving men—in case of a "divided vote" of married parties—there was no trouble in that family. Being a good Democrat and having had time to "master the situation," he told us a good joke, "how his wife voted the temperance ticket." But all this, though relevant to the tempest raging in the national tea-pot, has nothing in common with my autumn holiday.

[Readers will now accompany Mrs. Nichols to "The Dairy," on page 106 of this week's PRESS, where they may hear the interesting things she learned during a visit to Point Reyes.—Eds. PRESS.]

CURIOSITY in children is but an appetite after knowledge. I doubt not but one great reason why many children abandon themselves wholly to silly sports and trifle away all their time insipidly is because they found their curiosity balked and their inquiries neglected.—*Locke*.



## The Artist and the Mother.

A young girl stood over a block of marble, striving with eager, skillful fingers to embody the beautiful ideal that stood so clearly before her mental vision. Day after day, week after week, month after month, she labored with patient industry, throwing her whole soul into the work she loved, till at last the "imprisoned angel" was released, her task ended, and she gazed through eyes almost blinded with tears of joy upon the work of her hands. Even her eyes, rendered over-critical by ardent love for the profession she had chosen, could see nothing to alter, and throwing herself into a chair she feasted upon the lovely creation. But presently the happy glow faded from her eyes, her lip quivered, and a sigh fell softly on the air as she murmured: "So beautiful, and yet lifeless. After all—the highest skill, the greatest genius can only produce the form. God alone can make the soul."

A young mother sat beside the cradle in which her babe was sleeping. The mother's face was radiant with happiness, yet a look of awe stole over it as she gazed upon her little one. She looked forward into the future and thought, "Ah, if my baby is spared, what a glorious work is mine. And yet my very soul trembles as I think of the fearful responsibility laid upon me. If this little one live to become a man, he must influence, for good or evil, so many other lives, and what will his influence upon them be? Through his babyhood and childhood, his character will be like plastic clay in my hands. Each word, each act,—aye, even each silent thought of mine will have its influence in a greater or less degree. My life, not only outwardly but inwardly, must be pure and noble, for this sensitive little spirit will, all unconsciously, day by day reflect my inner life. O God, help me to do the work thou hast given me to do!"

The sculptress and the mother were the same. Which work is the greater, the nobler—to fashion a lovely image which shall be a "thing of beauty" merely in all eyes, or to mold a little immortal soul, and with God's help, impart to it so much of His likeness that it shall be not merely outwardly beautiful but inwardly lovely, shedding a holy, elevating influence upon all with whom it has anything to do? And to every mother is this work given.—*Ida T. Thurston.*

**THE RIGHT KIND OF A WIFE.**—A farmer was once blessed with a good-natured, contented wife; but it not being in the nature of man to be satisfied, he one day said to a neighbor he really wished he could hear his wife coddle once, for the novelty of the thing. Whereupon, his sympathizing neighbor advised him to go to the woods and get a load of crooked sticks, which would certainly make her as cross as he could desire. Accordingly, the farmer collected a load of the most ill-shaped, crooked, crotchety materials that were ever known under the name of fuel. This he deposited in its place, taking care that his spouse should have access to no other wood. Day after day passed without a complaint. At length the pile was consumed. "Well, wife," said the farmer, "I am going after more wood; I'll get another load just such as I got last time." "Oh, yes, Jacob," she replied; "it will be so nice if you will, for such crooked, crotchety wood as you brought before, does lie around the pot so nicely."

**SHE WAS QUALIFIED.**—A young woman recently answered an advertisement for a dining-room girl, and the lady of the house seemed pleased with her. But before engaging her there were some questions to ask. "Suppose," said the lady, "now only suppose, understand, that you were carrying a piece of steak from the kitchen, and by accident should let it slip from the plate to the floor, what would you do in such a case?" The girl looked the lady square in the eye for a moment before asking, "Is it a private family, or are there boarders?" "Boarders," answered the lady. "Pick it up and put it back on the plate," firmly replied the girl. She was engaged.—*Saturday Night.*

**COMMON SENSE.**—Common sense has given to words their ordinary signification, and common sense is the genius of mankind. The ordinary signification of a word is formed step by step in connection with facts. As a fact occurs, which appears to come within the sense of a known term, it is received as such, so to speak, naturally; the sense of the term becomes enlarged and extended, and by degrees the different facts and different ideas, which, in virtue of the nature of the things themselves, men ought to class under this word, become in fact so classed.—*Guizot.*

**THE BEST FRIEND.**—The most agreeable of all companions is a simple, frank man, without any high pretensions to an oppressive greatness; one who loves life, and understands the use of it; obliging alike at all hours; above all, of a golden temper, and steadfast as an anchor. For such a one we gladly exchange the greatest genius, the most brilliant wit, the profoundest thinker.—*Lessing.*

**FRIENDSHIP AND CIVILITY.**—Be civil and obliging to all, dutiful where God and nature command you; but friend to one, and that friendship keep sacred, as the greatest tie upon earth, and be sure to ground it upon virtue; for no other is either happy or lasting.—*Memoir by Lady Fanshawe.*



Cross Purposes.

## Young Folks' Column.

## The Pink Parrot and the Gray Boy.

Once there was a parrot. I knew him. He wore a pink suit, with a pale, sulphur-hued plume in his crested cap.

And there was a boy; and I knew him. He wore a gray suit. There was a shiny silver buckle on his cap.

The gray boy owned the pink parrot. The pink parrot owned nothing—nothing now, not even himself. It was a great change, I tell you, from a forest to a cage, from choosing his own fruit and nuts to waiting for them upon the pleasure of a boy. The pink parrot judged all boys by the gray boy, and he hated boys. He often sat on his ring silent, motionless, and hated boys by the hour.

The gray boy would bring in grapes and berries and nuts, and lay them down in plain sight, but out of reach, saying to the pink parrot, "Wait a bit! wait a bit!" And the pink parrot would wait, and while he waited the gray boy made faces.

Parrots have a crooked bill, and the upper jaw is hung with a hinge, like a box-lid. Did you know it?

The gray boy would stand before the pink parrot, and draw his chin in to look like the hooked bill; then he would work his mouth like a hinge. Indeed, the pink parrot was never certain of his breakfast, as to time nor quantity. Ten to one, when a luscious grape was all but in his bill, the gray boy would go out of the room carrying the grape with him. He would say, "Will you have it now, or wait until you can get it?" Maybe he would come back, and maybe he wouldn't.

But the parrot's day came at last. The gray boy had a watch lately given him, a lovely—O! a little darling of a gold watch, that would tick, and need to be real "truly" wound up at night.

The gray boy, one morning, the 24th of December in fact, was to take the half-past nine train, all by himself, to join his papa and mamma at grandpa's in the country. The gray boy had breakfast, and was now all ready to go. He had to brush his coat and put on his watch. He left them up there on the sitting-room table, in readiness, all together, a moment ago. And now, how could he believe his eyes, that his watch was not on the table! The gray boy was in double dismay. It was near train-time, and then the idea that a sneak-thief had been in the house!

All at once, high over his head, there was a shrill laughter. The gray boy looked up. He gave an angry cry. There, in the ebony ring which had been attached to the ceiling for his swing, high out of reach, swung the pink parrot. The gold watch was between his claws, the chain glittering as it hung. As he met the gray boy's eyes, he cackled again and laughed maliciously.

"Wait a bit! wait a bit!" he shrieked.

The gray boy danced with rage. While he was dancing he heard the whistle of the half-past nine train. He wildly flew down to the kitchen. The housekeeper had not returned. He flew up-stairs again, and, tears running down his cheeks, he flew out into the street.

"Will you have it now, or wait until you can get it?"

This was what the naughty pink parrot shrieked after him, cackling with derisive laughter until he nearly fell off the ring.

Just sobbing with helpless rage the gray boy rushed up the walk toward a tall man in blue with a star on his breast. "P'lice! I say, p'lice!"

The policeman was greatly puzzled by the queer, half-understood request; but he went into the house. And whether the pink parrot had been used to seeing policemen in the green forests of Australia and knew him at once, I cannot say; but I know he started, dodged, and nearly tumbled out of the ring when they entered; and carefully taking the watch in his beak he dropped down to the table with it, and, leaving it, scrambled out of the room as fast as ever he could, squealing and cackling like an imp.

The gray boy had his watch again, unhurt; but the day was spoilt, his luscious grape was not brought back. The train was gone, and he had to stay in town all through a lonely Christmas day, and eat a commonplace dinner with the housekeeper. And the pink parrot laughed.—*Elia Farman, in Wide Awake.*

## GOOD HEALTH.

## Sleeplessness.

It is a familiar fact to medical men, says the *Journal of Chemistry*, that thousands suffer from wakefulness who are otherwise in good health. With some of them this becomes a habit, and too often a growing one. Not a few resort to soporific drugs, and the taste for opium is thus often initiated. Others find alcoholic liquors occasionally effectual, and there can be no doubt that in this way the foundation of intemperate indulgence in these liquors has been laid. Many people, however, have found a way of going to sleep without resort to such dangerous measures. For instance, looking at a fixed point steadily will often succeed in inducing sleep; or, if it is too dark to do this, closing the eyes and in imagination watching attentively the stream of air entering and leaving the nostrils. Another plan has recently been proposed by Dr. Cooke, who tells us that in many cases of sleeplessness it is only necessary to breathe very slowly and quietly for a few minutes to secure refreshing sleep. He thinks that most cases depend on hyperemia of the brain, and that in this slow breathing the blood supply is lessened sufficiently to make an impression. Certainly, when the mind is uncontrollably active, and so prevents sleep, persons whose observation was worth trusting have testified that the breathing was quick and short, and they have found they became more disposed to sleep by breathing slowly. This supports Dr. Cooke's practice, but at other times his plan quite failed. It is certainly worth any one's while who is occasionally sleepless to give it a trial. In doing so they should breathe very quietly, rather deeply, and at long intervals, but not long enough to cause the least feeling of uneasiness. In fine, they should imitate a person sleeping, and do it steadily for several minutes.

In no case should opiates or other drugs be resorted to for sleeplessness except under the direction of a physician. The other methods mentioned above may be safely tried by anybody; but if they fail, and the case becomes at all serious, medical advice should be promptly taken.

## Poisonous India-Rubber Toys.

A. F. Taylor, Ph. D., of Andover, Mass., sends the following note to the *Journal of Chemistry*: Prof. B. Tollens, in the *Journal of the Berlin Chemical Society*, of November 13th, 1876, calls attention to the injuriousness of many of the articles manufactured from caoutchouc, which, among other impurities, contain a very large per cent. of zinc oxide. In the rubber nipples of milk bottles for children, this has often been found to be the case, and so much attention has been called to this fact that the manufacture of these nipples containing zinc oxide has to a great extent ceased.

But more recently suspicions have been aroused concerning the quality of children's toys, dolls, animals, etc., made from rubber. One case, in which a child, having one of these dolls, had had it for some time in its mouth, grew sick, and the doll, laid in vinegar, became covered with an incrustation (without doubt zinc acetate), led to direct investigation. In 0.7325 gramme of such a doll, 0.4445 gramme zinc oxide was found, or 60.58%. Another portion gave, after being subjected to a red heat, 62.64 gramme of ash, yellow while hot, white on cooling. In the ash besides the zinc were traces of lime, iron and phosphoric acid. From another doll which had been warranted "harmless," 57.68% of ash were obtained, consisting almost wholly of zinc oxide.

It is not at all improbable that the sickness of the child, particularly the severe vomiting, was caused by the zinc oxide, and it is to be wished that the manufacture and sale of such articles containing zinc oxide could be prohibited.

**BLUE GLASS FOR WEAK EYES.**—Noted oculists in Europe recommend either blue, bluish-gray or smoky-colored glasses as a protection for weak eyes, against the unpleasant effects of red, orange and yellow light. On the same principle the trying reddish-yellow light of candles, lamps and gas on normal eyes as well as weak ones, can be pleasantly modified by the use of blue chimneys or globes, or at least of shades for the reflection of the light, colored a light ultramarine blue. A near approach to daylight is said to be produced by a petroleum lamp with a round wick and a light blue chimney of twice the usual length, the latter causing so great a draft that the petroleum burns with nearly a pure white flame.

A CORRESPONDENT of the *English Mechanic*, in answer to a question as to the best means of keeping the feet dry in winter, says: "A simple plan would be, on having a pair of shoes made, to order the maker to put between the soles a piece of gutta percha as thick as a sixpence. No wet or damp will ever get through. I have adopted this plan for some years. Formerly I had both wet and cold feet continually, which even worsted stockings failed to keep warm; now I wear cotton all the winter, and never have cold feet."

## DOMESTIC ECONOMY.

## Cooking Fish.

The following hints on this subject are taken from an article by the culinary correspondent of the *London Agricultural Gazette*: Fish should be washed as little as possible, and white fish, after being cleaned and wiped with a damp cloth, should have the stomach stuffed with salt for an hour or two before cooking. Fish should be put on in cold water, so that the inner part may be sufficiently done, and also it is less liable to break. This rule holds good, except for very small fish, or for salmon boiled in slices, when boiling water should be used. The time will depend on the kind and size of the fish, but it may be easily known when it is ready by drawing up the fish-plate and trying if it will separate from the bone. Here, as in other things, practice is better than all the directions that can be given, as so much depends on the strength of the fire and the size of the fish. A little salt and vinegar should always be put into the water, and some prefer the fish boiled in what is called a *court bouillon*, and this is how it is done: Lay the fish in the fish-kettle with enough cold water to cover it, add a glass of wine or vinegar, some sliced carrot and onions, pepper, salt and a laurel leaf, a bunch of parsley, a faggot of sweet herbs, or some of the same powdered and tied up in a muslin bag. These seasonings impart a fine flavor to most boiled fish, excepting salmon, and for fresh-water fish it is considered very useful for getting rid of the muddy taste they often have.

Frying fish may be fairly well done by just putting sufficient fat in the pan to prevent it sticking, and cooking it till of a fine brown color; but the artistic mode of frying fish is what is called the wet process, which may be simply described as boiling it in fat. There are different opinions as to what kind of fat answers best, but all agree that butter should never be used, as the expense is great, and the color never so good. Lard is considered by many to be the best frying medium; but Careme, the great French cook, gives the preference to beef fat—not, however, the dripping from the roast, but lard made by melting beef suet instead of the fat of the pig. What we recommend to families as best and most economical is clarified dripping, that is, the fat from the joints while roasting, poured into boiling water, and removed in a cake when cold. But whatever the medium, the great point is to have the fat at a proper temperature before the article to be fried is put in. The skillful cook can see the blue smoke rising just at the boiling point, and then she knows it is time to put in her fish; but for those who are only acquiring experience, it is safer to throw in a bit of bread, and if it takes a fine color in a minute or so, then the fat is hot enough, and the fish may be put in. This is the cardinal point of successful frying. As Brillat-Savarin says: "It all depends on the surprise," that is, on the fat being hot enough, or otherwise the fish will be flabby and greasy instead of crisp and appetizing. Another point to be attended to is that the fat be deep enough in the pan to cover the fish, which should be put into a wire basket that will easily fit into the pan of fat, and then no turning is required. The same fat will do again and again for 20 times, if necessary; all that is needed is to strain it into boiling water; when cold take it off in a cake, wipe off the water on the under side, and put it by for use, of course only to fry fish again.

## Recipe for Pickles.

**EDITORS PRESS:**—Will you please give a recipe for putting up pickles for market, the best method of greening them, and, in fact, the whole process, if it will not be too much trouble. I mean cucumber and mixed pickles.—H. J. RHOADES.

Will some of our readers write as requested above?

**PICKLED FIGS.**—"Pickled figs" (I think I hear some reader exclaim, with a sneer of incredulity,) "Who ever saw pickled figs? I never heard of such a thing!" Perhaps not, my dear sir or madam; but pickled figs are among our choicest and rarest Southern table luxuries, and if some Underwood from Boston, or other purveyor of toothsome delicacies, were to come here and put those delicious sweet pickles up in the tasteful style of Northern manufacturers, and ship them to the North and East and West, it would in a few years require hundreds of acres of fig trees to supply the demand for the raw fruit.—*Florida Semi-Tropical.*

**CREAM AND POTATO PASTRY.**—Six good sized potatoes, boiled and mashed mealy and white, one tea-cup of sweet cream, half teaspoonful of salt, and flour enough to make it stay together, and roll out. Work and handle as little as possible, and roll thicker than for common pastry.

**EGG TEA.**—It is a common but injurious practice for women to take a cup of hot tea on an empty stomach when tired and exhausted. An egg broken into a weak cup of tea, well beaten and mixed with a glass of cold sweet milk, is much less injurious, and really nourishing.

**DELICIOUS CORN GEM CAKE.**—One quart of cornmeal; two quarts of sweet milk; two heaped teaspoonfuls of cream-yeast; two eggs. Bake in a quick oven.





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. B. EWER. G. H. STROGO. J. L. BOONK.  
PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.  
Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters of P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 80 2.00 5.00  
Half line (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00  
Four weeks are rated a month.

Our latest forms go to press Wednesday evening.  
No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, February 17, 1877.

TABLE OF CONTENTS.

GENERAL EDITORIALS. California Sunflower; "Potato Bugs" in Arizona; Oil of Peppermint, 97. The Week; The Outlook in Wheat; The Black Knot, 104. Insect on Acaia Trees; Scenery on the Columbia River, 105. The Japanese Persimmon; The Vine Growers' Memorial; Frank Bros. & Co.; Notices of Recent Patents; Patents and Inventions, 108.  
ILLUSTRATIONS. The California Sunflower, 97; Scenery on the Columbia River, 105.  
CORRESPONDENCE. Scott Valley, Siskiyou Co.; What the Alden Company is Doing; San Jose Nurseries; The Rule for Descriptive Writers—San Bernardino Valley, 98.  
HORTICULTURE. Points on Handling Fruit, 98-9.  
THE STABLE. On Draft, 99.  
SHEEP AND WOOL. The Wool Industry in California, 99.  
POULTRY YARD. Poultry for Farmers, 99.  
PATRONS OF HUSBANDRY. Sacramento Grange and General Grange Interests; Election of Officers; From the Granges; In Memoriam, 100.  
AGRICULTURAL NOTES from various counties in California and Washington Territory, 101.  
HOME CIRCLE. A Dutch Picture; Poetry; Offices of Reason—No. 2; Handy Men; Effervescence of Current Events, 102. The Artist and the Mother; The Right Kind of a Wife; She was Qualified; Common Sense; The Best Friend; Friendship and Civility, 103.  
YOUNG FOLKS' COLUMN. The Pink Parrot and the Gray Boy, 103.  
GOOD HEALTH. Sleeplessness; Poisonous India-Rubber Toys; Blue Glass for Weak Eyes, 103.  
DOMESTIC ECONOMY. Cooking Fish; Recipe for Pickles; Pickled Figs; Cream and Potato Pastry; Egg Tea; Delicious Corn Gem Cake, 103.  
QUERIES AND REPLIES. The Apple Root Louse; Sonoma Oranges; Beach Sand; Sick Hogs; Leaky Tanks; Irrigation with Plow and Hoe, 104.  
THE DAIRY. Dairy Ranches of Hon. J. McM. Shafter, 103.  
THE STOCK YARD. Bots, 106.  
THE APIARY. Bees Biting Blossoms, 106.  
ARBORETCULTURE. White Redwood, 106.  
USEFUL INFORMATION. Utilization of Sea-weed; Mummies Converted into Paint; Load for a Man; Artificial Beeswax, 106.  
MISCELLANEOUS. The California State University; Portable Steam Engines; The New Star; The Oldest Plant; Narrow-Gauge Progress; The Moral Value of Physical Strength; Sunday Trains in Canada, 106.

NEW ADVERTISEMENTS.  
Public Sale of Short Horn Cattle, Cyrus Jones & Co., San Jose, Cal.; 25 Fancy Cards, J. B. Husted, Nassau, N. Y.; Cast Steel Plows, Collins & Co., N. Y.; Pear Seedlings, Hunter & Brewer, Springfield, N. Y.; White Leghorns, C. P. Stone, Hardsburg, Cal.; Landscape Gardening, Chas. A. Reed, Santa Barbara, Cal.; Webster's Dictionary, G. C. Merriam, Springfield, Mass.; Roses, Dingee & Conard, Chester, Pa.; 25 Elegant Cards, Geo. L. Reed & Co., Nassau, N. Y.; Trees, F. K. Phoenix, Blooming-ton Nursery, Illinois; Flowers, Hoopes, Bro. & Thomas, West Chester, Pa.

The Week.

The week has brought another rain, gentle and refreshing. It has fallen upon nearly the same surfaces which were gladdened before, and adds to the assurance of prosperity and good crops in the coast, center and northern counties of the State. A few places which have reported their season's rainfall, with the latest additions, are as follows: Santa Rosa, Sonoma county, 13 inches; Vallejo, Solano county, 7.46 inches; Sacramento, 7.13 inches; San Francisco, 8.49 inches; Stockton, San Joaquin county, 5.90 inches; Niles, Alameda county, 6.18 inches. It does not yet appear that the upper San Joaquin and the southern coast were included in the dispensation. We trust they may not be forgotten the next time the clouds gather.  
The jewels of the early gardens continue to deck the city marts. The week notes new potatoes, green peas and rhubarb in addition to those which came before. Spring lamb comes with the peas and vies with the flowers in ushering a fragrant spring-time. Thus we are nearing again another season of our State's grand productiveness. Affairs will now progress in the bright course marked out by the gifts of the elements until the pleasant activity of the harvest will awaken all to quick thoughts and deeds.

ON FILE.—"Replies to Poultry Inquiries," M. E., Jr.; "Vermont and Other Merinos," S. W. J.; "Remedy for Rheumatism," I. A. W.; "Education," J. S.; "Offices of Reason," J. G. L.; "International Co-operation," B. P.

The Outlook in Wheat.

Another rainfall, which embraces in its area a good part of the great wheat regions of this State, renders surer the prospect of a handsome surplus for export, and sharpens the grower's interest in the outlook for wheat abroad. Although the possibilities of a war demand have almost if not quite cleared away, there are still grounds for expectations in the conditions of legitimate demand and supply. Although during the last three or four weeks there has been a gradual decline in Liverpool quotations, amounting in the aggregate to 6d per cwt., the tide seems to have turned, during the past two or three days, and a slight advance is recorded. The opinion, among those engaged in the city trade, seems to be that the bottom for this crop has been reached. We propose to present, in this connection, such information as we have, mainly from foreign sources, which seems to indicate that such a judgment is well founded.

The London Board of Trade returns, for the year 1876, shows the following imports of wheat into Great Britain during that time, as compared with two previous years:

COUNTRIES.	1874.	1875.	1876.
Russia, cwt.	5,714,488	9,995,295	8,760,260
Denmark, do.	167,286	493,599	262,518
Germany, do.	3,053,080	5,615,984	2,824,148
France, do.	300,299	1,296,920	293,350
Turkey, Wallachia, and Moldavia, do.	650,676	1,308,137	1,238,851
Egypt, do.	293,880	2,093,853	2,218,27
United States, do.	23,048,552	23,463,910	19,299,785
Chile, do.	1,925,334	900,880	982,617
British India, do.	1,076,876	1,334,943	3,279,887
British North America, do.	3,807,174	3,864,616	2,417,151
Other countries, do.	1,422,215	1,673,262	3,308,556

By summarizing the last two years' results, it appears that the imports in 1875 were 51,596,393 cwt., and in 1876, 44,394,142 cwt., a decline in last year's imports of 7,002,251 cwt. It will be noticed that all the leading producing countries reduced their shipments to the English markets. What increase there was in individual imports was from India and the unnamed countries. These facts, taken in connection with the deficiency of the last English crop, which we have alluded to several times formerly, go to explain the conditions of stocks on hand in England, January 1st, 1877, which were 4,800,000 cwt. less than January 1st, 1876. The view which is taken of this state of affairs in England is just such as we would expect, and points to large requirements during the coming months. The London correspondent of the New York Financial Chronicle describes the condition as follows:

"The stocks of foreign wheat in the United Kingdom have also been reduced considerably, and there is much reason to believe, therefore, that, even apart from political considerations, a firm tone will pervade the trade for some time to come. Our wants are very great, and had it not been that the stocks of wheat on hand at the close of August last were very considerable, the rate of importation for the current season would have been far below our requirements. At the present moment the prospect with regard to supplies is less satisfactory than it was at the commencement of the season, for the supply of wheat afloat is by no means great, considering how vast are our wants, while not only has a large inroad been made into the accumulated stocks of foreign produce at our out-ports, but a very considerable proportion of our home crop has been consumed. In fact, the English crop, owing evidently to the financial necessities of the farmers, who have for two seasons sold their wheat at a low price, has been marketed very freely, and it is quite clear that for the remainder of the season the deliveries at market must be very small. It must be admitted that there is not at present any prospect of supplies exceeding our great requirements, and consequently it would take but little to stimulate a further upward movement in prices."

The stocks of wheat in England being thus shown to be reduced and the home crop having been closely mortgaged, it remains to see what effect the amount of wheat now afloat and bearing down upon English ports can have upon the trade of the coming months. A letter in a recent number of "Beerholm's Corn Trade List" states that the question of wheat supply for the United Kingdom for the coming four months seems to some to be entirely settled by the fact that 2,000,000 quarters are on the way, but as the requirements for that period are estimated at 1,200,000 quarters, there is a deficiency of 700,000 quarters in the available supply. During the same period in 1875-6, viz., from December 1875 to March 1876, inclusive, the quantity required to supplement the 2,000,000 quarters was 2,300,000 quarters. The amount to be drawn from the same sources this season is estimated as follows:

1876-77.	On passage Dec. 1st, 1876.	Supplementary to arrive before Mar. 31st.
Russia.....	425,000	150,000
Denmark.....	.....	150,000
Germany.....	.....	200,000
France.....	10,000	25,000
Turkey, etc.....	45,000	100,000
Egypt.....	1,225,000	.....
U. S. & California.....	75,000	450,000
Chile.....	60,000	.....
India.....	115,000	175,000
Sundries.....	45,000	150,000
On Passage.....	2,000,000	1,400,000
Supplementary.....	1,400,000	.....
Four months' consumption.....	3,400,000	.....
Prospective deficiency.....	1,000,000 qrs. in 4 months.	.....

The writer adds: "It may be said that the stocks in the granary are still large and will make up for any deficiency in imports. But there are no longer excessive stocks. The excess has already vanished in the last three mouths of small imports."

This is the outlook, according to the best information we can get of its features. It is very promising for the coming crop, because the promise is of a close consumption of all wheat now in existence before the new wheat comes from the thrasher. In addition to this, it may be stated that the cutting off of the Indian crop, or at least the consumption of what there may be of it at home, with possible drafts from elsewhere, tends to influence the supply for the coming season. By the table above, it is shown that the imports from India in 1876 amounted to something more than 3,250,000 cwt., which placed her next to the United States and Russia in the list of importing countries. The coming year India can promise nothing. The London Times dispatch from Calcutta says: "In the week ending February 2d, the number of persons engaged in relief works decreased 34,000 in Bombay, and 39,300 in Madras, as compared with the number employed the previous week. The decrease is attributed to the reduction of wages and exclusion of persons not really destitute. But there has been no rain, and no improvement in the condition of the crops."

The Black Knot.

EDITORS PRESS:—I have found a black knot on a plum tree. I did not know before that the excrecence known as black knot troubled the trees in California. What is it?—S. W. JEWETT, Kern county.

This is the first intimation we have received that the black knot had found its way to this State. We have not received any specimen, but as we know Mr. Jewett to be a careful observer, both East and West, we fear his announcement is accurate. What the black knot is has been a vexed question among orchardists, entomologists and hotanists for a great many years, but now students quite generally agree in pronouncing it the work of a fungus. The latest information on the subject we find in a recent issue of the Bussey Bulletin, which contains a detailed record of observation, by Professor W. G. Farlow, of the Bussey Institution. The following is a condensation from this report: "The black knot grows upon the plum and cherry trees, and is one of the most destructive of fungi. As its name indicates, it forms black warty excrecences on the twigs and branches, which are very conspicuous in the winter season, when the trees are not covered with leaves. This disease is confined to America, where it has proved a severe pest to the fruit growers. The size of the knots varies greatly, being found all the way from a few lines to several inches in length, with an average of two inches in circumference. The knot does not usually entirely surround the branch, but growing from one side often causes the branch to bend or twist into an irregular shape. The fungus first reaches the cambium, or growing layer by germination of spores on the surface of the branch, or by the mycelium proceeding from a neighboring knot. In the spring the affected portion of the branch increases rapidly in size, and the mycelium soon reaches and bursts through the bark, so that in early summer the knot has reached its full size, though differing from an old one in being still greenish in color, and solid or pulpy in consistency. As autumn approaches the knots assume their black color, the inner portion being either destroyed by insects or reduced to a powdery mass, with only the hard outer shell left in place. In this hard crust the spores are borne in cells, always to the number of eight.

The black knot is far from being of recent origin, and has furnished a subject about which vastly more has been written than was known. Many, especially the early writers, held it to be of insect origin, while, later, others have looked upon it as a vegetable growth, and still others included in its production both these forms of life. During the last 30 years the insect theory has been gradually given up by entomologists, but it still remains for many fruit growers to accept the knot as being of fungous origin. The proof given by Dr. Farlow in his paper on this subject is very conclusive: "First, the knots do not resemble the galls made by any known insect. Secondly, although insects, or remains of insects, are generally found in old knots, in most cases no marks at all are found in them when young. Thirdly, the insects that have been found by entomologists in the knots are not all of one species, but of several different species, which are also found on trees which are never affected by the knot. On the other hand, we never have the black knot without the *Sphaeria morbosa*, as was admitted by Harris, and the mycelium of that fungus is found in the slightly swollen stem long before anything which could be called a knot has made its appearance."

With a knowledge of the nature of this disease the remedy at once suggests itself—namely, to cut off the knots, together with the swollen portions of the branches, wherever and whenever they are found. This can be best done in autumn after the leaves have fallen. The knots should be burned, otherwise the spores will ripen the same as if the knots were left on the trees.

QUERIES AND REPLIES.

The Apple Root Louse.

EDITORS PRESS:—I send you herewith a piece of the root of an apple tree, and I want you to tell me all you know about it. I had occasion to buy a few trees from a nursery on the Salinas, and noticed the roots appearing a little moldy. The weather having been very damp, and "muggy" here lately, I presumed that the dampness had affected the roots; but on closer examination I found that on the roots that were milder there were many small excrecences; while on some, as on the piece I enclosed, these excrecences formed a border round an enclosed portion of dead root.

I had heard of apple tree canker, but on looking up my authorities it appears not to show the symptoms that are described as attending "canker." Moreover, on cutting into the knots no insect appears to the naked eye. Can you tell me anything about it? What is it? What causes it? Will it spread from tree to tree in an orchard? Is it likely to kill the tree? I cut off the excrecences and piddled well the root. I am anxious to know especially whether there is any chance of the disease spreading to healthy trees, as my orchard has heretofore been very thrifty, and I had just added a lot of very fine, vigorous trees. —EDWARD BRWICK, Carmel Valley, Monterey Co., Cal.

The root under the microscope shows the work of the root lice which were described in the RURAL of Feb. 3d. The insects are seen in a dried and shriveled condition, and are chiefly vestiges of the last generation. No young lice were seen. The whitish substance which Mr. B. took for mildew is the debris and wooly exudation of the lice. There is a chance that the insect will spread, because cutting off the parts seen to be affected does not destroy the lice which may be at the time on a prospecting tour over the healthy roots and bark. The true way is to dip all young trees in weak lye when they come from the nursery. This will do them no injury and will be nearly a complete surety against the ravages of root lice. A weak lye may be made with wood ashes or by using one ounce of commercial potash to a pint of water. As Mr. Berwick has his trees all planted, and if he took precautions to burn the most affected parts, he can do no better now than trust the strength of the trees to cope with whatever lice remain and watch for future results, when perhaps some treatment like that mentioned in our issue of Feb. 3d may be necessary.

Sonoma Oranges.

EDITORS PRESS:—I send you to-day a sample of oranges grown on the ranch of C. C. Carriger. He has planted about 150 trees; four of the trees are now bearing. The largest tree bore this year over 900 oranges, 800 having already been gathered and sold in the town of Sonoma. I think they will compare favorably with any you have received. The ranch is situated along the foothills, about four miles from the landing of the Sonoma steamer. The trees need no protection from frost and grow rapidly. —MRS. C. C. CARRIGER, Orange Grove, Sonoma county.

The oranges are the finest sample we have seen this season. They are of splendid size, one measuring 11 inches around the belt, and are superior in color and clear rind. The flavor is rich, sweet and true. Oranges like the sample would be worth in this market \$5 per thousand above our highest quotations. The tree has doubtless made a good record for its owner this year. Mr. Carriger's locality is a favored one, and well known throughout his part of the county.

Beach Sand.

EDITORS PRESS:—Will you kindly answer through your columns whether a mixture of ocean sand (taken above high water mark), with good surface soil, would be injurious to the plants in a flower garden? The soil in my garden is inclined to bake and requires sand to keep it loose. River sand is very distant, and I wish to know if the ocean sand available will not do just as well. —A SUBSCRIBER, Santa Monica, Cal.

We should have no fear of it in the amount needed for the purpose. It might be well to take a little of the sand and wash it in a small amount of water. If it only makes the water a trifle brackish, no fear need be had of it. A very small amount of salt is not harmful, and may be of benefit. If the sand should be found unusually salt, draw it up and let it lie through a rainstorm before putting on the garden. This is perhaps an extra precaution; if well incorporated with the soil, we should have no fear of the beach sand.

Sick Hogs.

EDITORS PRESS:—I have lost several hogs in the last few years with a disease like inflammation of the lights. Symptoms are as follows: The hogs refuse to eat. If in a pen, they will put their noses to the cracks and act as though they were in distress for want of breath. If they are outside, they walk around in a circle and appear stupid, with head down. They breathe hard and quick and grow worse for two or three days and die. Examination shows the lights full of blood when they are dead. I also have hogs with lumps under their throat from the size of a walnut to the size of one's fist. If any of your readers can give me a remedy through your valuable paper it will be thankfully received. —CONSTANT READER, Santa Maria, Cal.

We should be pleased to receive facts and remedies on these points from our readers.

Leaky Tanks.

EDITORS PRESS:—I adopted the following for a leaky tank more than a year ago, and it has not leaked any since. First, I poured a quantity of charcoal and sifted it through a meal sieve till I got the fine powder or dust. Then mixed it with lard so as to make a thick paste. This paste may be kept in a ball for years ready for use when needed. This paste is used to some extent in the East in the cheeks of sap troughs in the sugar bush. It does not impart a bad taste to the water, and is not considered injurious. Do not fail to put on plenty of it, where the holes or seams are large. —I. A. W., Santa Clara, February, 1877.

Irrigation With Plow and Hoe.

EDITORS PRESS:—There was a little misprint in my article in your last issue in regard to irrigating trees. I know from experience that the idea of irrigating trees in this section of country is altogether useless. In relation to tree culture my communication as printed recommends irrigation after setting the trees out, when it should have read thus: "Prepare the ground well before setting the trees out, and then irrigate liberally with the plow, harrow and hoe," aiming to convey the fact that plenty of work is more essential than water artificially applied. Please correct, for I should dislike to make the impression that our part of the country requires irrigation to warrant success in raising timber. —J. W. DARBY, Deer Valley, Contra Costa county.



## Insect on Acacia Trees.

We have received from Anna Rosecrans, of San Rafael, Marin county, a very carefully packed box of specimens of an insect which is making grievous inroads upon the acacia and other trees and shrubs, with a request that we classify the insect and name remedies. The insect is plainly one of the *Coccidae* or family of scale insects, and is a relative of the cochineal, the wax-producing *Coccus*, and of the smaller scale insects which infest our orange and other fruit trees. The specific name we cannot give at this time, for it is a species which we do not recognize. It is not the species which is found on the acacia trees in Eastern greenhouses. We expect at another time, with the aid of Mr. Edwards, to fix upon the particular name of the pest.

Our correspondent notes below the exceeding quantity of the insects which appeared upon her trees this year. We think this was due to the prolonged drouth and we surmise that the abundant rains which have fallen at San Rafael since the notes below were written have alleviated the evil somewhat. What shall be the remedy for this and other scale insects is now the problem. The best means known to destroy them is by scraping the branches and applying strong alkaline washes. But how is one to apply such a remedy as this to a grove or an orchard? It will do very well to a few trees or bushes, but it is too expensive, both of time and material, when the trees are many. There is no doubt that carbolic acid, which our correspondent applied, will kill the insect, but who can carbolate a grove? This is the problem which presses upon the orchardist for solution. It does not appear that present remedies are sufficient, but new discoveries in the warfare against insects must be made. One point at least in this warfare must be to increase the number of students. If we had an observer like Anna Rosecrans in every township in the State, much valuable information of the common enemy would be gathered. Her writing on the subject of the acacia insect will be read with interest.

An insect was first noticed at San Rafael on acacia trees four or five years ago. Its appearance at first sight is like a grayish white blister, from the size of a small coffee grain to three or four times that size. It adheres generally to the sheltered side of limbs, where the bark is smooth and thrifty. Examined more closely, the upper part is of orange color, tipped with black and frosted with white, while the lower portion of individuals of average size is pure pearl white.

Examined under a pocket lens the insect has a tortoise shape and the smallest size is humpy, salmon-colored, fringed with a number of white hairs half as long as the body.

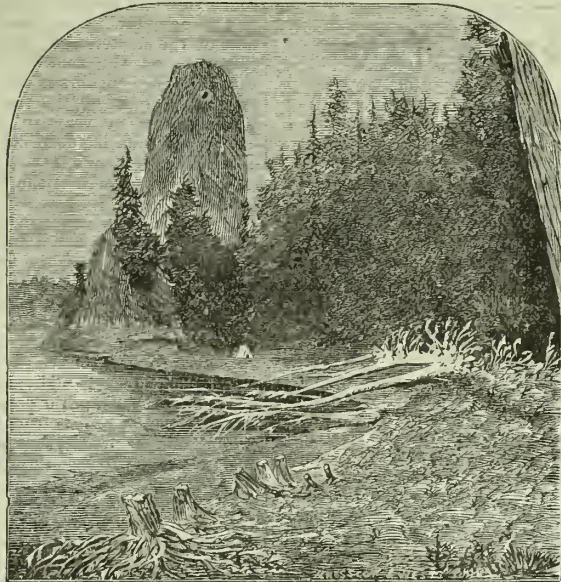
It has three slender black legs on each side and two jointed antennae, thicker than the legs. The next larger size noticed appears adhering very closely to the bark, more torpid, and the salmon color seems purplish. The edge of the body begins to be fringed with the white substance, which seems as if it were made of cocoon material. In the larger individuals the salmon color has more dark spots, and is more frosted over, the white material extending into the form of a ribbed sack, which seems to become larger and larger, until from one to four times the size of a grain of coffee. The corrugations of the sacks radiate longitudinally from the edge of the insect, running nearly parallel to each other, and in the one I examined, I counted 15 or 16, reaching to the base of the sack and ending in a scalloped edge. The body of the insect is frosted with a white substance, similar in appearance to that of which the sack is composed and through which its legs project.

On opening these sacks with a sharp-pointed pin, they are found to be filled with a large number of bobbin-shaped, salmon-colored eggs, about 1-48th of an inch long and from 1-100th to 1-120th of an inch in diameter, apparently. The insect appears to have the greatest powers of locomotion soon after being hatched, when its body is nearly the color of the egg, but a little larger in size. Its slender legs are hard, black and shiny, its body is delicately frosted and fringed with short white hairs of irregular length. The places on the bark to which it adheres become roughened and browned, showing that the insect derives its nourishment from the tree, which is further proved by the fact that when they are numerous on a tree it becomes sickly.

The power of locomotion does not appear to be great, but here they have spread slowly from the acacia trees to the Australian pea-vine, rose bush, honeysuckle, ivy-geranium and laburnum tree. They also appeared on weeds in the orchard and thence spread to the nearest young fruit trees, seeming to favor equally the pear and peach. To get rid of them resort was had to whale oil and soap suds, with which the trees were washed, and the day after rinsed off with water. This seemed to stay their increase

but did not destroy them. As a last resort the trees themselves were cut down and burned, but the insect takes new habitations on the neighboring plants above mentioned. I have just applied with a feather a saturated solution of carbolic acid to the insect on some of our vines and trees and to some individual insects, which it killed. Should I find the free application of carbolic acid successful, I will be glad to give you the result.

EFFORTS IN BEHALF OF CITY BOYS.—We have alluded to the work of the "Youth's directory" in obtaining homes for homeless city boys. We learn now from the report of the Superintendent, Ambrose P. Dietz, that during the ten months ending January 1st, 1877, two thousand five hundred destitute lads were rescued from the streets, provided with situations, and surrounded with moral influences; while very many others were furnished with free meals and lodging. All this was accomplished, including



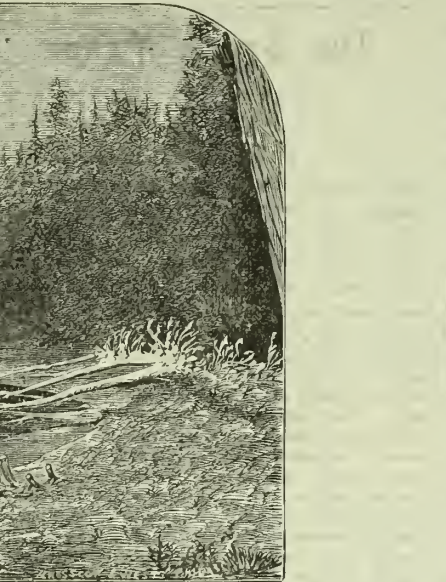
ROOSTER ROCK, COLUMBIA RIVER.  
43 miles from Portland.

office expenses and the salary of the incumbent, with an average income of only \$77 per month. Without the assistance and protection from this bureau, there is no doubt that most of these lads should have suffered for the necessities of life, or committed offences against the law. Criminal statistics show that the inmates of our prisons and reformatories are generally young persons. Mr. Ambrose P. Dietz, Secretary and Superintendent, House of Reception, 1417 Howard street, is authorized to solicit contributions in cash. He will also receive, and

## Scenery on the Columbia River.

The Pacific coast is rich in natural scenery from end to end. It has the grand elements of mountains and rivers to weave into its landscapes. The glaciers and rivers in many cases have been the sculptors and the mountain sides have been the marble. The result is a most wonderful variety of rock exposures, which command the silent admiration of the one who views them because of their grandeur and magnitude. These remarks are especially true of the scenery of the Columbia river of the north. The little sketches which we present on this page this week represent scenes which are sublime in their proportions.

Cape Horn derives its name from the danger in passing; it is a bold promontory, situated on the north side of the Columbia river, in the Territory of Washington, about midway between the Cascades and the Dalles. The river bends



around it from the northeast, the channel keeping mid-stream, in which are numerous rocks that rise above, or near to the surface of the water, which, together with the high winds that often blow a strong gale "around the horn," dashing the waters into a foam against the rocks, make the passage a dangerous one, even for the most skillful oarsman.

This promontory is of basaltic formation, like most others on the Columbia, and rises near 250 feet perpendicular from the water's edge, and extending about a mile in length, the lower part

are a continuation of the Sierra Nevada mountains of California, and are the central range. The eastern ridge is above the great falls of the Columbia. The western is along the shore of the Pacific ocean, called the Coast range.

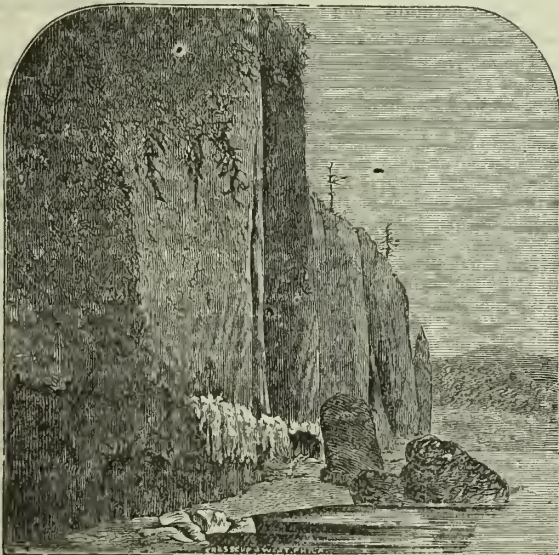
The Columbia has three large falls in the distance of 700 miles: the Cascades, 130 miles from the ocean; the falls of the Columbia, 40 miles above the Cascades; and the Kettle falls, 530 miles above the Columbia. Besides these falls, there are many dangerous rapids. On the Southern Columbia, Lewis, or Snake river, as it is more commonly called, which unites with the main river a few miles above Old Fort Walla Walla—now Wallula—there are two great falls, known as the American and the Shoshone, the latter being 362 feet perpendicular, with cliffs towering on each side 1,000 feet from the water's edge.

The Cascade range is the most important of the three ranges of mountains named, and derives its name originally from the great number of beautiful cascades which pour out of almost every ravine and crevice of the mountains, many times from the very summit, presenting in the sun's rays a grand constellation of glittering jewels.

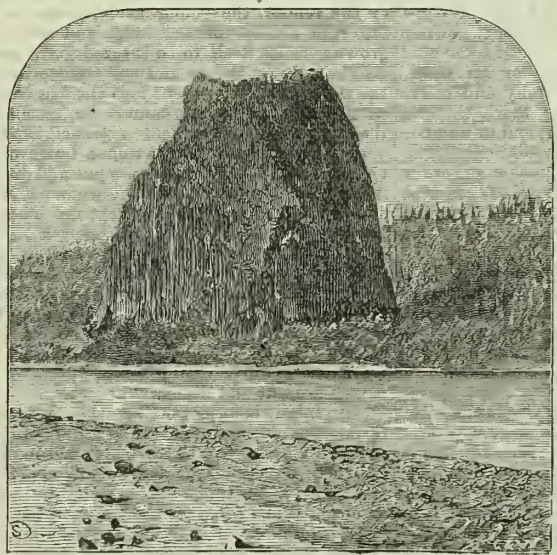
For varied and remarkable scenery the Columbia, for 1,000 miles from its mouth, is certainly the most notable of any river in the world. The most magnificent views of earthly scenery are presented from different points. High mountain peaks, covered with perpetual snow, are to be seen in all directions. Among these peaks the most notable are Mt. Hood, Mt. Jefferson, Mt. Adams, Mt. St. Helen, Mt. Rainier, and the Three Sisters. The sight is grand beyond description. At places the country, as viewed from the river, looks barren and worthless, and the waters move sluggishly towards the sea. At others, the country presents the most beautiful appearance, with gardens, vineyards, crops and herds—a perfect Elysium. Again it is covered with thick forests of heavy timber—or the broad, rich bottom lands are awaiting the husbandman to yield a thousandfold the seed sown. Another view and we have the submerged forests; then again the towering basaltic cliffs rising on each side from 1,000 to 1,500 feet in height, through which the river runs with a rapid current. Many beautiful cascades are to be seen on each side, while passing along this narrow channel; some of these in their fall from the heights are lost in spray before they reach the river below, while others come pouring down from over the cliff, hundreds of feet above, in one unbroken sheet. Many of these falls would present at a distance the appearance of a mountain-glacier, were it not for the fine sheets of spray, which are wafted by the winds in clouds hundreds of feet away.

The climate in the valley of the Columbia and its tributaries is unusually healthy, and unrivalled by any in the Union.

CORK OAK.—The Santa Barbara Press says: Commissioner Watts, of the National Agricultural Department, has asked for the results of a distribution of cork acorns made by his office. In response we state that 15 years ago Mr. Hinchman, of San Diego, then resident here, received some acorns from Washington, and planted some and gave five (described as being 2½ inches long) to Captain Trussel. Those planted by Mr. Hinchman failed to live, and of the five planted by Captain Trussel four were destroyed by squirrels. One tree is now standing on the lot at the corner of Montecito and Castillo streets. It is an evergreen oak about 20 feet high and covers about as much area. At the foot it is 40 inches in circumference, and six feet from the ground, where it begins to branch, it is 30 inches in circumference. The leaf is very similar to the California live-oak, except that the under side is whitish. The tree, though carefully watched, has never been known to fruit. As Captain Trussel does not permit specimens to be cut we had to be satisfied with sticking a knife into the bark; it



CAPE HORN, COLUMBIA RIVER.  
45 miles from Portland.



CASTLE ROCK, COLUMBIA RIVER.  
57 miles from Portland.

duly acknowledge, any donation of clothing or provisions for the Home.

PERSONAL.—We had a call during the week from W. R. Robinson and brother, who are farming in the Mussel slough country, getting their mail at the newly established post-office, Hanford. The Robinsons are making a specialty of fine hogs, and are breeding thoroughbred Berkshires, besides crossing thoroughbred boars upon common hogs for the pork market. They are young men of much spirit and enterprise and we doubt not will do much to farther spread the fame of their famous locality. They were thoroughly educated at the English agricultural schools at Cirencester, and propose to graft upon their California enterprises the methods of investigation and scientific economy which are there inculcated. They pronounce the Mussel slough country justly entitled to its reputation for agricultural greatness. We hope to hear from them in articles which may be suggested by their observation and experience.

projecting several hundred feet out into the river. Near the summit, and from many crevices of the cliff, a kind of fir, or stunted cedars are to be seen, which add materially to the charm of this otherwise most romantic locality.

Only a short distance above Cape Horn, on the south, or Oregon side of the river, is situated another perpendicular rock of peculiar basaltic formation, "Rooster rock," and still another, which rises from the middle of the river for some hundreds of feet, called "Lone rock," or "Castle rock." At another point a tiny stream of sparkling water pours over the cliff in one unbroken fall, 700 feet in height.

The Columbia river is navigable a distance of 130 miles, from the ocean to the Cascades, the head of tide water. At the Cascades, Dalles and several other places, railroads have been built around the falls and dangerous rapids, which connect with steamboats of light draft, which run up the Columbia and its numerous tributaries for 700 or 800 miles distant.

There are three general ranges of mountains west of the Rocky mountains, running in a northern and southern direction: the Cascades

penetrated readily through a smooth, good quality of cork bark to a depth of an inch and a half. As all cork used in the United States is imported, and the wine interest of California is growing so fast, it may be well worth while for our enterprising agriculturists to plant the cork acorn, as this soil and climate are eminently well adapted for it.

PRIZE ROOT SHOW.—William Rennie, seedsman, of Toronto, Canada, send us his annual catalogue for 1877. It is a fine publication. We note, among other interesting things, the announcement of Mr. Rennie's prize root show for the coming season. He offers 14 cash prizes and a gold medal for the heaviest six roots grown from his seed. The prizes are arranged in pairs for seven kinds of roots, which are enumerated. We see no reason why a California grower should not bag the whole lot if he cares to try.

THE RURAL PRESS.—This is the best farm and stock journal in the world for the Pacific coast reader.—*Vivian Delta*, Feb. 10th.



## THE DAIRY.

### Dairy Ranches of Hon. J. McM. Shafter.

EDITORS PRESS: Having in my holiday trip spent five delightful days at the "Home ranch," on the Point Reyes property of Hon. Jas. McM. Shafter, in the family of his brother in charge, Mr. William N. Shafter, I collected facts of some interest in dairy culture as prosecuted on the leasing system practiced by owners of large dairy properties in this State. To persons looking for homes among us, any details that throw light on the business life of the State and its facilities, are of practical value. Every thing Californian has its peculiar features, the dairy business furnishing no exception.

Hon. James McM. Shafter's Pt. Reyes dairy farm is a property of 20,000 acres, occupied by several dairy ranches, of which the Home ranch on King's point is one, and joins the dairy properties of Mr. C. W. Howard, and the estate of Judge Shafter, described in the RURAL PRESS in December, 1875, and was originally a third interest in the tract of which they represent the remaining two-thirds. To bring the tract or grant into a more desirable shape, these gentlemen some time since sold a portion at \$7,000, for which its present owner is receiving an annual income (rent) of \$10,000.

Messrs. Shafter and Howard have purchased large adjoining tracts until they are possessed of some of the largest real estate properties in the State, and probably there are none which make better returns in their staple products—both owners and renters of these dairies receiving considerable profits.

The dairy ranches are located at convenient distances for pasturage and care of stock, and subsist on an average 170 cows each. They are leased for a term of three years. The cows, buildings, dairy fixtures, with lime, lumber, etc., for repairs, are furnished by Mr. Shafter. The renter, in consideration of their use, pays an annual rent of \$27.50 per cow, and raises for the owner one heifer calf to each five cows. At the expiration of his lease the renter makes good any loss in the number of cows received, and then if there remain any stock raised on his own account it belongs to the ranch, he receiving therefor \$10 per head. The calves raised are weaned at once and fed on skimmed and buttermilk.

The ranchers income, from which he must deduct his cash rent, wages of help and expense in movable dairy furniture, may be summed up on the average as follows: Buttermilk, 175 pounds per season, at 37½ cents, net. Pork per annum from dairy slops, \$1,000 worth. To which may be added the \$10 per head for any surplus stock—after making up losses of cows and counting out the calves raised for the owner of the ranch.

The renter may raise "keep" for his team, vegetables and roots for his family and cows, and poultry for his table or market. The buildings present a neat exterior, and in number and size suggest ample accommodations. The Home ranch dairy house is a model of order and neatness, and the butter manufactured is of the finest quality. Pickled rolls laid down in spring had the freshness and flavor of late made.

This is essentially a dairy region. Surrounded almost by the ocean, the presence of fogs and the absence of frost secure green feed for stock the year round; while the cool, even temperature of the atmosphere is an essential condition in the successful manufacture of butter.

Potatoes and hardy garden vegetables also thrive here—anything that likes a cool, moist, and much shadowed exposure. But fruit culture, within range of the ocean winds, is nowhere a success. Good springs and well stocked trout brooks and salt water fish are among the luxuries, and for lovers of the chase I must not forget to mention an abundance and variety of game, on foot and on the wing. Farm animals occasionally fall victims to the more savage denizens of the forest and woody undergrowth, of which there are long stretches interior from the ocean bluffs, and on the mainland side of this long, narrow strip of country. From the ocean inland, in the vicinity of the Home ranch, the surface of the country presents the appearance common to baldheaded, stoop-shouldered mountain swells, rising sometimes to the dignity and beauty of mountains dressed in green; with here and there, scooped out from among their tangled feet, irregular, cozy levels, or basins, covered with rich growths of native grasses, furnishing fresh pasturage, or subdued to domestic uses—as in case of the Home ranch. The cozy, sheltered nook, with its choice evergreen shade trees and flowers, becomes a beauty spot, suggesting taste, culture and successful industry. Isolation from society is the one objectionable feature of life on stock and dairy ranches, which can be atoned for—not removed—by means and leisure for home association and culture, friends, books and music. And these, in the unostentatious conditions of simple country life, are surely possible where the rancher understands his business and, seconded by wife and children, leads head and heart to so happy

a consummation. For every department of his business he can find competent and reliable help, and the profits of the renter assimilate more nearly to those of the capitalist than in any other department of farming. The Point Reyes country is reached by steamer from San Francisco to San Quentin, thence by the narrow gauge North Pacific Coast railroad to Garcia station; whence a drive of some four miles brings one to "The Oaks," a handsome country seat built by Hon. Jas. McM. Shafter (the buildings costing some \$30,000) and recently presented to his son, Mr. Payne Shafter, with the 700 acres attached to it, known as the "Garcia ranch." Six miles farther is the Home ranch.

My article is already too long and yet not to say one good word for the hundreds of fine, motherly cows—mostly Short Horns with a few Jerseys—would be as unkind to them as wanting in appreciation of the owner's taste in the choice of stock for his dairies. We have no such cows hereabout—"more's the pity!"

MRS. C. I. H. NICHOLS.

Ukiah, Mendocino Co., Cal.

## THE STOCK YARD.

### Bots.

Prof. C. V. Riley gives the following essay on bots, those grievous pests of the stock grower:

Almost all cloven-footed animals, and many other herbivorous species, are infested with bots. These are legless grubs which fall into three categories: 1. Gastric, or those which are swallowed by the animal infested, and which live in the stomach in a bath of chyle. 2. Cervical, or those which crawl up the nostrils and inhabit the frontal sinuses. 3. Cutaneous, or those which dwell in tumors just beneath the skin. They are all the larvæ or early state of two-winged flies (diptera) belonging to the family *ostridae*, characterized by having the mouth parts entirely obsolete, and popularly called gad flies or bot flies. In the first series, of which the horse bot (*Gastrophilus equi*) is the most familiar example, the eggs are attached by the female fly to the hairs of the body, and principally on those parts of the body within easy reach of the animal's mouth. The egg opens with a lid, and the young maggot upon hatching clings to the tongue as the animal licks itself, and is thus carried into the fore-stomach, to which it holds tenaciously by a series of spines around the body, but principally by a pair of sharp hooks at the head.

When fully grown, they leave their posts with the faeces, burrow in the ground and undergo the final transformation. In the second kind, of which the sheep bot (*Esthus ovis*) will serve as an example, the egg generally hatches within the body of the parent, and the young grub is deposited alive on the slimy nostrils of its victim. By means of a pair of long and sharp hooks at the head, and bands of minute spines on the venter, the young grub works its way into the sinuses of the head, and when full grown permits itself to be sneezed out, when it also burrows in the ground and transforms. In the third kind, the parent lays the egg on those parts of the body which cannot be reached by the mouth of the animal attacked, and the young grub, which soon hatches, burrows into the flesh and subsists upon the pus and diseased matter which results from the wound inflicted and the irritation constantly kept up. The well-known worm, or ox bot (*Hypoderma bovis*) so common along the backs of cattle, and especially of yearlings and two-year-olds, and dreaded as much by the tanner as by the animal it infests, is typical of this kind. Residing in a fixed spot, we no longer find in this species the strong hooks at the head, and the spines around the body are sparse and very minute; the parts of the mouth are soft and fleshy.

All these bot larvæ breathe principally through two spiracles placed at the blunt and squarely clocked end of the body, and in the ox bot these are very large and completely fill up the hole to the tumor in which the animal dwells. When ready to transform, it backs out of its residence, drops, and burrows into the ground, and there, like the other species, contracts and undergoes its final change to the fly. The eggs of this ox bot are elliptic-ovoid, slightly compressed, and have at the attached end a five-ribbed cap or stout stalk with which to strongly attach themselves to the skin of the back.

The gastric bots are best prevented by proper grooming of the horses to remove the eggs or nits from the fore legs and flanks. Horses, too, that are properly stabled and kept in the shade during the hotter summer months are less frequented by the parent fly. Scarcely any mode of drugging will dislodge the bots when once they are attached to the stomach, without injuring the parasitized animal. Cervical bots are also with difficulty dislodged except when they are full-grown and ready to naturally let go their hold. Animals may, however, be measurably protected, by enabling them to smear their noses with tar, or by enabling them to bury their noses when the parent fly is seeking to deposit. This they will instinctively do if portions of their pastures be turned up and the ground kept loose. The cutaneous species may be removed by pressure of the thumb and finger, or destroyed by the application of kerosene. If removed while small, the wound in the skin heals up, and no hole will occur in the hide.

## ARBORICULTURE.

### White Redwood.

T. J. Alley writes for the Sonoma Democrat an interesting account of a curious *lusus nature*, the white redwood: The white redwoods are on my place, Altamont farm, which name may lead you to class your humble servant, in one sense at least, among the "way-up" folks. If ocular demonstration should be more desirable, just step to your west window and cast your eyes upon the Tabletop mountain, almost due west, (a little north,) and 15 miles distant from your city, and you will not wonder that I am disposed to look down upon the lower classes. This mountain is upon the western rim of the Green valley basin, and one mile from Latham & Streeter's mill, on the railroad in Dutch Bill canyon. When I bought the property, nearly 11 years ago, the white redwood was a small, compact cluster of suckers at the base, on the south side of a common redwood tree, some two feet in diameter. I supposed from the compactness of the suckers that they grew from an excrescence on the root of the parent tree, and that the green suckers in the vicinity came from the natural roots of the same tree; but the extension, year by year, of the white cions in every direction, has lead me to believe that the excrescence extends entirely around the tree, and that the growth of the white suckers comes from it.

It differs from other redwoods in three particulars, viz: The non-secretion of the coloring matter for the foliage; the less vigorous growth, owing, perhaps, to its crowded condition; and a disposition, towards the beginning of winter, to blight in spots.

The frequent molestations of visitors (now strictly forbidden), have prevented their attaining any considerable height; and this is, no doubt, one principal cause of the density of their growth. Many efforts at propagation have proved unsuccessful, and we predict that Mr. William Sexton, of Petaluma, will soon record another failure, though I entertain a faint hope that his plan may succeed.

A new feature presents itself to my mind, which is damaging to my theory as given in the foregoing. About eight feet from the tree that I have denominated the "parent" stands another redwood, somewhat larger. Within the last two years this tree has flaunted a snow-white branchlet, at the height of about 60 feet; and near the end of the main branch, 20 feet from the trunk of the tree; and there it swings and tosses in the breeze, evidently to contradict my recently hopeful theory.

## THE APIARY.

### Bees Biting Blossoms.

We read in the latest book of Charles Darwin, the English naturalist, the following interesting observations on flower-cutting by bees:

"The motive which impels bees to gnaw holes through the corolla seems to be the saving of time, for they lose much time in climbing into and out of large flowers, and in forcing their heads into closed ones. They were able to visit nearly twice as many flowers, as far as I could judge, of a *Stachys* and *Pentstemon* by alighting on the upper surface of the corolla and sucking through the cut holes, than by entering in the proper way. Nevertheless each bee, before it has had much practice, must lose time in making each new perforation, especially when the perforation has to be made through both calyx and corolla. This action therefore implies foresight, of which faculty we have abundant evidence in their building operations; and may we not further believe that some trace of their social instinct, that is, of working for the good of other members of the community, may here likewise play a part? Many years ago I was struck with the fact that humble-bees as a general rule perforate flowers only when these grow in large numbers near together," etc.

### The Hive-Bees Take the Hint.

It appears that the cutting of these holes is done only by humble-bees, never by hive-bees. Yet the latter are quick to take advantage of them. "In the early part of the summer of 1857 I was led to observe during some weeks several rows of the scarlet kidney-bean (*Phaseolus multiflorus*), whilst attending to the fertilization of this plant, and daily saw humble and hive-bees sucking at the mouths of the flowers. But one day I found several humble-bees employed in cutting holes in flower after flower; and on the next day every single hive-bee, without exception, instead of alighting on the left wing-petal and sucking the flower in the proper manner, flew straight without the least hesitation to the calyx, and sucked through the holes which had been made only the day before by the humble-bees; and they continued this habit for many following days. Mr. Belt has communicated to me (July 28th, 1874), a similar case, with the sole difference that less than half of the flowers had been perforated by the humble-bees; nevertheless, all the hive-bees gave up sucking at the mouths of the flowers and visited exclusively the bitten ones. Now, how did the hive-bees find out so quickly that holes had been made? Instinct seems to be out of the question, as the plant is an exotic. The holes cannot be seen by bees whilst standing on the wing-

petals, where they had always previously alighted. From the ease with which bees were deceived when the petals of *Lobelia Erinus* were cut off, it was clear that in this case they were not guided to the nectar by its smell; and it may be doubted whether they were attracted to the holes in the flowers of the *Phaseolus* by the odor emitted from them. Did they perceive the holes by the sense of touch in their proboscides, whilst sucking the flowers in their proper manner, and then reason that it would save them time to alight on the outside of the flowers and use the holes? This seems almost too abstruse an act of reason for bees; and it is more probable that they saw the humble-bees at work, and understanding what they were about, imitated them and took advantage of the shorter path to the nectar. Even with animals high in the scale, such as monkeys, we should be surprised at hearing that all the individuals of one species within the space of 24 hours understood an act performed by a distinct species and profited by it."

## USEFUL INFORMATION.

UTILIZATION OF SEA-WEED.—The *Quarterly Journal of Science* says: At the chemical works at Aalborg, in Jutland, Denmark, where about 30 tons of alkali are made per week by the ammonia process for obtaining alkali from sea-weed, Mr. Thowald Schmidt, the director of the manufactory, proposes to work, in conjunction with this process, a method devised by himself of treating sea-weed so as to obtain iodine, potash salts, and other marketable products therefrom. In Denmark a very heavy duty is levied on the importation of common salt, whilst enormous quantities of sea-weed, rich in iodine and potash, can be obtained at small cost in the neighborhood of the works. Mr. Schmidt's process is as follows: After the sea-weed is dried and burnt, a concentrated solution of the ash is made and added to the liquor containing chlorides of sodium and calcium, left after the ammonia has been recovered in the ammonia-soda process by boiling with lime. The sulphates of potash, soda and magnesia contained in the ash of the sea-weed are thereby decomposed, and hydrated sulphide of lime and hydrated magnesia are precipitated in a form which may be available for paper-making as "pearl-hardening." The last traces of sulphates are got rid of by adding a small quantity of solution of chloride of barium. To the clear solution nitrate of lead is now added until all the iodine is precipitated as iodide of lead, which is then separated by filtration and treated for the production of iodine or iodides. After filtration the liquid is boiled, nitrate of soda is added to convert the chloride of potassium present into nitrate of potash. The latter is separated by crystallization. There remains a solution of common salt containing traces of ammonia from the previous soda operation and a trace of chloride of potassium. This solution is again treated by the ordinary ammonia-soda process for the production of bicarbonate of soda and white alkali.

MUMMIES CONVERTED INTO PAINT.—Few persons are aware that veritable Egyptian mummies are ground up into paints. But in this country and in Europe mummies are used for this purpose—the asphaltum with which they are impregnated being of a quality superior to that which can elsewhere be attained, and producing a popular brownish tint when made into paint, which is prized by distinguished artists both of this and other countries. The ancient Egyptians, when they put away their dead, wrapped in clothes saturated with asphaltum, builded, as it were, better than they knew, and could never have realized the fact that ages after they had been laid in the tombs and pyramids along the Nile, their dust would be used in painting pictures in a world then undiscovered, and by artists whose languages were to them unknown. That a portion of one of the Pharaohs, or a Potiphar, or even of the historic Mrs. Potiphar, may even now be on the canvass of a Vernet, a Millais, or a Church, who may question?—*Washington Gazette*.

LOAD FOR A MAN.—A curious set of experiments made in France developed some interesting facts in regard to the greatest average load for a man of great strength to carry a short distance. This was found to be 319 pounds; all a man can carry habitually, as for example, a soldier his knapsack, walking on level ground, is 132 pounds, (an extreme load it would seem,) or he can carry an aggregate of 1,518 pounds over 3,200 feet as a day's work, under like circumstances. If he ascend ladders or stairs, as do hod-carriers, then he can carry but 121 pounds continuously, and his day's work cannot exceed 1,232 pounds raised 3,300 feet high. With regard to the effort and the velocity with which a man can produce by pulling or pushing with his arms, it has been found by these experiments that, under the most favorable circumstances, and for continuous work, an effect cannot be gained exceeding from 26.4 to 33 pounds raised from 1.8 to 1.2 feet per second, or about one-eighth-horse power.

ARTIFICIAL BEESWAX.—A mixture of paraffine and common resin has found its way into the market as a substitute for beeswax. It resembles the genuine article very closely in color, fracture and adhesiveness. The cakes are generally covered with a thin coat of genuine beeswax.



### The California State University.

The local editor of the Stockton Independent, Mr. J. D. Schuyler, found time while serving his country as a member of the jury in the United States Court, lately in session in this city, to take a look at the State institution at Berkeley. We reprint a few paragraphs from the account which he prepared of his visit:

I had the pleasure yesterday of paying a visit of a few hours at the University, and came away feeling richly repaid for my time and trouble. I cannot imagine a more desirable or more beautiful location than that of the University grounds at Berkeley. Nature seems to have been in one of her most indulgent and artistic moods when she formed this favored spot, for she gave it a rich, productive soil, sheltered it with high protecting hills, from which she poured a crystal stream that goes babbling through the grounds, furnishing life and nourishment to a dense, leafy border of most beautiful trees and shrubbery, and giving abundance of its cool, clear nectar for all purposes desired. The buildings, two in number, of large size, substantially constructed of brick and stone, stand on a slight eminence commanding a view of the bay and surrounding landscape for miles in every direction. The five years that have elapsed since the location of the college in this spot have been well improved by the landscape gardener in adding to the natural beauty of the place, and the semi-tropical climate has given an almost marvelous growth to all vegetation. Evergreen trees seem to take to the soil with especial kindness, and have in this short time reached a surprising maturity and perfection. The grounds are very beautifully laid out in serpentine drives and walks, which give to the visitor a fresh surprise and delight at every turn. The chief charm of the place is the profusion and luxuriance of the gnarly live oak and laurel trees, which are characteristic solely of the coast country, and seem to have reached an unusual perfection here, but are never met with in the interior. As an instance of the richness of the soil and rapid growth of vegetation in this place, I saw eucalyptus trees, grown from seed planted 22 months ago, that were three inches in diameter at the base and 20 feet high. The eucalyptus seems well adapted to the soil of this locality generally, as there is a large grove in a flourishing condition planted on the very top of the mountain near the University. Professor Hilgard, in charge of the agricultural department of the University, treated me with many kind attentions, driving me about the grounds and showing me as much as possible in the limited time at my command. I was much interested in the nursery and hot houses for the propagation of choice plants and trees to be used in beautifying the grounds. Even at this season of the year, when vegetation is supposed to be dormant, there were many plants in bloom. A sheltered spot has been planted in orange and lemon trees, which are thriving, while a long avenue is lined with young magnolia trees that ere many years will make the air redolent with the odor of their beautiful blossoms. A large number of caoutchouc, or rubber trees, are growing thriftily—but an attempt to mention the different varieties of choice trees growing on the campus would be impossible. Experiments on the adaptability of the soil for producing different staple products, and the effect of the application thereto of the different manures, superphosphates and salts, are being carried on by Professor Hilgard in a very thorough and scientific manner. The results attained are of that exhaustive and satisfactory character as to be of the utmost value to the agricultural student. In his well furnished laboratory Professor Hilgard has appliances for making thorough mechanical and chemical analyses of soils, and it is his design to make an analysis of the soils of all the principal agricultural regions of the State, with a view of ascertaining their general characteristics. To this end he solicits specimens of soil from different localities.

The importance to the farmers of assisting the Professor in this laudable work is self-evident. Any one sending such specimen of soil will ascertain, free of cost, all its characteristics; its deficiencies and advantages; the kind of produce most likely to be successful upon it, as well as the cultivation it requires; whether it needs draining, irrigation or thorough cultivation, and the sort of fertilizer best adapted to it. The entire information thus obtained will ultimately be compiled in an agricultural map of the State, showing at a glance the leading characteristics of the soil—a map of the highest value. Farmers throughout the State should aid this work by sending forward their specimens. Professor Hilgard has had a life experience in this kind of work, having been State Geologist of Mississippi for 16 years, and professor of agriculture for 18 years in the State University of that State.

#### Fish Hatching.

Among other interesting novelties, I saw the process of fish hatching, going on under the care of Mr. Woodbury, who has for years had the personal supervision of the salmon hatching grounds on the McCloud river. The fish that were being hatched at the University were white fish and brook trout, from Lake Michigan and New Hampshire, a lot of eggs having arrived by rail last week. The eggs were in excellent condition, and the hatching was progressing at a lively rate. When hatched the young fry are to be placed in Lake Tahoe and

other California waters, and part of them sent to New Zealand.

#### A Standard Orchard.

The nomenclature of California fruits has become notoriously mixed and unreliable, so much so that the same varieties of apples, pears, peaches, apricots, etc., are known by different horticulturists, in different parts of the State, by entirely different names. For the laudable purpose of bringing order out of chaos and naming the fruits correctly, a standard orchard has been started at the University, filled with trees which have been so carefully selected that there is no doubt of the true name of each, so that when the trees bear fruit the University orchard will be the standard of nomenclature.

I have confined my description, as I did my observation, to the general surroundings of the University, from the fact that unfortunately I was there on the last day of the winter vacation and could not see the machinery of the great college in operation. But on so fine a day and in so beautiful a spot, I could not have desired more. The great drawback of the University at present is the result of the course pursued towards it by the last Legislature in withholding appropriations for carrying on the work so urgently demanded. Another building is sorely needed, and although the ground has been laid off for a semi-tropical botanic garden, covering 20 acres, where all the products and possibilities of California are to be gathered in one spot to be viewed by the world, yet the lack of funds, withheld by as glaring a shortsightedness as that which so sadly crippled us at the late Centennial exhibition, has prevented anything further being done. Other needs are experienced, which, it is hoped, future legislation may rectify and alleviate.

#### Portable Steam Engines.

The increase in the use of steam, and consequently in demand for mechanic's work, by the spread of portable engines, is great. There have been many valuable inventions to adapt these engines to the consumption of different kinds of fuels. We read in a book on the portable engine just published in England that the absence of fire-wood and heavy cost of coal on the steppes of Hungary and south Russia appears to have almost excluded the use of steam in those districts, until the application of straw and other vegetable substances as fuel became known. The want of steam power is equally felt in other agricultural districts besides those already mentioned. In India the dried leaves of fibrous plants, the scrub or brushwood, and the stalks of the cotton plant supply an excellent substitute for coal in boilers properly constructed. In Egypt the cotton plants are pulled up after having attained a certain growth, and the stalks, which are about one-half inch in diameter and four to five feet in length, contain all the calorific properties of good wood, and will burn perfectly well if properly inserted into the furnace. In the large wheat-growing districts of the Maremma and the Puglia, in the west and south of Italy, wood and coal are very scarce, and as the grain requires to be threshed very shortly after harvest, on account of the nature of the climate, the farmer would gladly avail himself of steam power provided he could use his straw, which he has always at hand and in superfluous abundance. In South America, New Zealand and the extensive prairies of the River Plate, Chile and Mexico, the universal demand of the farmers is for steam machinery which can be worked with indigenous fuel; and the time may come ere long when the land in these countries shall be plowed, the crops harvested and threshed, and the grain ground into flour by steam engines fed with straw, brushwood and vegetable refuse grown on the estate. But the great recommendation of some improved portable engines appears to be that with slight changes in the arrangements of the fire bars they will burn not only coal, wood and the various vegetable substances already enumerated, but also peat of all kinds, sawdust, chips and megass, the refuse of the sugar cane, and, in fact, almost any vegetable refuse within reach. There can be no question that the adoption of this class of engine would permit of the introduction of steam power in almost innumerable localities from which it has hitherto been excluded, and as all the fittings attached to it are of the best and most approved form, it may be hoped that its use will be widely extended.

THE NEW STAR.—Prof. C. A. Young, of Dartmouth college, describes the coming of a new star in the *Journal of Chemistry*. On the evening of November 24th, 1876, Prof. Schmidt, of Athens, distinguished for his researches upon variable stars, observed in the constellation Cygnus a new star of the third magnitude, which by midnight was well up toward the second. On the 20th, the last clear night preceding, no such star had been visible. He immediately telegraphed the discovery to Paris and Vienna, but the weather was very unfavorable, so that no observations could be made until December 2d, when the star had already fallen to the fifth magnitude; by the 12th it had become invisible to the eye,—of the seventh magnitude according to Hind,—and it is now (January 10th) not above the eighth. The position of the star is near L. Cygni, in right ascension 21h., 36m., 50.4s., and in north declination 42° 16' 38.5", where none of the catalogues indicate any star at all; so that hitherto it cannot well have been brighter than the eleventh or twelfth magnitude.

### The Oldest Plant.

At a recent meeting of the Academy of Natural Sciences of Philadelphia, Mr. Martindale exhibited some specimens of the sensitive fern (*Onoclea sensibilis*) in the curious condition known as the variety *obtusilobata*. The matter is of great interest, from the fact that this fern is perhaps the oldest living floral organism on the globe. It is found in a fossil state, and some paleontologists believe it has been in existence for 500,000 years. On some of the prevailing theories of evolution it ought to have branched off, by "gradual modifications," into numerous descendants, and we ought to have allied species, if not allied genera. But not only are there no very closely allied genera, but only this one single species, and it shows no tendency to produce the slightest variation worth speaking about. If we could find a good substantial variation in this fern, it would be, therefore, a case of considerable interest. Dr. Asa Gray, in his "Manual of Botany," regards the so-called variety *obtusilobata* as no variety, but as a peculiar morphological condition of the same thing; and the specimens found by Mr. Martindale perfectly confirmed this view. The male frond of the *Onoclea* is but the female frond contracted and rolled up, as is the case in all ferns having the female fronds of a different character to the male. In the variety *obtusilobata* the sporangia are borne on a flat frond, like as in *Aspidium*, the lobes of the frond not rolling completely up, as in the perfect form. It is the same thing, with only the frond not as perfectly transformed. The sensitive fern ("sensitive") from its withering so soon after gathering is also of interest from its being as "highly organized," notwithstanding its great age, as any fern of a much more modern origin, geologically speaking. There is, doubtless, much to sustain the theory of a gradual progress from a simple to a complex structure through the course of ages, but the *Onoclea* is surely not among these facts.

#### Narrow-Gauge Progress.

The *Railway Age* has the following figures on the progress of narrow-gauge railroads, which is a matter of interest in many counties of this State: Narrow-gauge building on this continent may be said to have begun in 1871, only six years ago, and its progress may be noted as follows: 1871, miles of narrow-gauge built, 179; 1872, 450 miles; 1873, 555 miles; 1874, 819 miles; 1875, 585 miles; 1876, 569 miles. Total in operation in America, 3,157 miles. These figures are nearly correct, though, probably, not entirely complete. This shows an addition of 569 miles of narrow-gauge track in twenty-one States—more than one-fifth the total number of miles of railway constructed in the country during the year, according to most authorities. For a system practically of recent introduction and which is still considered by many of doubtful economy and efficiency, this certainly is a very encouraging showing, and indicates that, in spite of the assertions of some that narrow-gauge roads will not and must not be built, they have been and will continue to be built. The thirty-three roads whose extensions are noted above have now a total length of nearly 1,000 miles, and this is less than one-third of the total narrow-gauge mileage now in operation in America. The number of narrow-gauge roads in operation in America is over 100, besides an indefinite number projected.

THE MORAL VALUE OF PHYSICAL STRENGTH.—The American scholar and thinker is by rule a dyspeptic. He is a razor-faced, lantern-jawed, thin, nervous man. This is partly the effect of climate, and partly that of diet and regimen. In the old days of bran bread, and prayers before daylight in the colleges, and long morning walks before breakfast, and suicidal, consumptive habits, it required a pretty tough man to live through his studies at all. We are now doing this thing better, but we have not reached the highest outcome of the change, and shall not reach it, probably, for several generations. But we have come to the recognition of the fact that it does not toughen a man to reduce his diet, to cut short his sleep, to take long walks on an empty stomach, and to indulge in cold baths when there is no well-supported vitality to respond to them. We have come to the conviction that, for a useful public life, brains are of very little account if there are no muscles to do their bidding. In short, we have learned that without physical vitality the profoundest learning, the most charming talents, and the best accomplishments are of little use to a public man in whatever field of professional life he may be engaged.—*Scribner's Monthly*.

SUNDAY TRAINS IN CANADA.—Railway trains are not to be permitted for the future to run on Sundays in Canada. The Dominion government has issued orders that no trains are to be run on Sundays, excepting in cases of great emergency. Of this emergency the authorities are to be the judge, no Sunday train being permitted except on direct government order.

ANILINE colors, according to Mr. Joseph Seidebotham, are being extensively employed for tinting photographs, and likewise in paintings and water color drawings. He calls attention to the well known instability of these beautiful tints, and warns artists who desire the permanency of their work to avoid employing them.

### Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract From the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys of Land for Pre-emption, List of California Post Offices.

Published and sold by DEWEY & CO., S. F.

#### Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, *Harpers Weekly* and *Scientific American*, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, DEWEY & Co., Publishers, San Francisco.

### BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

#### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

#### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

#### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Breed Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

#### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

The Grangers' Business Association of California.—Office of Secretary, Room 6, No. 40 California street, San Francisco, California, January 22d, 1877. The annual meeting of the stockholders of the Grangers' Business Association of California, for the election of Directors to serve for the ensuing year, and for the transaction of such other business as may properly come before the meeting, will be held at the office of the Corporation, Room 6, No. 40 California street, San Francisco California, on Wednesday, the 21st day of February, A. D., 1877, being the third Wednesday of February, at the hour of ten o'clock A. M., of that day.

DANIEL INMAN, President.  
Attest, AMOS ADAMS, Secretary.

#### TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPAREIL TYPE, FORMERLY USED ON THIS PAPER FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,

224 Sansome Street, San Francisco.

#### Wakelee's Bath for Sheep.

SUPERIOR EFFICIENCY IS CLAIMED FOR THIS BATH, IT BEING ALSO 50 PER CENT. CHEAPER THAN ANY OTHER IN USE.

H. P. WAKELEE & CO.

Importing and Manufacturing Druggists,  
Cor. Montgomery & Bush Sts., S. F.

#### RANCH FOR SALE.

\$8,000. Splendid dairy or hog ranch; 800 acres in Lake county; all fenced substantially; 100 acres in cultivation; permanent water; title perfect; terms easy; no failure of crops; healthy climate. For further information write to

"W." Middletown, Lake Co., Cal.



## The Japanese Persimmon.

The ebony family, *Ebenacea*, includes about 160 species, principally found in the tropics of the Eastern Hemisphere. The family is represented in North America by *Diospyros Virginiana*, the common persimmon of the Middle and Southern States; in the south of Europe by *Diospyros lotus*, the European date plum; in China and Japan by *Diospyros kaki*, the Japanese persimmon; and in the Philippine Islands by *D. discolor*, a valuable fruit. The genus includes many species besides those mentioned, ebony being one of them.

T. A. Kendo, in his little book on "Tea and Silk Culture," says that there are 40 varieties of the persimmon cultivated in Japan, nearly every one being excellent in its way. Some of them are sweet, others tart or sour, and in size from a small apricot to almost a pound in weight. Some varieties, like our late apples, keep in good order for three months. The fruit generally contains eight or ten seeds, distributed promiscuously through the pulp, though one variety is seedless. About six years ago trees were imported by James Hogg and planted in the vicinity of New York. One of them produced fruit two years ago, which was tested in the office of the *Rural New Yorker*. Accurate engravings of both tree and fruit were soon after published by that journal, accompanied by the following description: "The fruit was somewhat over-ripe when eaten, and when cut presented a mass of rich, jelly-like sweet, and with a flavor reminding one of both the apricot and plum. It fortunately happened that Messrs. Ellwanger & Barry, and Mr. Charles Bernard, of Boston, were present in our sanctum when the fruit was tested and all pronounced it 'good.' In Japan it is eaten when much less mature and it then has more of the character of an apple. In Japan they have several varieties of this fruit (Mr. H. has some six or seven) varying in size, shape and time of ripening. One variety is of the form of the 'Teton de Venus' peach, but as large as an ordinary-sized coffee cup. With the exception of one variety they are eaten when as soft in texture as a ripe Greening apple. The exceptional variety is kept until it is soft enough to be eaten with a spoon. The fruit of the latter sort is kept as we keep apples, and is in eating until February."

Dr. Asa Gray, the eminent botanist, says of this fruit: "He that has not tasted kaki has no conception of the capabilities of the *Diospyros* genus." Hon. Horace Capron, ex-Commissioner of Agriculture, and more recently connected with the Agricultural Department of the Japanese Government, writes that the persimmon is the best of all the native fruits of that country, and well worthy of introduction into California.

Of its history in this State, which extends back several years, we present such facts as are accessible. Col. Hollister, of Santa Barbara, imported trees in 1869. They were kept in pots until 1872, and made but little progress until planted out. The first fruit was produced in 1875, and was followed by a larger and finer crop last season. Specimens of the last crop, four inches in diameter and weighing three-quarters of a pound, have been exhibited in this city. Trees imported by the late Hon. Thomas Selby, fruited last year at the home of the family at Fair Oaks, San Mateo county. In 1872, a few trees were imported by G. P. Rixford, and planted in Sonoma valley, and produced their first crop last season. It is of note that the fruit has been produced to perfection in San Francisco. Mr. I. H. Van Reed, 908 Howard street, has trees that have fruited for two years, producing some very large and luscious specimens. From all these experiments there can be no question of its success in this State. The tree bears in three years from the graft, if well cultivated, and, according to Hon. Horace Capron, in five or six years from the seed. It delights in a rich, mellow, well-drained loam, and produces larger fruit when irrigated, though with thorough culture it will thrive without it. The tree is graceful in form, and when clothed with its rich mass of glossy foliage and showy fruit, is exceedingly ornamental. We bespeak for it a cordial reception among all lovers of beautiful trees and luscious fruit.

Since the foregoing was written we have received the following

## Note from Professor Hilgard.

EDITORS PRESS:—I have two points to suggest regarding the Japanese persimmon, or rather the advertisement thereof in your columns. One is that so excellent a fruit is entitled to have its name spelled right, viz: *Diospyros* instead of *Diospyrus*. Second, that grafts of the same can be of use only to those who have proper stocks to graft on, namely, the American persimmon, or perhaps the Mexican sapote. The persimmons are so widely different from any other tree usually cultivated in our latitudes, that according to any analogy it cannot be expected to succeed on any other stock.

The kaki persimmon has, I think, been fruited in California before. If I am not mistaken there is a tree of some size on the premises of General Naglee, at San Jose. It would be desirable to have the experience had heretofore brought out now, for the benefit of those who, like myself, wish to try the adaptability of the kaki to our climate. Of this, however, I think there can be little doubt.—E. W. HILGARD, University of California.

## The Vine Growers' Memorial.

We learn from a report sent us by Chas. A. Gardner, Sec'y, that the St. Helena vine growers held a meeting on Saturday, and adopted a memorial to Congress which asks for legislation to relieve the disadvantages under which the brandy producers of the State are now laboring. The relief which is asked may be learned from the following paragraphs which we extract from the memorial: "Facts attest that our present revenue system virtually discriminates against the interests of the vine growers of the United States, and in favor of the importer of wines and brandies, and that a more liberal policy on the part of our Government toward a new and but partially developed industry, at the present time, would not only save a large and deserving portion of citizens from bankruptcy and ruin, but would add largely to the public revenues."

"While we concede that the tariff imposed on the productions of foreign vineyards for revenue purposes incidentally protects us to a certain extent, we know that that prohibition is not equal to the difference of the cost of production in the two countries, and we feel the hardship of being compelled annually to pay an inordinate revenue duty, and on account of the high rate of interest here to sell our brandies at ruinous prices and before their qualities are sufficiently developed by age to give them reputation, while the European producer can keep his in our warehouses, ready for sale till he can find a good market, without paying duty in advance."

"We do not ask for the fostering care of Government, in the shape of bounties and exemption from taxation, such as were formerly awarded to originators of new industrial enterprises which saved us from exporting money to pay for foreign labor; but we do ask most earnestly, though respectfully, that Congress will remove those disabilities that are now crushing out our energies and annihilating the millions of capital that have been invested in a new and most important department of agriculture in our country."

"And finally, it was resolved by the society that they know the views herein expressed are in accordance with the feelings and wishes of the vine growers of California, and that if those who have our interests in charge in Washington find it impossible, from the lateness of the season or other causes, to get laws enacted for our relief, that we pray them to appeal to the Commissioner of Internal Revenue and learn of him whether he could not, consistently with his public duty, instruct his agents on this coast to delay the collection of the brandy duty for one year after the 1st of May next."

## Frank Bros. &amp; Co.

Happening in at Frank Bros. & Co.'s establishment, on Market street, S. F., in pursuit of information, we found everything in readiness for an active campaign in the line of agricultural implements. The firm are going to push things this season. They have a stock on hand and on the way for a good season, and they doubtless will have it, for the crop prospect will reward those who have trusted it. The firm is going to make an especial point this year on the Wood header and self-binder, which was illustrated in our columns last season, and which has been given improvements which especially adapt it to the California trade. Samples of this machine are now ready for examination, and it is well worth study. Besides a full line of machinery, other specialties of the establishment may be stated. The Sweepstakes thresher, which has several valuable improvements, and the La Belle wagon, which needs no improvement, will be pushed vigorously this season. The branch establishment, with the same title, at Portland, Oregon, did a very satisfactory business during the last season, and will be found valuable to our northern readers. Visitors will find Frank Bros. & Co. gentlemanly and attentive to their wants.

SPECIAL PREMIUMS.—The old Board of Directors of the State Agricultural Society awarded the following special premiums at their meeting Wednesday evening: Special gold medal to the Pacific Rubber Paint Company; special gold medal to the Sacramento Plow Company, for best exhibit of agricultural implements of home manufacture; special gold medal to F. Gabrielle, of Sutterville, for best display of vegetables of his own raising; special silver medal to Mrs. Murphy, of Sacramento, for best display of millinery; special silver medal to J. L. Chaderton, for best display of varnish and artists' materials; special silver medal to Ira F. Bamber, for display of fruits of his own raising; special silver medal to Robert Williamson, for display of fruits of his own raising. At the last State fair, there were on exhibition two of Phillips's champion sewing cases, presented by Mr. Phillips to be awarded as special premiums for the best specimens of hand-sewing by misses under 16 years of age. By an oversight of the directors, there was no committee appointed to award these premiums, therefore the board resolved to hold them and offer them as premiums to be contested for by misses under 16 years of age at the next State fair.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

BELT SHIPPING ATTACHMENT FOR PULLEYS.—R. Denmark, Washington Corners, Alameda Co. It is often necessary in many kinds of mechanism (as for example the field engines or horse powers which are employed to drive threshing machines), to throw the driving belts entirely off the pulleys, and when those belts are large or tight, or the machine very heavy, it is very difficult to replace the belt on the pulley. The apparatus patented consists of a bar with a thin projection, which lies upon the outside of the pulley, and an arm that projects beneath the rim as far as the line of the spokes. A short pin passes through this bar, so that it crosses the slot formed between the two parts of the bar which clasps the rim of the pulley. A notch is made in the edge of the pulley, and when the bar is slipped upon the pulley the arm will rest behind a spoke of the wheel, and the pin referred to will fit into the notch to form a fulcrum and prevent the bar from being pulled from its place by the drag of the belt. The bar then projects at right angles with the plane of the pulley's motion, from the rim of the wheel, and all that will be necessary to slip the belt upon the pulley will be to bring it over the arm and set the engine in motion. The arm will run the belt into its place at once, and as soon as it arrives at the point where the belt leaves the pulley in its passage to the other pulley, the arm will be free to fall off, which it does, and leaves no dangerous projection, as would be the case if it were a permanent attachment to the wheel.

PORTABLE DERRICK.—Byron Jackson, Woodland, Yolo county. This patent covers an improvement in derricks to deliver unthreshed grain to the feeder of a threshing machine, and it consists in a novel construction of upright pieces of suitable height, framed or braced in two sections, to stiffen the uprights. The four uprights are fastened together at the top with one bolt, and two of them hinged at the bottom in such a manner that one section will fold inside of the other and lay down smoothly on the delivery table or platform, for passing under obstructions. The derrick, when in working position, is substantial enough to move from place to place without taking down, and requires but two guy ropes to hold it up while at work. The pulley blocks are both hung with swivel hooks to prevent chafing the ropes.

BOTTLE HOLDER.—W. C. Stokes, Grass Valley. This device consists of a suitably formed case, which incloses and holds the bottle, and may have lugs, so as to be held by the feet when drawing the cork from a bottle. It is intended to protect the operator from accident while in the act of uncorking a bottle. The case is formed in halves, hinged together at one edge, while at the other meeting edges is formed a clasp for holding the halves together when closed. The case is made large enough to clasp a large champagne bottle, but will hold any sized bottle. After inserting the bottle, the feet can be placed on the lugs, and while thus held firmly in place, the cork can be withdrawn. By this means the operator is protected from danger of being harmed by the breaking of a bottle which he may attempt to open, an accident which often happens.

A USEFUL DEVICE.—We received a curious little arrangement this week from C. H. Barrows, of Willimantic, Connecticut, in the shape of a "moustache protector." It is a device to place on the edge of a cup to keep the moustache out of the tea or coffee, and is much better than the ordinary moustache cup. It is self-adjustable, and by means of spring clamps will fit any cup, tumbler, mug or bowl, and is really a useful thing for moustached gentlemen. It may be carried in the vest pocket, being made of very thin metal, nickel plated. The invention is a new one, and is just being introduced for sale.

SEVIN VINCENT & Co.—This old established firm of seedsmen hand us their illustrated seed and plant catalogue and guide to the flower and vegetable garden for 1877. The publication of a copiously illustrated catalogue is something new and indicates the prosperity and progress of the firm. We find the guide to contain much valuable information succinctly stated and it should be in the hands of every farmer and gardener. The store, 607 Sansome street, is full as an egg of desirable seeds and plants.

BEST BOOK FOR EVERYBODY.—The new illustrated edition of Webster's Dictionary, containing 3,000 engravings, is the best book for everybody that the press has produced in the present century, and should be regarded as indispensable to the well-regulated home, reading-room, library and place of business.—*Golden Era*.

RINDERPEST.—A dispatch from Washington says: The Treasury Department prohibits the importation of neat cattle and hides of neat cattle from Germany, until further orders, in consequence of the rinderpest there.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

FOR WEEK ENDING FEBRUARY 6TH, 1877.

ROCK DRILLING ENGINES.—Percott S. Buckminster, S. F. HEMMERS' FOR SEWING MACHINES.—Charles L. Goethals, Los Angeles, Cal. OVERSEAMING SEWING MACHINES.—John S. Hall, Monterey, Cal. HARROWS.—Charles Kechner, Roseville, Cal. GOPHER GASS FLOWS.—Morgan S. McMahan, San Jose, Cal. GALVANIC SOLES.—Erastus H. Crow, Vallejo, Cal. CARPENTER'S GAUGE.—Charles O. Farciot, S. F. CURRANS.—Elias Groat, Napa, Cal. SOFA BEDSTEADS.—August Hansen, S. F. BARREL TAPS.—Henry Sanders, S. F. AUTOMATIC SEWER TRAPS.—John P. Schmitz, S. F. PLUMBERS' TRAPS.—Louis Schoenberg, S. F. TELEGRAPH INSULATORS.—Paul Seiler, S. F. SLUG POTS.—Henry Zottman, Eureka, Nev.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

DOES THE FARM PAY?—Hon. George Geddes, one of the foremost farmers of central New York, has an original method of arguing that agriculture is profitable. His method is approved by the experience of many men of our acquaintance. He writes to the *Country Gentleman* as follows: When we go into paper estimates of the profits of agriculture, it would be well to credit the farm generally with those comforts that make our quiet and happy homes. Let us consider what the farm gives us in the way of food, of house and of fuel for our fires; horses to draw us, and the many nameless things that people living in cities and villages buy at great cost. I have seen more than one comfortable and well-to-do farmer sell broad acres for narrow town houses, and under the delusion of educating their children, of living more easy lives, to get nearer lecture and church privileges, and by various other devices of self-deception, persuade themselves into the fatal move which soon proved that farming was better to support families than the price of farms at interest. Generally, these mistaken men have found that money received as interest had a way of going easily, and a very few years has been sufficient to cause them to wish themselves again the owners of farms, and to teach them (as no other experience could) that though it might be easy to prove on paper that wheat could not be raised for its selling price, and that no animal (from a chicken to a horse) could be raised on a farm for its market value, yet that somehow all the final results proved just the reverse; for farmers do live well, educate their children well, and leave them, at their own deaths, valuable estates—accumulated, it is true, by slow process, but nevertheless entirely the fruits of their own labor on their farms. Can any other body of men show more uniform success, and more real enjoyment of life?

A MOST effective remedy for the PHYLLOXERA is a weak solution of carbolic acid, one gallon of the strength of Calvert's Sheepwash, with about 450 gallons of water sprinkled over the stem and roots of the vine. The same wash is useful for preserving WET HIDES, even after it has served for SHEEP DIPPINGS. For the latter purpose its advantages over tobacco and other remedies are now beyond question. A sheep farmer in Ireland, Captain Lapinmandays, of Newport, Mayo, writes on the 26th December last: "I find my savings in a flock of 2,000 to be about £30 (£150) a year, merely for dressing (not to speak of dippings), as against tobacco juice and spirits of tar." Those who have used it most in California speak equally highly of its merits, finding it not only the cheapest, but decidedly the most efficacious remedy they have tried. As a disinfectant for stables, etc., it is as useful as the more expensive preparations of carbolic.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco. B. W. CROWELL—Colusa, Butte and Sutter counties. G. W. MCGREW—Santa Clara county. A. C. KNOX—Nevada, Montana and Utah Territories. C. N. WEST—Santa Cruz, Monterey and San Benito counties. A. C. CHAMPION—Tulare, Kern and Fresno counties. A. W. STROMO—Lake, Napa and Solano counties. G. KITSON—Santa Barbara, San Luis Obispo and Ventura counties. W. D. WHITE—San Bernardino and Los Angeles counties.

THROUGH the length and breadth of the land the celebrated SILVER TIPPED Boots and Shoes are sold by the million, for parents know they last twice as long as those without tips.

Also try Wire Quilted Socks.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription.

NOTICE.—Wm. J. Lawrie is no longer agent for us in this State. Dewey & Co. Jan. 31st, 1877.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Feb. 14, 1877.

The week has disclosed nothing startling in trade. In most lines of Produce there has been a slight decline in prices and amounts pressing for sale are large. This is notably the case in Dairy Produce, Potatoes, Onions and Hay. In Grain there has been but little change. Wheat has declined a point or two, and some sales have been made at concessions, but holders are firm at present figures.

During the week the cable quotations for Wheat declined, but at the close advanced a point, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	10s	5d	20s	8d	10s	8d	20s	2d
Friday.....	10s	4d	10s	6d	10s	7d	10s	—
Saturday.....	10s	4d	10s	6d	10s	7d	10s	—
Monday.....	10s	4d	10s	6d	10s	7d	10s	—
Tuesday.....	10s	5d	10s	7d	10s	8d	10s	—
Wednesday.....	10s	5d	10s	7d	10s	8d	10s	—

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	8s	11d	9s	2d	9s	5d	10s	—
1876.....	10s	24d	10s	5d	10s	6d	10s	—
1877.....	10s	5d	10s	7d	10s	8d	10s	—

## The Foreign Review.

LONDON, Feb. 12th.—The *Mark Lane Express*, in its weekly review of the British Corn trade, says: The weather during the past week has been sufficiently dry to allow field labor. Autumn-sown Wheat is looking forward and healthy. Threshing has been more practicable, and increased offerings of home-grown Grain at country markets afford proof of the farmers' renewed activity; but the condition of English Wheat has been generally very unsatisfactory. A decline of one or two shillings per quarter on the week is quoted in *Mark Lane* and country markets. Regarding foreign Wheat, the leading feature continues to be inactivity of buyers. The somewhat increased imports into London have not tended to relieve the dullness. Where there has been a pressure to sell, a concession of one shilling per quarter was necessary to induce business; but as a rule, millers only bought to satisfy immediate requirements. It is somewhat curious that values should have declined gradually as they have done, when the fact is considered that the leading features of supply and demand are unchanged. It must be remembered that according to able authorities, 13,000,000 or 14,000,000 quarters of foreign Wheat will be required to supplement last year's deficient harvest, and with the rate of importations at present only equal to 8,000,000 or 9,000,000 quarters, only heavy granary stocks, which we do not now possess, can prevent prices from rising when the demand exceeds the supply. With a fair number of arrivals at ports of call, cargoes off coast have ruled very quiet, fifty shillings per quarter being accepted for large cargoes of California, showing a decline of three to four shillings per quarter from the recent highest point. This price has attracted demand, and holders seem inclined to greater promise.

## Freights and Charters.

Freights have had a quiet market during the week, without many features of interest, says the *Commercial Year*. The situation has been largely one of expectancy. The available tonnage is well held and we think the chances favor higher rates than those now ruling. Meanwhile, in the absence of business, we continue our previous quotations of £2 3s 6d for wooden and £2 6s 6d for iron ships to Cork, U. K. At the close we have 25,951 tons engaged Wheat tonnage in port, 11,441 miscellaneous and 25,142 tons disengaged. The latest charters reported are: Nor bark Semiramis, 1,083 tons, Wheat to Cork for orders, private; B ship Patterdale, 1,270 tons, Wheat and mids to Liverpool, owners' account.

## New York Grain Market.

NEW YORK, February 10th.—The Grain trade remains in a wholly abnormal condition, the export trade being held in check by lower prices abroad than at home. Holders of Wheat appear to be inflexible in their determination not to yield, in the expectation that necessity will sooner or later compel the European markets to respond to their views. The receipts continue light, since prices are higher in Chicago than at the seaboard; and such is the confidence of operators there in the stability of the article that they continue to pick up all the stray lots of good spring that may be offered here, rather than permit prices to take their natural course. No. 2 spring has sold at \$1.41. Winter Wheat has sold at \$1.50/61.63. Barley continues depressed. Corn is about 2c lower and Flour irregular.

## Chicago Grain Market.

CHICAGO, February 11th.—Under local influences the breadstuffs market has been rather active, very unsettled and generally very firm, especially for the option dealers. Prices of Wheat have been, for cash, \$1.27 1/2 to \$1.32, closing at \$1.30 1/2. Corn closes weak at 41c; Oats, 35c; Rye, 70c; Barley, 61c/63c. Receipts for the past week—Wheat, 72,000; bushels; Corn, 442,000; Oats, 110,000. Shipments—Wheat, 108,000 bushels; Corn, 267,000; Oats, 84,000. Receipts same week last year—Wheat, 235,000 bushels; Corn, 562,000; Corn, 333,000; Oats, 98,000. These figures show how remarkably short is the Wheat crop this year in this section, and especially in the light of the unusually higher prices for that cereal which prevail. Packing has about ceased, and there are but few more hogs packed here this season than last, though it was expected the packers would be overworked. The lowest prices of the season for provisions were reached to-day. Pork sold at 15 1/2c; lard, 10 1/2c.

## Eastern Wool Markets.

NEW YORK, February 11th.—The Wool market has been unusually quiet during the week, but this is due in a great measure to the absence of desirable parcels of fine stock. There have been quite a number of manufacturers looking around, as goods are selling fairly at prices rather more satisfactory than those which were ruling a short time since. The stock of really choice descriptions is now reduced to an exceedingly low point, but inferior Wools, such as Fall California and Texas, are in large supply and neglected. Prices of the better kinds are firm, but for the lower grades they are entirely nominal.

The sales for the week are: 99 bales Spring California at 24c/26c; 61,000 lbs Fall do, 16c/20c; 100,000 lbs Mexican, 16c; 20,000 lbs Western Texas, 25c; 5,000 lbs mixed do, 23c/25c; 20,000 lbs X and XX Ohio, 40c; 3,000 lbs No. 1 Western, 40c; 4,000 lbs washed State Combing, 55c, and 701 bales New Zealand, 27s do; Donkoi, 30,000 lbs Western Texas, 2,000 lbs secured do, 8,000 lbs mixed do, 10,000 lbs Oregon lambs, 33,000 lbs Fall California, 12,000 lbs do, pulled, 10,000 lbs do lambs, and 5,000 lbs unwashed State, on private terms.

PHILADELPHIA, Feb. 13th.—Wool quiet and firm; prices steady and without change; supply light. Ohio, Pennsylvania and West Virginia, XX and above, 46c/48c, and 44c/45c; medium, 41c/45c; coarse, 36c/38c. New York, Michigan, Indiana and Western, fine, 39c/42c; medium, 41c/43c; coarse, 36c/38c; combed, washed, 52c/56c; do, unwashed,

37c. Canada, combed, 52c; fine, unwashed, 28c/31c; tub washed, 40c/45c. Colorado, washed, 18c/22c; unwashed, 17c/18c; extra and merino pulled, 33c/38c; No. 1 and super pulled, 33c/37c. Texas, fine and medium, 20c/25c; coarse, 17c/20c. California, fine and medium, 15c/30c; coarse, 15c/20c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Jan 24.	WEEK. Jan. 31.	WEEK Feb. 7.	WEEK Feb. 14.
Flour, quarter sacks.....	62,081	23,226	55,377	84,135
Wheat, centals.....	131,191	159,181	133,553	356,523
Barley, centals.....	10,439	11,136	4,873	8,101
Beans, sacks.....	2,219	1,391	919	656
Corn, centals.....	4,841	2,027	2,586	4,249
Oats, centals.....	6,723	1,852	5,854	3,894
Potatoes, sacks.....	11,910	12,984	9,567	19,144
Onions, sacks.....	936	1,064	1,586	1,736
Wool, bales.....	89	63	36	86
Hops, bales.....	17	2	87	144
Hay, bales.....	553	826	920	931

**Beans**—Beans have advanced a point under a speculative demand. There have been sales of large lots of Standard Hand-Sewed Wheat Bags at 8 1/2c cash, but supplies are now held at the cash, with 9 1/2c for a jobbing rate, with usual credit.

**Barley**—Barley has met with fair sale during the week. Prices for Feed Barley have ruled 2 1/2c lower than our last week's quotations. We note sales: 1,200 sks good Feed, \$1.25, silver; 280 sks Coast Feed, \$1.25, silver; 300 do do, \$1.17 1/2, gold; 300 sks Feed, \$1.25, silver; 70 tons good Bay do, \$1.25, silver; and 300 sks, \$1.17 1/2, gold; 1,000 sks Coast Brewing, \$1.30, silver; 1,800 sks do, \$1.21, gold; 1,800 sks fair Coast Brewing, \$1.21 1/2; 1,000 do do, 1.30, silver.

**Beans**—Bayo Beans are quotable 25c per cwt lower than last week.

**Buckwheat**—The price remains \$1.80 per cwt, silver.

**Corn**—There is reported a corner movement in Corn. The receipts have been considerable during the week, and all thus far have been taken at full rates. We note sales: 500 sks fair Yellow, \$1.35, silver; 250 do choice do, \$1.22 1/2 per cwt, gold; 150 sks Yellow, \$1.22 1/2, gold.

**Dairy Produce**—Butter is now quoted by dealers at farther decline; nothing but single boxes of fancy brands selling above 27 1/2c, and the average ruling about 25c. Dealers report that they can find no outlet for the surplus which they are now receiving. One firm whom we interviewed said that they had been advised from New York that the market was unusually fully supplied and they could promise nothing over 25c per lb laid down there. Butter is exceedingly low in the Eastern markets this winter, and this will work against our Butter makers. Cheese, on the other hand, is gaining in the Eastern markets. In the local trade Cheese does not advance. Some makers are holding Cheese in hope of improvement, and others are ordering it sold at quotations. The immediate future does not seem to promise much improvement either in Cheese or Butter.

**Eggs**—Eggs show a tendency to advance a little and dealers vary in quotations from 28c to 30c per dozen.

**Feed**—Ground Feeds are unchanged. Hay has met with a dull market, and the best is not rated above \$15 per ton. We note sales of 36 tons good Wheat and Oat at \$12; 45 tons Stable, \$12.

**Fruit**—Green and Dried Fruit show no change in price. During the week the receipts of Apples from Oregon have been large, and prices range toward our lower figures.

**Honey**—There have been sales of Honey, graded by the San Diego Beekeepers' Association, as follows: 400 cases No. 2 at 10c, gold; 300 cases No. 3 at 8 1/2c, silver.

**Hops**—The receipts of Hops have been unusually large. It is thought now that 20c is the top of the market, and some lots which have been held for some time have been let go on concessions. One dealer reports the market as follows: "Business on a very moderate scale. Shippers continue to operate very cautiously, and brewers' wants are very small. The supply is ample, and the outside figure is reached with difficulty. There has been more inquiry for fancy grades than on previous reports, and sales within the range. The Zealandia, hence for Australia on the 3d inst, carried 6,122 lbs for New Zealand." The New York trade for the week ending February 2d, is reviewed by Emmet Wells as follows: We have to report a very dull market, with prices on all descriptions entirely nominal. The Hops taken for export make very little impression upon our heavy stocks. Brewers are almost entirely out of the market; many of them are still working on yearlings—Hops bought at low prices a year ago—and while they have any of this class on hand, no inducement in the price of the last growth will tempt them to buy fresh Hops, so that really the only thing that keeps the market alive is the export demand. Prices in the interior range between 10c and 20c. There is a strong disposition on all sides to sell and realize, and this fact alone tends to weaken the market. Choice export Hops are extremely scarce; those most in favor are of California and Oregon growth. Quotations: New Yorks, good to choice, 20c/25c; New Yorks, low to fair, 12c/18c; Eastern, 18c/23c; Wisconsin, 12c/17c; Yearlings, 10c/15c; Olds, all growths, 4c/8c; Californians, 23c/25c; Oregon, 23c/25c.

**Oats**—Oats are selling well at quotations and are steady. We note sales: 100 sks Oregon Surprise at \$2.25, and 160 do Oregon Feed at \$2.07 1/2; 238 sks Humboldt at \$2.20 1/2 cwt gold; 240 sks good Feed at \$2.20.

**Onions**—Onions have met with a decline and are plenty and weak. The receipts have been ample and the trade dull and slow.

**Potatoes**—The Potato market is heavy beyond description. Nothing to-day is quotable above 50c per cwt and lots are sold at 50c per sk. Poor qualities have been sold for anything which was offered, even as low as 25c per cwt. Cuffey Coves are now out of the market, the remaining lots being held for improved prices. New Potatoes have appeared and sold at 2c/3c per lb.

**Poultry and Game**—Poultry takes a reaction from the Chinese holiday demand and is now quotable lower all around, as may be seen in our table of quotations below.

**Rye**—Rye has declined to a range of \$1.85/2. We note a sale of 600 sks fair quality at \$1.85.

**Seeds**—Alfalfa Seed is firmer, and outside quotations are advanced 1c.

**Vegetables**—Asparagus, Cauliflower and Celery are cheaper. Several new Vegetables may be found in our price list this week.

**Wheat**—The Wheat market is steady at a lower range. We note sales during the week as follows: 10,000 cts Milling at \$2.02 1/2; 200 sks Superfine at \$1.70, gold; 15,000 cts choice Shipping and Milling at \$2.02 1/2, according to quality, averaging nearly \$2.05; 1,400 sks choice Shipping at \$2; 600 good do, \$1.97 1/2; 30,000 cts Shipping at \$1.97 1/2; 1,500 cts choice Milling at \$2.05; 2,000 cts choice Milling at \$2.05 per cwt.

**Wool**—We have no transactions to report and quotations are still nominal.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., February 14, 1877.

<b>BEANS.</b>	Almonds, hd sh lb	7 @	—
Bayo, etc.	Soft sh lb	15 @	17
Butter	15 @	20	14 @ 16
Pea	20 @	12 @ 12 1/2	17 @ 19
Red	25 @	—	—
Pink	25 @	—	—
Sw't White	15 @	—	—
Lima	25 @	—	—
<b>BROOM CORN.</b>	Union City, etc.	75 @	12 1/2
Common, lb	Stockton	75 @	87 1/2
Choice	Petaluma, etc.	50 @	—
<b>CHICORY.</b>	Salt Lake	150 @	—
California	Humboldt	50 @	—
German	Cuffey Cove	—	—
<b>COTTON.</b>	Early Rose, new	75 @	85
Cotton, lb	Sweet	100 @	—
<b>DAIRY PRODUCE, ETC.</b>	<b>POULTRY &amp; GAME.</b>		
Cal. Fresh Roll, lb	Broilers	75 @	85
Point Reyes	Broilers	75 @	85
Pickle Roll	Ducks, tame	90 @	100
Firkin	Geese, pair	200 @	25
Western Reserve	Wild Gray	200 @	25
New York	White	100 @	50
<b>CHEESE.</b>	Turkey, Live, lb	15 @	17
Cheese, Cal, lb	Dressed	15 @	17
Old	Quail, doz	100 @	125
Eastern	Snipe, Eng.	200 @	25
N. Y. State	Rabbits	125 @	150
<b>EGGS.</b>	Hare	200 @	250
Cal. fresh, doz	<b>PROVISIONS.</b>		
Ducks	Cal Bacon, Lt, lb	14 @	15
Eastern	Heavy	13 @	14
<b>FEED.</b>	Lard	13 @	14
Bran, ton	Cal. Smoked Beef	10 @	10 1/2
Corn Meal	Eastern	—	—
Hay	Eastern Shoulders	—	—
Middlings	Hams, Cal.	14 @	14 1/2
Oil Cake Meal	Armour	16 @	—
Straw, bales	Cal. Mess.	75 @	—
<b>FLOUR.</b>	Davis Bros	17 @	—
Extra, bbl	<b>SEEDS.</b>		
Superfine	Alfalfa, Chile, lb	8 @	13
Graham	California	16 @	19
<b>FRESH MEAT.</b>	Canary	10 @	12 1/2
Beef, 1st quality, lb	Clover, Red	22 @	25
Second	Brown	5 @	55
Third	Cotton	6 @	10
Mutton	Flaxseed	33 @	—
Spring Lamb	Hemp	5 @	—
Pork, undressed	Italian Rye Grass	25 @	30
Dressed	Perennial	20 @	30
Veal	Millet	10 @	12
Milk Calves	Mustard, White	10 @	—
<b>GRAIN.</b>	<b>TALLOW.</b>		
Barley, feed, cwt	Crude, lb	6 @	6 1/2
Brewing	Refined	8 @	8 1/2
Buckwheat	<b>WOOL, ETC.</b>		
Chevalier	<b>FALL.</b>		
Corn, White	Free	12 @	14
Yellow	Choice	14 @	16
Oats	Northern	17 @	21
Milling	Burly	10 @	16
Rye	Oregon, Eastern	20 @	—
Wheat, shipping	Valley	25 @	—
Milling			
<b>HIDES.</b>			
Hides, dry			
Wet salted			
<b>BEEF.</b>			
Beeswax, lb			
Honey in comb			
Strained			
<b>HOPS.</b>			
New Crop			
Cal. Walnuts			

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY, M., February 14, 1877.

<b>FRUIT MARKET.</b>	Prunes	12 @	17
Apples, bx	Raisins, Cal, bx 150	25 @	50
Crab, lb	Malaga	3 @	—
Bananas, buch.	Zante Currants	9 @	10
Cocanuts, 100	<b>VEGETABLES.</b>		
Cranberries	Artichokes	25 @	40
Limes	Asparagus, lb	25 @	40
Lemons, Cal M	Beets, etc	60 @	—
Sicily, bx	Cabbage, 100 lbs	55 @	—
Oranges, Mex	Carrots	37 @	40
M.	Cauliflower, doz	50 @	—
Tabiti	Celery	50 @	—
Cal	Garlic, lb	1 @	2
Pears, bx	Green Peas	6 @	8
Pineapples, doz	Lettuce, doz	10 @	—
<b>DRIED FRUIT.</b>	Mushrooms	5 @	10
Apples, lb	New Potatoes	2 @	2 1/2
Apricots	Paraspiis, lb	1 @	—
Citron	Rhubarb	25 @	—
Figs, Black	Horse radish	4 @	5
White	fat, tn	12 @	—
Peaches	Tomatoes, lb	8 @	—
Pears	Turnips, etc	60 @	—
Plums	White	100 @	—
Pitted			

## LEATHER.

[WHOLESALE.]

WEDNESDAY M., February 14, 1877.

Sole Leather, heavy, lb	26 @	29
Light	22 @	24
Jodot, 8 Kil, doz	48 @	50
11 to 13 Kil	68 @	70
14 to 19 Kil	82 @	94
Second Choice, 11 to 16 Kil	57 @	67
Cornellin, 12 to 16 Kil	57 @	67
Females, 12 to 16 Kil	57 @	67
14 to 16 Kil	71 @	75
Simon Ulmo, Females, 12 to 16 Kil	58 @	62
14 to 15 Kil	58 @	62
16 to 17 Kil	61 @	63
Simon, 18 Kil	61 @	63
20 Kil	65 @	67
24 Kil	72 @	72
Robert Calif, 7 and 9 Kil	100 @	135
Kips, French, lb	40 @	40
Cal. doz	40 @	40
French Sheep, all colors	8 @	15
Eastern Cal for Backs, lb	100 @	125
Sheep Roins for Topping, all colors, doz	90 @	113
For Linings	50 @	50
Cal. Goat Sheep Linings	75 @	80
Best Legs, French Cal, pair	40 @	40
Good French Cal	40 @	45
Best Jodot Calif	50 @	52
Leather, Harness, lb	35 @	38
Fair Bridle, doz	48 @	72
Spriding, lb	33 @	37
Welt, doz	30 @	30
Butt, doz	18 @	20
Wax Side	17 @	18 1/2

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., February 14, 1877.

<b>BAGS—Jobbing.</b>			<b>OTHS.</b>		
Eng Standard Wheat	9 @	9 1/2	Seafloat Co's	No 1	00 @ 90
Neville & Co's			Castor, No 1	25	30 00
Hand Seward, 22x36.	9 @	9 1/2	Baker's A A	25	30 00
24x36	9 @	10	Olive, Plagniol	25	35 75
23x40	10 @	10 1/2	Possel	4	75 00
Machine Swd, 22x36	9 @	9 1/2	Palm, lb.	9	00
Flour Sacks, balves.	9 @	11	Linsced, Raw	77	00
Quarters	6 @	7	Coconut	82	00
Eighths	4 @	7 1/2	China nut, cs.	68	00
Heads	4 @	12	Speru	1	60 1/2
45 inch	8 @	9	Coast Whalcs.	60	00
40 inch	7 3/4 @	8	Polar, refined	60	00
Wool Sacks, 3 1/4 lb.	50 @	—	Lard	1	10 @ 15
4 lb.	50 @	—	Dvoco's Brit't.	44	45
Standard Gunnies	11 1/2 @	12	Nonparil.	50	00
Bean Bags	7 @	8	Eureka	32 1/2 @	38
			Barrel Kerosene.	32 1/2 @	—
<b>CANNED GOODS.</b>			Downer Ker.	50	00
Assorted Pie Fruits.	18 @	20	Elaine	48	00
2 1/2 lbs cans	2 75 @	3 00			
Table do.	3 75 @	4 25	<b>PAINTS.</b>		
Boiling Peas, 1 lb.	1 50 @	1 75	Pure White Lead	95 @	10 1/2
Pickles, 1/2 gal.	3 50 @	—	Whiting	14 @	—
Sardines, q box.	1 65 @	1 90	Putty	4 @	5
Hf Boxes	3 00 @	—	Chalk	14 @	—
<b>COAL—Jobbing.</b>			Paris White	2 1/2 @	—
Australian, ton.	8 25 @	8 50	Ochre	3 1/2 @	—
Coos Bay,	8 00 @	9 00	Venetian Red.	34 @	—
Bellingham Bay	9 00 @	—	White Chemical	31 @	—
Seattle	9 00 @	—	Paint, gal.	—	—
Cumberland	14 00 @	17 00	White & tints.	2 00 @	2 40
Mt Diablo	5 75 @	6 75	Green, Blue &	—	—
Lehigh	22 00 @	—	Ch Yellow	3 00 @	3 50
Liverpool	8 50 @	9 00	Light Red	3 00 @	3 50
West Hartley	14 00 @	—	Metallic Roof.	30 @	60
Scranton	13 00 @	16 00	<b>ICE.</b>		
Vancouver Id.	10 50 @	12 00	China No. 1, lb.	5 1/2 @	6 1/2
Charcoal, sack.	75 @	—	Hawaiian	6 @	6 1/2
Coke, bbl.	60 @	—	<b>SALT.</b>		
<b>COFFEE.</b>			Cal. Bay, ton	18 00 @	20 00
Sandwich Id, lb.	21 @	—	Common	5 00 @	7 00
Costa Rica	23 @	—	Carmen Id.	18 00 @	20 00
Java	20 @	21 1/2	Liverpool Shd	10 00 @	25 00
Manila	20 @	21	<b>SOAP.</b>		
Ground, in cs.	25 @	—	Castile, lb.	10 @	10 1/2
<b>FISH.</b>			Common brands.	4 1/2 @	6
Sae'to Dry Cod.	5 @	7	Fancy brands.	7 @	8
Boneless	5 1/2 @	7	<b>SPICES.</b>		
Extra	12 00 @	10 50	Cloves, lb.	45 @	50
In Kits	1 85 @	2 35	Cassia	23 1/2 @	25
Ex Mess.	3 50 @	4 00	Nutmeg	85 @	90
Pkld Herring, bx	3 00 @	3 50	Pepper Grain.	15 @	17
Boston Sunk Hd	4 @	5 00	Pimento	15 @	16
Hf bbls.	4 50 @	5 00	Mustard, Cal.	—	—
Pkld Cod, bbls.	22 00 @	—	1/2 lb glass.	1 50 @	—
Hf bbls.	11 00 @	—	<b>SUGAR, ETC.</b>		
Mackerel, No. 1	—	—	Cal Cube, lb.	13 1/2 @	—
Extra Bbls.	9 50 @	10 50	Circles, crushed.	13 1/2 @	—
Extr.	12 00 @	10 50	Powdered	13 1/2 @	—
In Kits	1 85 @	2 35	Fine crushed	13 1/2 @	—
Ex Mess.	3 50 @	4 00	Granulated	13 @	—
Pkld Herring, bx	3 00 @	3 50	Golden C.	11 @	11 1/2
Boston Sunk Hd	4 @	5 00	Hawaiian	10 @	11
			Cal Syrup, kgs.	72 1/2 @	—
			Hawaiian	25 @	27
<b>LIME, ETC.</b>			<b>TEA.</b>		
Lime, Time Cruz.	2 00 @	2 25	Young Hyson	—	—
Cement, Rosen-	2 75 @	3 50	Moyune, etc.	35 @	50
Portland	4 75 @	5 50	Country pkd Gun-	—	—
Plaster, Golden	—	—	powder & Im-	—	—
Gate Mills.	3 00 @	3 25	perial.	50 @	60
Land Plaster, in 10	00 @	12 50	Hyson	30 @	35
<b>WALS.</b>			Ford	35 @	60
Ass'ted sizes, keg 3	25 @	4 00	Japan, 1st quality	40 @	50
			2d quality.	25 @	30



## Nurserymen.

## FRUIT AND ORNAMENTAL TREES,

Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
518 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco.  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

## FRUIT, EVERGREEN, NEW AND RARE TREES.

BRIGGS' RED MAY PEACH.

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Prichardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF ALL PALMS.

## FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

## TREES, TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES. ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG & CO.,

Nos. 8, 8 and 10 J Street, Sacramento.

200,000

## Australian Gum Trees For Sale,

—AT—

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,  
East Oakland, Alameda County, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, ALMOND, QUINCE, OLIVE, FIG, GRAPEVINES, AND SMALL FRUITS.

EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER, ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

## LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, San Jose, Cal.,  
A large and general assortment of

Fruit and Ornamental Trees, Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stalky fruit trees a specialty. Address,

S. NEWHALL, San Jose, Cal.

SQUILLS, Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Petaluma, Cal.

## PETALUMA NURSERIES.

Established 1860.

We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria, Excelsa, American Elm, Black Walnut and Blackberry Roots, at very low rates. Price List sent on application. Address, WM. SEXTON, Petaluma, Cal.

## PEACH SEEDLINGS

FOR SALE,

For Grafting and Transplanting, IN LOTS TO SUIT.

Address, W. A. T. STRATTON, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb K. PIGENIX, Bloomington Nursery, Ill.

## Seedsmen.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds.

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. *See* Trade price list on application.

We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,

607 Sansome street, S. F.

P. O. Box 10231



My annual Catalogue of Vegetable and Flower Seed for 1877 will be ready by January, and sent FREE to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Printed directions for cultivation on every package. All seed sold from my establishment warranted to be both fresh and true to name; so far, that should it prove otherwise I will refund the order gratis. As the original introducer of the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of other new vegetables, I invite the patronage of all who are anxious to have their seed fresh, true, and of the very best strain. *New Vegetables a specialty.*

JAMES J. H. GREGORY,  
Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## SPANISH CHUFA

SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

## The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

NURSERYMEN, FLORISTS, SEEDSMEN, TREE DEALERS, HORTICULTURAL IMPLEMENT MAKERS, ETC., of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,  
Publishers, Galena, Illinois.

Dewey & Co. { 224 } Patent Agt's.  
{ Sansome St. }

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm Pumping, Railroad and Power

## WINDMILLS,

Pumps & Fixtures,



Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT).

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
Stockton, Cal

## EXTRAS.

## EXTRAS.

## For the Kirby Machines.

D. M. OSBORNE & CO. ARE READY TO SUPPLY

ANY DEMAND FOR EXTRA PARTS FOR ANY

"KIRBY" EVER MADE. ORDERS

SHOULD BE SENT IN BEFORE

THE HARVEST SEASON

ADVANCES.

Address, D. M. OSBORNE & CO.'S

BRANCH HOUSE,

254, 256 Market St. }  
and } SAN FRANCISCO, CAL.  
8, 10 Front St., }

## NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

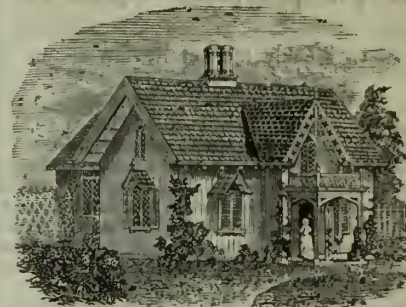
One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal. JAMES W. WEBB, President.

CHARLES MALTBY, Secretary.

## Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they relax and rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lunabago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 69 Sacramento Street, S. F.

## CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

## THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

## The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

## WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.

306 Pine Street, San Francisco.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries.

THE HIGH SCHOOL CHOIR, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book 1, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend these books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents), SHINING RIVER, (35 cents), GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

## OLIVER DITSON &amp; CO., Boston.

C. H. DITSON & Co.,

J. E. DITSON & Co.,

711 Broadway, New York. Successors to Lee & Walker, Philadelphia.

## The Patron's Almanac for 1877.

Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,

Mechanicsville, Bucks Co., Pa.

## CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc. T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

## DAVIS &amp; SUTTON,

75 Warren St., New York,

## Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.



GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).

R. C. HAILE, (VICE PRESIDENT).

JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).

THOS. UPTON.

I. C. STEELE.

THOS. FLINT.

G. P. KELLOGG.

W. L. OVERHISER.

O. HUBBELL.

D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

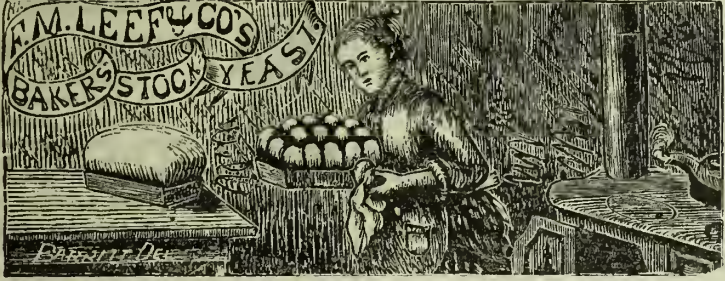
DANIEL INMAN, Manager.

CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO., - - - SACRAMENTO, CAL.

Ask Your Grocer for Them.



Use None Other.

TRADE-MARK.

B. B. SCOTT, General Agent, - - - Sacramento, Cal.

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco,

Taber, Harker & Co., San Francisco,

Newton Bros. & Co., San Francisco,

J. A. Folger & Co., San Francisco,

A. P. Whitney, Petaluma,

Luther & Schroeder, San Jose,

Chas. Jones, Oakland,

J. H. Seymour, Los Angeles,

Adams, McNeil & Co., Sacramento.

T. M. Lindley & Co., Sacramento.

Booth & Co., Sacramento,

H. S. Sargent, Stockton.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE & CO., Agents.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

HEALD'S BUSINESS COLLEGE.

No. 24 Post Street,

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

CALIFORNIA FARMERS' MUTUAL Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING,)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - \$200,000 00

ASSETS, DEC. 31, 1876, - 310,793 69

MUTUAL PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.	\$6,202,435.00	\$136,622.18
Less Amount Canceled.....	435,419.00	9,568.38
Amount in force, Dec. 31, '76.	\$5,767,016.00	\$127,053.80
Losses paid.....	\$16,330.00	

CASH PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76....	\$3,605,935.00	\$71,865.16
Less Canceled and Expired.....	1,587,246.00	28,585.16
Amount in force, Dec. 31, '76....	\$2,018,689.00	\$43,280.00
Losses paid.....	\$12,718.71	

OFFICERS.

J. D. BLANCHARD.....PRESIDENT

I. G. GARDNER.....VICE-PRESIDENT

G. P. KELLOGG.....TREASURER

A. W. THOMPSON.....ATTORNEY

FERD. K. RULE.....SECRETARY

TRUSTEES.

J. D. Blanchard.....San Francisco

G. P. Kellogg.....Salinas

I. G. Gardner.....San Francisco

Chas. Laird.....Salinas

Uriah Wood.....San Benito

A. B. Nally.....Santa Rosa

A. W. Thompson.....San Francisco

A. D. Logan.....Colusa

I. C. Steele.....San Mateo

G. W. Colby.....Butte County

A. Wolf.....Stockton

C. J. Cressey.....Oakland

J. C. Merryfield.....Dixon

E. W. Steele.....San Luis Obispo

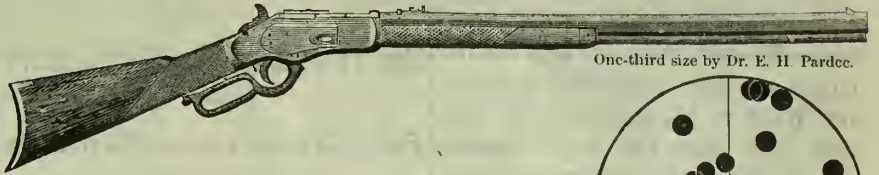
C. S. Abbott.....Monterey

Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

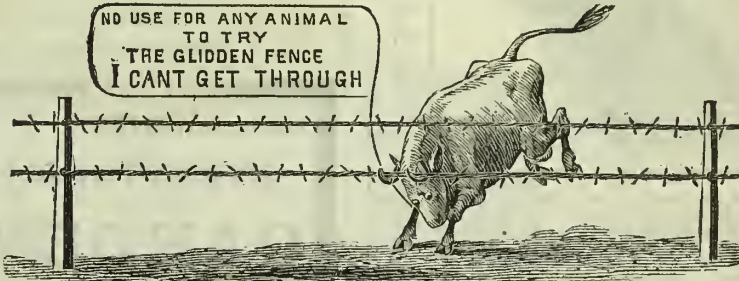
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



It makes the most durable, safe, and reliable fence in the world against stock of all ages.

About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
7. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
8. The only barb wire that gives universal satisfaction and has greater sale than all others put together.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

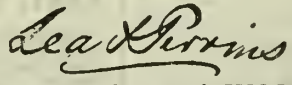
JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,




which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

LOOK!



ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.

B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR, Ceres, Stanislaus County, Cal.

FOR FINE HATS

GO TO

C. HERRMANN

NO 402

KEARNY ST. NEAR PINE

SAN FRANCISCO



T. J. PETER, S.F.



## Mining and Scientific Press Patent Agency.

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. Circulars of advice, free. Address,

DEWEY & CO.,  
Publishers MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, 224 Sansome Street, S. F.  
A. T. DEWEY, GEO. H. STRONG,  
W. B. EWER, JNO. L. BOONE.

## SANBORN & BYRNES,



Mechanics' Mills, Mission Street,  
Bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Jewels and Balusters.

## THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING

# ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

## A FIRST-CLASS BUSINESS OPPORTUNITY.

Wanted, a partner with \$5,000 to \$10,000 cash to take one-third to one-half interest in the Bull's Head Stock Yards, Ninth and Howard streets. A general partner; must be active and understand all about live stock. Advancing freights, making purchases of stock and hay, make the business too great for one person.



Contains over 1,200 varieties Vegetable and Flower Seeds, COLORED PLATES. Elegant wood-cuts of vegetables and flowers. Handsomest Guide Published! Send for it.  
DETROIT SEED CO., Detroit, Mich.

## LANDSCAPE GARDENING.

CHAS. A. REED,  
Experienced Landscape Gardener,  
SANTA BARBARA, CAL.  
Correspondence solicited.

25 LADIES' or Gents' Fancy Cards, with name, 10c.; 25 Snowflake Cards, 7 styles, with name, 20c.; 10 Photos of Actresses, no name, 10c., postpaid. J. B. HUSTED, Nassau, Reuss, Co., N. Y.

## PUBLIC SALE SHORT HORN CATTLE,

TO BE SOLD  
On Thursday, April 5th, 1877,  
AT THE  
Fair Grounds, near San Jose,  
CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US TO CLOSE UP OUR PARTNERSHIP AFFAIRS; WE SHALL THEREFORE SELL, AT PUBLIC SALE, THE ENTIRE AVENUE RANCH HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to breeders, and all parties wishing to purchase high bred Short Horns.

Full Sale Catalogues furnished on application.  
CYRUS JONES & CO.



### Webster's Dictionary.

10,000 Words and Meanings not in other Dictionaries.  
3,000 Engravings. 1,840 Pages Quarto.  
FOUR PAGES COLORED PLATES.  
"THE BEST PRACTICAL ENGLISH DICTIONARY EXTANT." London Quarterly Review, Oct., 1873.  
The sales of Webster's Dictionaries throughout the country in 1873 were 20 times as large as the sales of any other Dictionaries.  
One family of children having WEBSTER'S UNABRIDGED, and using it freely, and another not having it, the first will become much the most intelligent men and women. Ask your teacher or minister if it is not so, then buy the book, and use, and urge its use, freely.  
Published by  
G. & C. MERRIAM, Springfield, Mass.

SEEDS

Our Combined CATALOGUE for 1877

OF

EVERYTHING

FOR THE

GARDEN

Numbering 175 pages, with Colored Plate,

SENT FREE

To our customers of past years, and to all purchasers of our books, either Gardening for Profit, Practical Floriculture, or Gardening for Pleasure,

(Price \$1.50 each, prepaid, by mail.)

To others, on receipt of 25c.

Plain Plant or Seed Catalogues, without plate, free to all.

Peter Henderson & Co.

Seedsman, Market Gardeners and Florists,

35 Cortlandt St., New York.

PLANTS

## Fraud! Fraud!!

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

COLLINS & CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

John Saul's Catalogue of New, Rare and Beautiful Plants, will be ready in February, with a colored plate of the New Striped Rose,

BEAUTY OF GLAZENWOOD.  
"A rose of golden-yellow, striped and flaked with scarlet vermillion. Sounds like a dream or a fairy tale; it is nevertheless a reality." H. Curtis, in the Gardener. Catalogues free to all my customers; to others, price 10 cents, or a plain copy free. JOHN SAUL, Washington, D. C.

100 DAYS TOMATO EARLIEST AND MOST PROLIFIC GROWER!  
Sold last year into every State, to thousands, with great success. Per packet, 25 cents; Six for \$1. MY LOW PRICE LIST OF SEEDS (Twelfth Annual List) sent with every order.  
J. A. FOOTE, Seedsman,  
Terre Haute, Ind.

25 ELEGANT CARDS, 20 styles, with name, 10c., postpaid. GEO. I. REED & CO., Nassau, N. Y.

## A NEW AND WONDERFUL FRUIT. THE DIOSPYROS KAKI, OR, JAPAN PERSIMMON.

It commends itself to the public as follows:  
(1.) The tree is highly ornamental, is a prolific bearer, is as hardy as the pear, and fruits as early.  
(2.) It ripens without frost.  
(3.) The fruit is solid and can be shipped across the continent.  
(4.) The season is from October to January, when fine fruits are scarce. When dried it is equal to figs, and can be kept a long time. It is extensively used for preserving in China.  
(5.) It is of a bright yellow, orange or vermilion color, and is unsurpassed for the table, being thought by some to be equal to the peach or strawberry. Its average weight is from one-half pound to over a pound. (Some grown by Col. Hollister, of Santa Barbara, the present year, averaged three-quarters of a pound.)  
(6.) The wood is valuable for manufacturing, being a species of the ebony. Order, Ebenaceae.  
Four varieties, warranted genuine, and will bear in from one to three years. Perfectly adapted to California. Cultivate the same as apple and in same variety of soil. The only grafted and reliable stock in the country.

### TESTIMONIALS.

PROF. ASA GRAY:  
The Persimmon has great capabilities, and will give fruit of a type wholly distinct from any we possess in temperate climates. He who has not tasted Kaki (the Japan Persimmon) has no conception of the capabilities of the Diospyrus genus. Cal. Agriculturist, March, 1876.  
KENTARO YANAGIYA, Japanese Consul:  
It is one of the choicest and best fruits grown in my country.  
This is also the opinion of Sir Rutherford Alcock. See "Three Years in Japan," Vol. 1st, page 286.  
COMMANDER J. C. WATSON, U. S. Navy:  
It is a magnificent fruit, with a rich flavor, whether eaten fresh or dried, while in size it is as much of a curiosity as any of the mammoth fruit of this wonderful State. I feel sure it can and will be raised most successfully in this country.  
REV. P. V. VEEBER, D. D., Tokio, Japan:  
It is a most delicious fruit and worthy to be ranked with the peach and pear of California. I see no reason why it may not grow and ripen well here.  
CAPT. CHARLES J. McBRIDE, U. S. Navy:  
It is much larger and to my taste more delicious than the persimmon of the Southern States. There are two varieties, one with a hard and the other with soft pulp, both equally good. It does not require the frost to bring it to perfection as does the southern variety, nor has it the acid taste when green. The tree is very ornamental and produces an immense number. I see no reason why it could not be introduced into this State, and believe it would thrive and do well. It certainly would make a valuable addition to our fruits, and could not fail to be very popular. When dried, it resembles figs, and makes a very nice confection.

ADMIRAL J. M. RODGERS, U. S. Navy:  
It is quite different in its development as fruit from anything I have seen in the United States. It is one of the favorite fruits in China and Japan, where it is in universal use, both fresh and dried. There are many kinds as there are of apples, and they differ in size and flavor, some being as large as oranges. The tree grows to the size of the apple and bears as many specimens of fruit. Its introduction into common use will be a boon to the State, since it will augment the number of fine fruits.

### PRICE LIST.

3-year-old trees	.....	\$3 00 each.
2 " " "	.....	2 00 "
1 " " "	.....	1 00 "
Cions	.....	25 "
Seeds	.....	12 for \$1 00 or 75 for \$5 00

Liberal discount on large quantities.

Rev. HENRY LOOMIS,  
Trumbull's Seed Store, 421 Sansome Street  
San Francisco.

### REFERENCES:

Admiral J. M. Rodgers	.....	Mare Island
Com. J. C. Watson	.....	San Francisco
Hon. H. H. Haight	.....	San Francisco
Hon. Lorenzo Sawyer	.....	" "
Rev. C. E. Babb, D. D.	.....	" "
R. J. Trumbull	.....	" "
H. H. Reynolds	.....	San Jose
Col. W. W. Hollister	.....	Santa Barbara
J. M. Rodgers	.....	Watsonville

R. J. TRUMBULL,  
Grower, Importer, Wholesale and Retail  
Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application.  
My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

## One Million Pear Seedlings,

From two to three-sixteenths of an inch in diameter; well branched roots, just the thing for grafting. Sent by mail, securely packed, postage paid, for five dollars per thousand, or delivered at the express office here, boxing free, at two dollars per thousand. Pear root-grafts made to order, five dollars per thousand. Terms, cash.

HUNTER & BREWER, Springwater,  
Livingston Co., New York.

# FLOWERS

Strong Plants delivered free of cost safely per mail at your door. Satisfaction guaranteed. Splendid assortment of did assortment of ROSES  
6 for \$1;  
13 for \$2. Send for New Catalogue of Plants.  
HOOPER, BRO. & THOMAS,  
Berry Hill Nurseries, West Chester, Pa.

## SEEDS. SEEDS.

IMPORTED.  
Croeby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New  
Early Canada Yellow Flint Corn.  
Early Dutton  
Long Red Mangel Wurtzel Yellow Globe  
White Sugar  
Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,  
No. 317 Washington Street, San Francisco.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.  
Constantly on hand and for sale, choice specimens of the following varieties of Fowls:  
Dark and Light Brahmas, Buff, White and Partridge  
Cochine, White and Brown  
Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.  
NO INFERIOR FOWLS SOLD AT ANY PRICE.  
Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to  
GEO. B. BAYLEY,  
P. O. Box 659, San Francisco, Cal.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address  
Rev. DAVID MCCLURE, Principal,  
OAKLAND, CAL.

## M. FALLON,

Cor. Seventh & Oak Sts.,  
OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Ronen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chickens in their season. Eggs packed with care and sent in rotation as orders are received.

## THOROUGHbred FOWLS, BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL Eggs Shipped to  
OF FOWLS Any part of the  
GUARANTEED Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls, hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,  
M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

## WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.  
Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,  
C. P. STONE,  
Headsburg, Cal.

Trees, Plants, Spring Lists free. F. K. PIERCE, Bloomington Nursery, Illinois.



# PACIFIC RURAL PRESS

Volume XIII.

SAN FRANCISCO, SATURDAY, FEBRUARY 24, 1877.

[Number 8.]

## Marketing Limes.

The report in the Los Angeles *Herald* that the lime market was glutted and that the fruit was rotting in the orchards, brings out a statement from Thos. A. Garey, the well-known fruit grower of that county. Mr. Garey makes several points which are well worthy the attention of growers. As Mr. Garey will say below, there is no reason why the lemonade timber of this whole country should not be grown in California. It cannot be doubted that the trouble lies not so much in the production as in the marketing of it. Mr. Garey's communication to the paper named above is as follows:

Our producers have not selected their fruit; they have not put on the market only first-class fruit, but instead have sent to the commission merchants of San Francisco a heterogeneous mass of large, small, ripe, unripe, green and in some instances, half-rotten fruit. Of course the article would not compete with the fine, uniform Mexican or Tahiti limes, and the merchants returned account sales of "nix." Hence we must learn to put up our fruit properly, and if we send a second or third-class article not to mix it up with a first-class, but mark it second-class. I will say in this connection that I have just received account sales of my last shipment of limes from Messrs. Littlefield, Webb & Co., of San Francisco, returning me net \$7.45 per 1,000, and on the margin they write, "good, well selected limes looking up." This tells the story at this season of the year. But what will we do when the vessels begin to arrive from Mexico and Tahiti laden with this fruit? In answer I would say:

Flood the market at the same time with our own fruit. One or two trials will let the foreign shippers out, and we will have the market of this coast all to ourselves.

After securing and controlling this market we must introduce our limes to the lemonade-drinking people of the "States." Limes are almost unknown in the East, lemons being used almost entirely. Introduce limes, and the convenience alone of using them as against lemons gives the market to the limes.

A citric acid manufactory, as you suggest, to take care of the refuse and unmerchable fruit, and our lime culture will return in a few years tens of thousands of dollars to enrich our people. It may be asked at what price can we lay the fruit down in San Francisco at a profit to the grower? I feel assured that the lime growers of this country will be quite satisfied with a prompt market at 25 cents per 100, or \$2.50 per 1,000. Lime trees, at 12 to 15 years old, bear from 2,000 to 5,000 limes annually. One hundred and sixty to 200 can be planted on an acre to advantage. I leave the calculation on income per acre to those who have an interest in this industry.

A CORRESPONDENT of the Western Associated Press at Calcutta says: The Viceroy's official dispatch of February 16th states that the famine in North Ancoi is much worse than supposed, and there is great distress in Mysore.

OREGON STATE FAIR.—E. M. Waite, Secretary, informs us that the annual fair of the Oregon State Agricultural Society, for 1877, will begin on Monday, October 8th, and continue six days.

## Beet Sugar in Europe.

Whatever advantage there may be in the existence of a short sugar crop in Europe may be expected by our producers. The following facts from an exchange may be of interest to our beet growers and go to assure a profitable season to the new sugar establishments which will begin operations this summer in this State.

It appears that the past has been a disastrous season for the French beet root sugar works. It is said that, out of 438 factories in operation in 1875, only 184 are still in existence. The quantity of beet juice treated was 964,617 hectoliters, as against 4,338,501 hectoliters in the first month of last season, and its average density was 10% lower. The stock of sugar turned out was less than one-fourth of the amount in Sep-

## Cultivating Orchards.

We have now and then a long and mournful wail from some Eastern reader that if he comes to California he will have to forego the beautiful green sward in his orchard. It is very poetical to think of the grand old trees set in their carpet of green, but it is coming to be recognized as a fact that even Eastern orchards, to do well, must be cultivated. Aside from the new life which is given to the soil by stirring and overturning, it is understood that the old undisturbed soil is a splendid breeding ground for the hosts of insects that prey upon the apple tree. We doubt not that if the cultivation of orchards had entered into Eastern economy years ago, their fruit would have been rescued from much of the deterioration and unsoundness which is now prevalent almost everywhere. Hence it is we find in the Boston *Cultivator* such

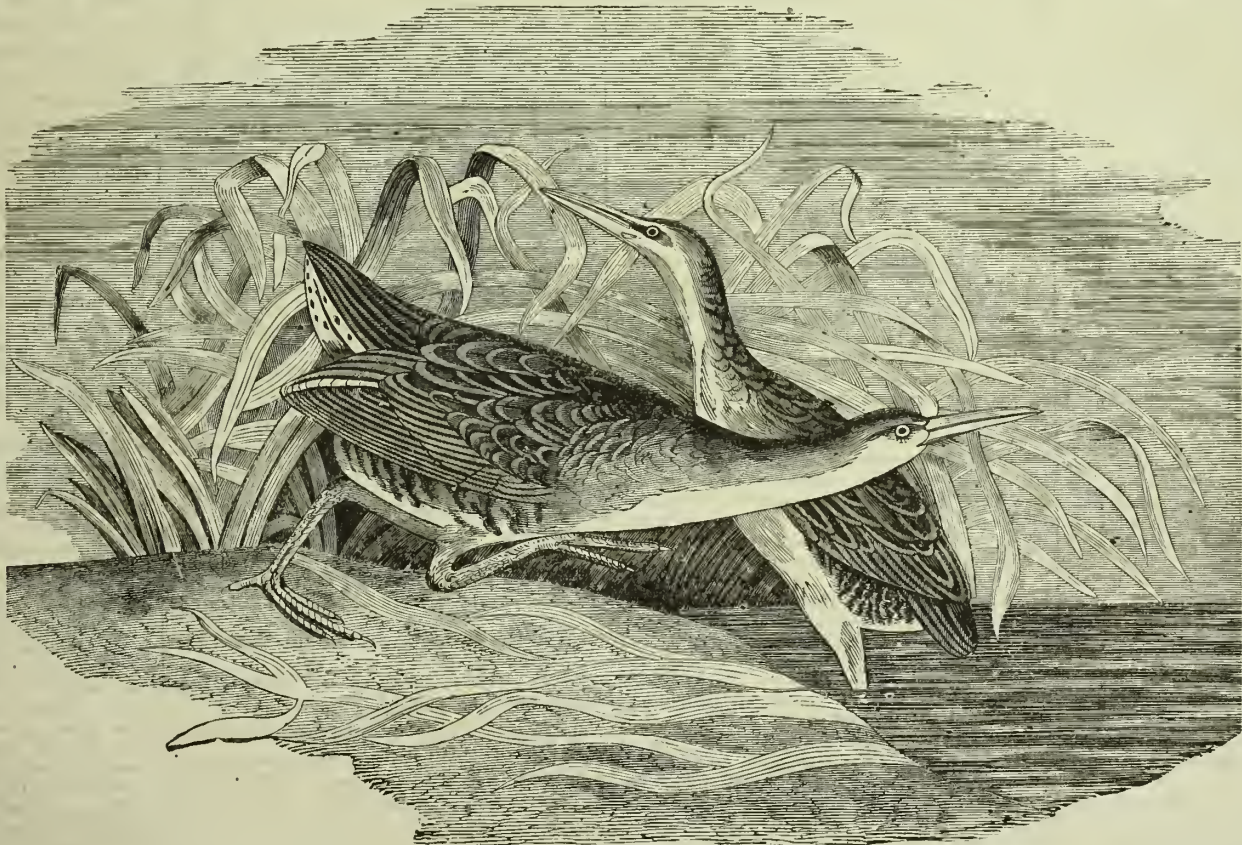
## Great Red-breasted Rail.

The *Rallus elegans*, of Audubon, has been confounded with the *R. crepitans*, by other authors. The former, shown in our illustration, is altogether a fresh-water bird, and breeds and lives throughout the year far inland in the Southern States, only a few stragglers having been observed east of Pennsylvania; while the latter never removes from the salt marshes on the Atlantic, from New Jersey to the Mexican gulf.

This bird resides in the fresh-water marshes and ponds in the interior of South Carolina, Georgia, Florida and Louisiana. In the extensive marshes of the Southern States contiguous to sluggish streams, they may be seen gliding swiftly among the tangled rank grasses and aquatic weeds, or standing on the broad leaves of the yellow cyamus and fragrant water-lily, or forcing their way through the dense foliage of pickerel weed and arrow-head. Twenty pairs have been found breeding within an area of 30 yards diameter in such places. The nests are built upon the ground, shallow at first, but as the nine or ten eggs are successively deposited, their walls are elevated to the height of six or eight inches by means of withered weeds and grass. The middle of April is usually the beginning of the breeding season, though some of them commence even a month earlier. They return to the same nests in successive years, and often repair or improve them. The young, which are at first black, leave the nest as soon as they burst the shell and follow their mothers along the borders of the streams and pools, where they find abundance of grass seeds, insects, tadpoles, leeches and small crawfish. At this season they may be easily mistaken for meadow mice.

In seasons of extreme drouth these birds wholly disappear from their accustomed haunts, and doubtless resort to the shores of larger and deeper ponds until after a heavy fall of rain. The young acquire the redness of their plumage the first summer and increase in size and beauty for several years, without experiencing any change in their coloring after the spring following that of their birth. The sexes differ in appearance only with respect to size, the males being considerably larger than the females. It is believed that this species raise but one brood a year, although the eggs may be replaced when destroyed during the period of incubation. Their flight is stronger and more protracted than that of the salt water species. When flushed they rise and go off with a chuck, their legs dangling beneath them, and alighting in the grass at a considerable distance they run off with surprising speed. Indeed, they depend for safety even more upon their fleetness and adroitness on foot than on the wing. They are less apt to take to the water than the *Rallus crepitans*, and are by no means so expert at diving. Their flesh is very good, especially in the autumn, when they feed on grass seeds. Their size, as well as their flavor, renders them desirable to the sportsman and epicure. Their eggs are also excellent, being preferable to those of the common fowl.

GOOD APPLE.—We have on our table a Gloria Mundi apple, grown on Avenue ranch, near San Jose, which measures 14 inches in circumference.



GREAT RED-BREASTED RAIL.

tember, 1875, the figures being 5,023 and 22,979 tons respectively, while the quantity obtained from each hectoliter of juice is but 3.60 kilogramme, as compared with 3.88 in 1875. It is also stated that deterioration in the sugar yielding qualities of the beets has been going on for a number of years past.

The falling off in the French crop, although very great, is not the only European country that has suffered in this respect. A large deficiency is estimated in the German crop. As the estimates now stand, the following will be the European crop, with comparisons:

	1876-7.	1875-6.	1874-5.	1873-4.
	Tons.	Tons.	Tons.	Tons.
France.....	200,000	462,259	450,877	396,578
Germany.....	200,000	346,646	250,708	239,244
Austro-Hungary..	140,000	153,922	120,921	167,059
Russia and Poland.	250,000	245,000	222,500	202,851
Belgium.....	65,000	79,796	71,079	73,516
Holland and other countries.....	30,000	30,000	30,000	35,000

Total tons..... 975,000 1,337,623 1,145,885 1,161,248  
According to these estimates—which it may be observed are those of the highest authorities on the subject—the yield this season will be 262,623 tons less than last, 170,885 tons less than in the season of 1874-5, and 189,248 tons under that of 1873-4.

THE amount of import duties paid at this port last week was \$113,367.

advice as this to orchardists: "Don't be afraid next season to cultivate your apple orchards. The roots of trees are not injured by careful cultivation about them. The green turf of the orchard is handsomer but the well-cultivated ground is more productive." We doubt not it will be found that our cultivation of orchards, which our Eastern friends so much deplore, will be found the only way to preserve their productiveness and freedom from noxious insects.

DUCKS AND GESE AS PASTURE THIEVES.—The ducks and geese have been driving a lively business on the fine pastures in different parts of the State. Before the January rains they descended like a shower upon the fresh alfalfa, and now they are going on the young grain. We saw a flock of geese so thick on a San Mateo grain field that they looked like sheep. They are of large size and one was reported shot weighing 24 pounds. They make a good many good breakfasts for the ranchers and make the itinerant meat peddler mourn. We read that in Sonoma county a swivel gun of one inch bore, transported by a mule team, is used to kill ducks and geese on McLaren's ranch, on Sear's point, to prevent them from destroying the crop.



## CORRESPONDENCE.

### San Felipe Valley.—No. 1.

EDITORS PRESS:—Last fall, during the very fine weather and roads that succeeded our first rains, I made a visit in the interest of the PACIFIC RURAL PRESS to San Felipe valley, in the southeastern portion of Santa Clara county. I was greatly delighted with my visit, and at the time made notes of matters of interest, which I intended to write up for the readers of the PRESS when I should secure some additional items from other parties there, of whom I had made that request. My failing to receive these items up to this date, is the only good excuse I have to offer for so long neglecting to acknowledge the real helpful kindness and generous hospitality extended to me by our patrons there.

San Felipe valley is located 12 miles east of Gilroy, and seems to me to be only part and parcel of the great Santa Clara valley, partially occupying a large recess in the Coast Range mountains, and bound on the north and south by low foothill spurs running out from the range; while the whole western aspect lay open to the great body of the valley—over a large tract of low, wet meadow or grazing land.

My route was over the smooth, well-kept road through the old town of Gilroy, where I saw many cozy, comfortable looking homes, well hid away among the orchards, vines and trees. The land here is a black, sandy loam, and exceedingly rich, producing fine fruit and vegetables in great abundance. After passing Old Gilroy the road lay through a fine farming and grazing country, with good, substantial dwelling houses, barns and out-buildings; and the broad, level fields on either side I noticed were better fenced than in most parts of this valley.

After passing Soap Lake on the north, on which were hundreds of ducks which swam towards the opposite shore as I passed, the road passes over and along the spurs of low hills, with here and there small plots of green grass and moist, cultivated vegetable lands.

After fairly reaching the rich, loamy willow land of the valley, I first came upon the attractive-looking and well-improved dairy ranch of Mr. Albert Wilson. His whole place, as first seen from the road—barns, dwelling house, dairy and out-houses, and his cultivated fields as far as seen—gave an impression of neatness, thrift and convenience, which is by no means lessened by a more careful examination.

The next place is, I believe, the fine home ranch of Mr. U. Wood, consisting of 110 acres of willow land of marvelous richness. As evidence of its known fertility, Mr. Wood mentioned the fact that he had leased a large portion of his place for a term of years for gardening purposes, at \$25 per acre per year, payable in advance. Mr. W. has a large, well-finished and well-arranged residence, with a wealth of tasty, well-kept tree and garden surroundings. His barns, carriage houses, tool houses, and stock sheds, etc., are substantial and well arranged for convenience. Mr. W. has the reputation among his neighbors of being a successful farmer, stock-grower and business man generally; having acquired besides his fine property here, a tract of seven sections of land in San Joaquin county, 2,500 acres of which is good wheat land, easily irrigated; besides being largely in the sheep business.

Mr. F. A. Jones (who is a patron of the RURAL PRESS,) has chosen a beautiful spot near to the post-office and village for making his home. His house, which is neat and tasty, well finished and painted, has the usual tree and vine surroundings of a first-class California home.

Arriving at Mr. E. A. Sawyer's fine place near dinner time, I gladly accepted an invitation to remain for dinner, thus affording me a favorable opportunity for a pleasant chat with him and his estimable wife.

Mr. Sawyer's ranch consists of 600 acres of grain and farm land, and 400 acres of dairy land, all in the valley. His crops the last year were very good. As items of farm products, he gave for the last season 2,000 sacks of potatoes, 700 tons of wheat and 25,000 sacks of barley; his wheat averaging over 25 cents per acre. Mr. S. keeps 400 dairy cows, making cheese alone. Mr. Sawyer has 10 acres of his best land in strawberries under a high state of cultivation, and yielding abundant crops of superior fruit as to flavor and size. This rich, warm willow land, with abundance of water from artesian wells, seems well adapted to produce this luscious fruit in perfection.

My old friend, William Buck, having invited me to visit him, with the promise when I came up he would "show me around San Felipe valley," I found at home at his beautiful place among the trees, but very busy and interested in superintending a number of men and teams at work in clearing out the bed of the Pacheco creek, which runs through his place, preparatory for the winter rains. But Mr. Buck has always been a warm friend and supporter of the RURAL PRESS, and he immediately left all and accompanied me, first to his house for dinner, and then during the whole afternoon to drive with me among his neighbors, helping me very much in my work, and in several instances generously offering to advance the subscription price of the paper for his neighbors.

Although I feel under peculiar obligations to do so, I hardly know how I should commence a full description of Mr. Buck's place. If I should say that it consists of 160 acres of the very best

willow land, under a high state of cultivation, the farming portion of it yielding immense crops of corn, potatoes, squashes and vegetables without irrigation; and the orchard and nursery, part of it producing trees and fruits in almost endless variety and great perfection, I should give the reader but a vague, poor idea of the place.

There is nothing here of the prim, precise, starchy, artistic style of beauty, that almost takes the breath out of a real lover of nature to even to see it; but such a glorious wealth of wild natural beauties of luxurious trees and vines, of plants and flowers, in groups and groves, in borders and plots everywhere, and in such variety, and often in such wild confusion, as to remind one of nature in her wildest, loveliest freaks.

Perhaps in no other country in the world could such results be produced in so short a time. Mr. Buck commenced to plant trees here in the spring of 1872. Now he has trees in groves and belts and singly that already begin to assume the airs of the forest. One eucalyptus tree, only three years old last spring, from the seed, I found to measure 28½ inches in diameter, forming a beautiful, symmetrical tree, of about 40 feet in height.

Then there are several large plant houses, latticed walks and bowers, fountains and small lakes, four strong flowing wells and a queer, quaint looking building—I don't know what to call it—built up under and around a big sycamore tree, on the summit of which is a fine large observatory, high up among the trees, for looking out over the beautiful grounds and the valley at large, as far as the trees will permit.

Mr. Buck has devoted much attention to oranges, of which he has many hundred trees on his grounds looking well, and making rapid growth. His largest size are perhaps five years old, and are beautiful, thrifty-looking trees. As to fruits, nuts and berries, Mr. Buck has something of nearly everything that will grow in this climate.

From his huge corn piles I brought away sample ears that would do great credit to the best Missouri bottom land, or any other valley land I ever saw. And as to squashes, I had good reason for not bringing away a fair sample. I only drive a one-horse rig. I certainly never saw squashes that would average so large, or so thickly on the ground, as those of San Felipe valley. I shall defer the balance of my San Felipe notes for another number.

Santa Clara, Feb. 16th, 1877. G. W. M.

### The Culture of Coffee and the Cork Oak.

EDITORS PRESS:—Coming to your State for the first time in December, I have looked with interest upon the agricultural possibilities of this most interesting region. Allow me, then, to make a few comments and a suggestion, which I do with great modesty, as becomes a recent sojourner. While your grain crops are enormous, it is to be feared that you are converting the native fertility of your lands into an exportable condition and shipping this, the farmer's capital, away never to return again. To a stranger it seems if there was more area being converted into orchards than the future demand warrants, unless drying or canning is possible. Olives are confessedly uncertain, while almonds and walnuts give promise of profit. It now remains to inquire whether there is any semi-tropical product which California can mature which is of unlimited demand and so valuable as to bear transportation. This inquiry should be made at the expense of the State, under the care of competent and reliable men. The Government very wisely provides for coast and geological surveys, but very little is done to promote directly the agricultural industry, on which all depend. As George W. Curtis has said, "The test of national welfare is the intelligence and prosperity of the farmer." I therefore beg to suggest that a small appropriation be asked for by the farmers of the State, to pay for an inquiry into the practicability of growing coffee successfully in California, as this is a commodity which meets the conditions before referred to, of unlimited demand and high value.

There are many species of the coffee plant and some, probably, can be found suited to many localities in the State. E. S. Morris, Esq., (a resident of Philadelphia,) exhibited as the Centennial Commissioner from Liberia a new and valuable species of African coffee which, if I recollect aright, was both hardy and prolific. In Mexico, coffee grows at very high altitudes, and from what I hear, in localities and under conditions very similar to regions in Southern California.

While I have the floor, let me mention that I have seen growing in Santa Barbara another plant which should be largely grown in this State, namely, the "cork oak." This tree is one of the results of the distribution of cork oak acorns by the Government many years ago, and its growth and the quality of its bark justify parties in entering upon the cultivation of this important plant. Like interest, trees grow while men are sleeping, and here where land is so cheap, most farmers could afford space for a row. Bonanza kings could endow their grandchildren with lordly estates by planting cork oaks where now the live oak only occupies the ground.

HORACE J. SMITH.

Ojai Valley, Nordhoff, Cal., Feb. 15th.

Coffee and cork oak are not new topics to our readers, and we trust the continued presentation of the subject may lead to the discovery of whatever possibilities there may be in them.—EDS. PRESS.

## SHEEP AND WOOL.

### Vermont and Other Merinos.

EDITORS PRESS:—Repeated in-and-in breeding, on the same farms, will degenerate poultry, swine, and some other domestic animals very rapidly. I think wool-bearing stock suffer less than other animal species by this successive line of breeding from year to year. I may give your readers by and by my experience in multiplying from year to year from the nearest of kin. This letter will be too lengthy to speak of that now.

I was about to say that the proprietors of the Merino stock farms in this county have, from the commencement in 1860, been constantly introducing new crosses upon their flocks, infusing theirs with the best blood that they could obtain from the French and Spanish breeds of Merinos in Vermont. Therefore, they claim to hold a superior band of sheep. Long staple, thick coats and fine fiber has, all through, been the drift in crossing up; which result has been attained to a high degree of perfection here.

The breeders of fine woolled sheep in Vermont have recently formed an association, mutually, and on a firm basis. One object of their meeting is to put forth a volume of recorded pedigrees at an early day. Noted breeders are now striving to get their flocks entered in the records of an institution which is already looked to as the standard authority on the pedigrees of Vermont Merinos.

There seems to be a new life and interest looming up in the Green Mountain horizon; partly caused by the great Centennial triumphs at Philadelphia, where those other States had hoped to secure the honor of showing the best animals, and thus prove to the world that they had succeeded in transplanting the prestige of the fame of our best flocks to their own States. It appears that the mantles of former breeders had fallen upon the shoulders of discreet and younger students of ours, who have made an advance on the old-time standard in improvement in carcass and wool.

At this great national and international show the exhibitors of Vermont Merinos received awards wherever there was a direct competition, and took every special premium offered.

We do not claim that many other flock-masters interested in the breeding of the finest carcasses and grades of wool elsewhere have not met with equal success from theirs. They have selected stock with great care and expense from the most noted Merino flocks in Vermont, and continue to keep up their sheep to a high degree of perfection, by judicious breeding from home productions and infusing occasionally their finest stock sheep with the best blood obtained at the East. It would appear that in the sales the stock that have been sold for breed on the Kern county Merino farms have met with equal success from year to year. The receipts on sales for breed alone have averaged annually over \$4,000. Last year the sales reached up to \$7,000, gold, which must be considered a very handsome income from that department of industry here and elsewhere.

SOLOMON W. JEWETT.

Kern County, Cal., Feb. 12th.

## THE VINEYARD.

### Are Grapevines Pruned to Death?

A. D. Grigsby, who has a vineyard near Yountville, some months ago expressed to the Napa Register his conviction that grapevines were suffering more from severe pruning than from phylloxera or other insects. Wednesday he brought to the office a couple of specimen vines to illustrate and support his views. The trunks of the vines were from four to five inches in diameter, having been cut off but ten inches above the ground. About one half of each was dead and decaying wood; some of the branches were dead; and the live ones did not appear to have a healthy growth. Large branches—some an inch and a half through—had been cut from the trunk, and where these branches had been removed there was decay. It was this severe treatment, in Mr. Grigsby's opinion, that caused the decay; and it is similar treatment which he thinks is generally causing the decay of vines in old vineyards—the vines in question being regarded as a fair sample of the vines in the majority of old vineyards. The vines were of the Mission variety, and about 17 years old. The theory that vines are injured by over-pruning is a plausible one, to say the least; for it seems impossible that a vine should be as severely trimmed year after year as grapevines generally are, and not lose their vigor, and eventually decay and die. When decay commences, of course insects will take up their abode in the affected parts and work still further injury.

Mr. Grigsby suggests a reformation in the manner of cultivating vineyards, and in starting new ones. He would have less pruning done—and he cites as proof of the wisdom of so doing, the vineyard of his neighbor, Mr. Edington, which has been pruned much less than vineyards usually are and which is in a better condition than the old vineyards in the vicinity

which have been pruned more. In making a new vineyard, he would set the vines as usual—eight feet apart each way; but instead of keeping all the vines cut back to a short stump, he would allow every alternate vine in alternate rows to run up to a considerable height—say seven or eight feet—so as to admit of a person and team going beneath the branches. In the course of time, say some 10 or 15 years, these tall vines would fully occupy the ground, and the others would be removed. By this means he thinks that whole vineyards of mammoth grapevines might be obtained; and that more grapes might be produced upon the same land with less labor than now, while the vines would live to a good old age, instead of dying when they are 20 years old and under, as so many now do.

### Raisins by Sun or Fire.

EDITORS PRESS:—Seeing a communication from G. W. Deitzler, in your issue of the 17th inst., calculated to mislead the beginner in raisin making, I ask the privilege of making this correction. It does not take five pounds of green grapes for one of cured raisins. Twenty pounds cured by sun heat in my vineyard make seven pounds of raisins ready for market. I don't think, with my experience, it makes any difference in weight of product whether made in an evaporator or by sun heat. One thing is certain, a raisin equal to the sun dried raisin can not be made in much less than six or seven days in an evaporator, consequently an evaporator to dry 30 tons of grapes per week would need 20,000 feet of drying surface; that would be allowing three pounds per foot, which is thick enough. A machine of this size can be made, including house, packing rooms, and 5,000 drying trays, for less than \$2,500. The same trays can be used for sun drying. R. B. BLOWERS.

Woodland, February 17th, 1877.

### Origin of the Mission Grape.

Le Roy Gomez writes from the Sandwich islands to the Bulletin concerning the origin of the Mission grape as follows: Universal tradition among a people, if not history itself, must be accepted as the basis of history, and a residence of many years in Mexico, and a thorough inquiry relative to the origin of the grape in that republic, has resulted in the conviction that the Mission grape is indigenous and originated in the wild grape of northern Mexico.

The colonial policy of Spain prohibited the cultivation of the grape and the manufacture of wine in all of her American possessions. The vine was never introduced into Mexico during the colonial dependency from any part of Europe. Its cultivation was contraband, and the little that was carried on was done clandestinely by the priests in the more northern missions.

After the expedition of Coronado had awakened the spirit of adventure toward New Mexico, various military expeditions were sent out in that direction. One of these expeditions in traversing the vast region known as the Balson de Mapeni, discovered among the hills in which arise the springs that form the stream flowing into the Laguna de Los Pallas, a quantity of delicious grapes growing wild. From the trailing of the vines over the rocks and trees, they called the place Pallas. On their march northward they came to the source of the Rio Concha, which flows into the Rio Grande del Norte. There they also found grapes of the same variety growing wild, and they called the place Parral, a name also significant of the trailing of the vines.

From these two sources spring all the grapes in Mexico, including the Mission grapes, which, according to tradition, were brought overland from El Paso del Norte to California.

TEST PAPER FOR WINES.—Les Monies says that cenokrine is the name of a test-paper sold in Paris, for the purpose of detecting the fraudulent coloration of wines. With a genuine red wine the color produced is a grayish-blue, which becomes lead-colored on drying. With magenta and other aniline colors, it turns a carmine red; with ammoniacal cochineal, a pale violet; with elderberries, the petals of roses, etc., a green; with logwood and Brazil wood, the color of drops of wine; with Pernambuco wood and phytolacca, a dirty yellow; with extract of indigo, a deep blue. The manipulation required is very simple. A slip of the paper is steeped in pure wine for about five seconds, briskly shaken in order to remove the excess of liquid, and then placed on a sheet of white paper to serve as a standard. A second slip of test-paper is then steeped in the suspected wine in the same manner and laid beside the former. It is asserted that 1-100,000th of magenta is sufficient to give the paper a violet shade, whilst a larger quantity produces a carmine red. The inventors of the test paper, MM. Lainville and Roy, are also said to have discovered a method of removing magenta from wines without injuring their quality, a fact of some importance, if it be true that several hundred thousand hectoliters of wine sophisticated with magenta are in the hands of merchants.



## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

## Replies to Poultry Inquiries.

EDITORS PRESS:—I propose to start a chicken ranch, say with 100 or 200 fowls, with the view of making a business by the sale of eggs and poultry, without wishing to incur any extravagant expense at the commencement. (1.) What kind of fowls shall I buy? (2.) Where can I best procure them? (3.) And upon what terms? (4.) I want also a few turkeys, and would like some advice on that point, and also to be informed whether they require any very different conditions from hens.—T. SMITH, Oakland.

1. Half-breed Brahmas.
  2. Perhaps the best way would be to go into the country and gather up good healthy hens, paying, if necessary, a little extra for them. If you will go to Napa, you will find Col. Eyre, our poultry editor, in his office in town. He will cheerfully direct you where to buy.
  3. From \$8 to \$18 a dozen, according to size, etc. Our half-breed Brahmas bring from \$12 to \$14 in the San Francisco market.
- With your hens you should mate thoroughbred cocks. Brahmas, if you desire flesh principally; if eggs be more your aim, then Leghorn cocks. Be sure you buy pure, strong cocks from a reliable breeder. About seven or eight to 100 hens will be sufficient.
4. They want more range. The mode of hatching, feeding, rearing, etc., has been given in the PRESS, and is contained in a pamphlet prepared by our poultry editor, embodying his articles for the PRESS, with some additions. It may be had for 10 cents and return stamp by addressing him at Napa. When space permits, we may repeat some of the articles.

## Other Points.

EDITORS PRESS:—Will Mr. Eyre please give in RURAL PRESS: (1.) The best way to start a chicken ranch. (2.) The best chickens for market. (3.) The best for eggs. (4.) Also as setters. (5.) The price of such stock. (6.) When is the best time to start in the same? (7.) What will pay the best, eggs or chickens? (8.) Does it pay to raise young ducks for market?—W. W., Salinas.

1. I have already written concerning the best and cheapest houses. The article was repeated, with illustrations, in PRESS of December 23d, 1876. Scatter such houses over your place, the farther apart the better. If the ground be rich, plant alfalfa. After it is grown the fowls will need little food. It is impossible to answer this question in full within the limits of this paper.
2. The Brahmas and Plymouth Rocks. The latter mature more quickly than the former, and yield perhaps more profit on that account.
3. Leghorns.
4. Plymouth Rocks or Brahmas.
5. Send for price list to those who advertise in the PRESS.
6. Now.
7. Some think eggs. Try a little of both. Both pay and pay well. But devote more space to the Leghorns, as eggs will probably pay better, inasmuch as they entail far less trouble and do not require as much care and knowledge as the raising of chicks.
8. Better than anything else, except, perhaps, turkeys.

## Some Points of Interest in Poultry Raising.

Mrs. Furlay, of Navarro Ridge, writes under date of February 3d, telling me that she had failed to see certain articles to which I had referred her, as they had not taken the RURAL PRESS for two years; but now they will again subscribe, as she finds that one article alone would have enabled her to arrest a disease among her fowls by which she lost chicks worth the subscription price of the PRESS for a decade.

Referring to the article on houses, she writes: "The little houses are just what I feel are needed, for I have discovered that as soon as I would get 40 under one roof, then no matter how good care they had, sickness would show itself. The most common disease here I see you call 'enteritis.' I opened a good many and found their liver was not right. I got so I always had Mr. F. kill them as soon as discovered. He does not have to kill many now, for, thanks to your nice fowls, I have not had a sick hen for two years. One dropped dead in three years, that is all the blooded ones I lost. I think one reason of that disease is in-and-in-breeding. I used to change eggs, but a sickly lot I had, as neighbors' hens were in-bred, too."

Small flocks and the purchase of males not related to the hens kept, or the purchase of eggs from fowls not so related, to raise new blood, are two of the most vital things in raising poultry. Get good stock and avoid in-and-in-breeding; procuring new strong blood from one on whom you can rely, even at a higher price than seemingly as good fowls may be had for nearer home, and keep your fowls in small houses as far apart as convenient, and you will succeed.

It takes more care and expense—necessitating our keeping a greater number of yards of each breed—to be ready to supply customers with fresh blood each year. I would prefer to raise and sell at half my present prices if I sold irrespective of this, but I keep a register of fowls sold and the year after I can always supply birds which, while they will breed well with those of the year before, are not too near akin to them. Every first-class dealer should do this.

WEIGHTS OF BRONZE TURKEYS.—I am constantly asked as to weights of Bronze turkeys at eight and nine months old. This letter will answer:

My cock turkeys have within a few days commenced to strut around. One is light and one dark bronze. The former weighs 20 and the latter 21 pounds; just nine months old; with just the run of the ranch. The hen turkeys are large in proportion. The boys weighed one of the hen turkeys and it is heavy at 14 pounds.—MARTIN KINSLEY, Santa Cruz.

## THE SWINE YARD.

## Selection in Breeding.

A. S. Welch, President of the Iowa Agricultural College, writes to the *Live Stock Journal* concerning selection in breeding. We extract a few points applicable to the swine breeder's industry:

Judicious feeding, careful treatment in shelter and exercise, and skillful selection for coupling, are the key-notes of the breeder's art. If one of these be wanting, breeding is very likely to be a failure; if all are defective, the animals that result are well-nigh worthless.

Take an example in the Southern hog, that inhabits the pine woods, and finds therein a precarious living. Scanty food has given to his carcass a permanent lankness. Excessive travel in search of it has developed his offal out of all proportion to his entire weight. Constant running has added unseemly length to his legs, and his big snout is the product of over-much rooting. All these bad peculiarities he transmits to his litters, aggravated by indiscriminate breeding. Now contrast this sorry result of poor feed, hard effort and careless crossing with a model Berkshire, and take note that the differences in favor of the latter are the combined effect of good food, careful treatment and skillful selection. The round carcass, broad shoulder and thick hams have been developed by a nutritious diet continued in abundance through a hundred generations. The delicate offal has come from long-continued ease and rest and freedom from hardship. The small head and snout are the result of the plentiful feed that saved the necessity of rooting, and the legs have derived their lack of length from lack of hard use. And selection has perfected all these "valuable points" by breeding from those individuals in which they are most marked, and sending the rest to the butcher. The black color with white tips is likewise the product of selection.

## Selection Requires Great Skill.

But dropping, for the present, the two antecedents in breeding—namely, food and fare—let us dwell a little more minutely on selection, for selection is really the most difficult part in the business of artistic breeding. Men of ordinary ability may, with close observation and constant care, become adepts in feeding and management; but the unerring eye and the sure judgment that reach the highest results by the selection of animals for pairing, are rare qualities, very nearly akin to genius. Indeed you may count, without reaching a score, all the men who have really attained celebrity in this line of the breeder's art. The breeder who can create new merits by skillful selection for crossing, is gifted with a prescience which discerns the offspring before it is gotten. He perceives intuitively the merits and the defects, the constitution, quality, structure, symmetry, weight—in short, the whole animal through and through which he proposes to couple with another, in order to reach certain contemplated improvements in the progeny that is to follow.

It is such breeders as these that have created races and families, and made certain prepotent animals famous. They had the power to shape the figures of sheep and swine and cattle, as the sculptor shapes his model. In their hands the domestic animals were plastic material, that took the forms which they had preconceived as faultless. Give them the picture of a model, and they would realize it, as in the Leicestershire sheep, or the improved Berkshire, or in the most excellent of the Short Horns. But, in order that the breeder may accomplish such wonders by a skillful selection for pairing, at least two conditions are indispensable:

1. He must have a large number of pure animals of the same breed from which to make his selections.
2. The animals he pairs must (one or both), be prepotent—that is, they must renew, in their progeny, their own peculiarities with infallible certainty.

Respecting the first condition, it is manifest that the breeder who possesses a great number of thoroughbreds from which to choose for coupling, has an immense advantage in the attainment of valuable individual results. The wider the variety of good, pure bloods, the more surely can he make a larger number of those happy fits in which the copulating animals reduplicate each other's merits, and correct or supplement each other's defects in the offspring that results.

AN APT COMPARISON.—The late M. Ste. Claire Deville was one day discussing with a famous anatomist the subject of the advance of knowledge. "After all," he said, "you have made great advances; but don't you think you are very like the hackmen, who know all the streets, but haven't the remotest idea of what is going on in the houses?"

## THE STOCK YARD.

## Milk Fever.

EDITORS PRESS:—The puerperal fever in stock is much more common in cows and sheep than in mares, which is a singular deviation from the ordinary rule, that the dangers attending the grand work of reproduction are multiplied in the proportion as animals recede from a state of nature. Dropping after calving or milk fever, as it is called, occurs at an early period after delivery, as from the first to the fourth day, and may sometimes be traced to violence, at others to exposure to either cold or wet, and more often the cause is altogether hidden from us. Cows in high condition are most subject to it. Their excess of condition disposes them to affections of an inflammatory character at all times, and more particularly when the constitution labors under the high febrile excitement accompanying parturition. It is not, however, peculiar to these, but the poorest and most miserable cattle are occasionally the subjects of this disease, and especially if, on account of their calving, they have been moved from scanty to luxuriant pasture or from low keep to high stall feeding. A great deal depends on the quantity of milk which the cow naturally yields; the great milkers are the most subject to it, and they are not always in the best condition. If from some affection of the system the secretion of milk is stopped, and the stoppage of milk is an early symptom and one of the most frequent, it is easy to see that the violence of the subsequent fever may bear a near relation to the quantity of the suspended secretion. It has often been observed that the udder has enlarged and become hot and tender a day or two before the attack; this enlargement and inflammation of the bag is generally attended by partial or total suspension of the milk. The symptoms of this complaint all betoken phlegmasia in the early stages at least, but they differ according as other viscera besides the uterus partake of the affection. They are usually restless, irritability, shifting of situation, pawing of the feet, quickened respiration, mouth hot and dry; the pulse in some cases is slow, in others however, particularly in the early stage of the disease, it is considerably accelerated; excessive uneasiness and prostration of strength succeed to these, the cud is lost and all appetite ceases. The hypogastric region, before only hot and tender, now begins to swell, in which at length the abdomen generally participates, by the extrication of gas from the contents of the paunch; it is now that it assumes its typhoid type, and after this it runs rapidly the remainder of its fatal course in most cases. For treatment some are favorable to bleeding, others are not. In the early state of the complaint I am favorable to bleeding, and that liberally. The bowels should be opened but not active. The strength has to be supported by liberal drenchings of ale, gruel, aromatic bitters, such as cascarrilla bark, nitrous ether, acetated liquor of ammonia, infusion chamomile, etc., two or three times a day, according to the urgency of the symptoms.

W. H. CARPENTER, V. S.

## The Angeln Breed of Cattle.

We find an interesting account of this breed of cattle in the last *Journal of the Royal Agricultural Society of England*, which cannot fail to interest those of our readers engaged in dairy husbandry in the United States and Canada. We copy from Prof. Tisserand's article on the industrial affairs of Denmark, a brief description of this new race of cattle.

This race is of small size and cannot be compared to any breed more closely than to the Ayrshires, whose qualities and size it partakes. The color of the Angeln cows is red—sometimes bright and clear, sometimes deep and even dark—often being spotted with white (these white spots have since been pointed out as evidence of impure lineage), and the hair is generally tipped with dark color; the skin is thin and supple, and all the cows have the distinguishing characters of good milkers. Head somewhat delicate, although bony; looked at in profile it has a pyramidal form, and shows a large brow; nostrils well open, and a somewhat straight forehead; lower jaws very divergent; eyes docile and lively; horns long, thin and well placed; neck long and very slender; back not always perfectly straight, back bone projecting, and brisket girthing most behind the shoulders; hind-quarters roomy; udder large and well placed, and the milk vein generally very much developed; legs and tail very slender; flanks hollow and bones projecting.

The Angeln cow presents, in fact, all the characters and all the defects of a good milking breed; its body has the form of a pyramid, of which the base is formed by the hind-quarters and the summit by the fore-quarters, which are very slight. While in milk the cow remains very thin; not only does it convert all its food into milk, but it appears also to perform the same operation with fat and muscles of its own body; but when it goes dry it fattens easily.

The Angeln breed, in fact, may be regarded as one of the best milking races in existence. The average weight of cow is from 700 to 800 pounds, and its annual milk produce 440 gallons, about 4,000 pounds.

## ARBORICULTURE.

## Railway Tree Planting.

J. R. Scupham furnishes the San Francisco *Bulletin* of the 10th with the following information in detail relative to the planting of the eucalyptus by the Central Pacific railroad, of which we made mention last week:

The work of planting the eucalyptus trees along the right of way of the Central and Southern Pacific railways, recently commenced, will probably occupy about two years. It is the intention of the companies to set them out along the entire line of both roads, where the trees can be grown to advantage. They will also be planted along the various branch roads as far as practicable. Already about one-half of the road through Alameda county has been set out with the *Eucalyptus globulus*, and the work is being pushed as rapidly as the young trees are supplied from the Oakland nurseries. This species of the eucalyptus, however, is only adapted to a good soil, and other species will have to be used in the different places through which the roads run, according to the nature of the climate and soil. It is a peculiarity of the eucalyptus tree that some of its almost numberless varieties seem adapted to almost every climate and soil. It is partly on account of this peculiarity that the railway companies have selected it for planting along their roads. The *Eucalyptus globulus* or blue gum tree is almost the only species of the eucalyptus to be found to any extent in this country, and in order to secure the various other species which will be used along the roads, J. R. Scupham, who has charge of the work, has been obliged to send to Australia for supplies of the seeds of these various eucalypti. These will be planted in the nurseries here, and the young trees will be set out as soon as they are sufficiently grown to bear transplanting.

## The Best Variety for Railroad Sleepers.

The *Eucalyptus marginata*, which for some time has been extensively exported from the southwest of Australia, and used for railway sleepers, will be set out along the hilly tracts and ledges along the roads. The *Eucalyptus rostrata*, which grows in Southern Australia, and in places of which the climate and character is very similar to the redwood districts of California, will be used for river bottoms and wet lands generally. The *Eucalyptus brachypoda*, which flourishes in the arid, tropical inland regions of Australia, will do equally well, it is thought, in the desert tracts of California; and the *Eucalyptus obliqua*, which rapidly attains gigantic dimensions in the poorest of soils, and can be used for almost any purpose above ground, will be set out in those places along the railroads where the other eucalypti will not thrive. The wood of all these eucalypti, with the exception of the last named, is exceedingly tough and heavy, and, owing to the resinous gums with which it is saturated, it is almost impervious to decay, and can, for this reason, be used with great advantage for sleepers and telegraph poles. Sleepers of *Eucalyptus rostrata* have been known to last over 12 years, and the wood of most of the other eucalypti is said to be little inferior in respect to durability. It is the intention of the companies to set these trees out in triple rows on each side of the tracks, from six to 20 feet apart.

## Advantages to the Railroads.

The great advantages which the railroads will derive from having constantly on hand a supply of timber suitable for repairing the roads can be seen at once, but the benefits which these lines of trees will confer on the lands adjoining the railways may be even greater. It is claimed as an established fact that, to a certain extent, the fall of rain is increased by trees, and it is thought by the advocates of this enterprise that this plan of growing large trees in many places almost devoid of forests will have a marked effect both on the crops and the soil of the neighborhood. An example of this kind is cited in the case of the introduction of the eucalyptus into Algiers, which was followed by such remarkably good results that one enthusiastic writer has declared that with enough eucalypti the desert of Sahara itself could be transformed into a garden of Eden. The peculiar property of the eucalypti, by which they absorb malarial poisons, has already led to their introduction in many places. In Spain, so great is the popular belief in the medicinal virtues of the tree that the eucalypti in the public gardens of the large cities are constantly guarded to prevent their being stripped of their foliage. In Italy, the introduction of the eucalypti in the Roman Campagna has greatly benefited that malarial country.

## Some Further Facts on the Trees.

The rapid growth of all the eucalypti is one of their most marked features, and one which make them especially adapted to such a purpose as that to which the railway companies now propose to apply them. In Algiers the average growth of a young eucalyptus is 19 inches per month, and a two-year-old tree is frequently 20 feet in height. Supposing that the trees will grow as rapidly in this country, by the time the work of setting out the trees along the road is completed, the small eucalypti that are now just starting up along the railway in Alameda county will have attained the size of ordinary trees, and only a few years will have

Continued on page 122.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY. A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Work for the Grange—International Co-operation.

EDITORS PRESS:—Being not now on the wing, but quietly resting in my Santa Cruz home, I am more than ever impressed with the necessity of the Subordinate Granges waking up to the new and future work of the so-called Grange movement. I say Subordinate Granges, for from them must emanate the outline of plans—practical plans—for our continued progress and greater efficiency. A wide, and in the United States, an entirely unoccupied field is opened up before us in the tocsin word, "co-operation," which, in the last 32 years, has so completely revolutionized the condition of the laboring classes of England, Germany and France that they are now, in their so highly benefited condition and acknowledged respectability, knocking at the doors of Parliament, for not a special class legislation—like unto our capitalists in America—but for that pure democracy—"free trade"—so as to enable them to reach out their hands to the producers of grain, cotton, wool, sugar, tobacco, wines and fruits in the United States, saying, in a well devised plan of international co-operation, "We want to give you the products of our manufactories free of duty and directly to your established agencies for the same, at a price not exceeding one-third of the price they are now costing you, and taking from your said agencies in return." Therefore, say, from the North Atlantic States, as agency No. 1, they will take their wool, cheese, butter and canned and dried fruits, etc. From the South Atlantic States, as agency No. 2, their cotton, rice, tobacco and possibly dried tropical fruits. From the upper Mississippi valley States, as agency No. 3, they will take their wheat, corn, bacon, cheese and tobacco. From the lower Mississippi valley States, as agency No. 4, will come their cotton, sugar, syrup and hides, and from the Pacific coast, as agency No. 5, their wheat, barley, oats, rye, wool, hops, cheese, honey, also their choice fruits, wines and brandies. And shipping these international products from our co-operative congress in England directly to your said agencies in America and *vice versa*, bringing back from your several agencies in America to our co-operative congress in England, would work so advantageously to the two producing associations that each would get from the other the highest market price for their several products, and save to each party of productive laborers and consumers that great cost of the middle agency, so fatal to the producers and the consumers as to make rich and prodigal the middlemen of both countries.

So true is this the case that not only do the middlemen of each country live luxuriantly upon the laboring and producing classes, but claiming for themselves the name of capitalists, control in their interest exclusively the whole legislation of both countries.

Now the labor and producing element constitutes in both countries seven-tenths of the adult male population, which, in the United States, are legal voters, and are or ought to be in England. Shall, therefore, this seven-tenths of the population of each country give to the non-laboring and non-producing three-tenths of the population of each country luxury, wealth, ease and all the benefits of class legislation at the expense of the seven-tenths laboring and producing population.

Grangers, Sovereigns of Industry, laborers and producers, what say you to a new deal, especially just now, to save the United States from financial ruin, which by every kind of inflation and class legislation in favor of the rich against the poor, in favor of capital as against labor, in favor of the three-tenths non-producing drones of society as against the seven-tenths working bees, led on by the two political parties of the day, each and both of which are sold out to the gold and speculative rings of the country, so thoroughly that to find a representative of the laborer and producer would require a more powerful telescope than has ever yet been invented, while to find the representative of the capitalists in both the State and national halls of legislation, is simply to be there as a lobbyist with the tin, and they flock around you like buzzards after the carrion carcass. Shall this always be so? Shall labor always bow to capital, the creator to the creature, or shall the labor element of the two countries assert their God-given rights, and with not only their genuine riches—"labor"—but with their plural strength at the ballot-box, send these carping political parties to where they truly belong—a non-existence—and with a simpler party, an honest party, a non-inflated and no demonization party, a party that has only one

standard value of money, with interest at such a low rate that capital shall seek the industry of manufactories and the products of the farm life instead of those demoralizing speculations that excessive interest and class legislation has brought upon the country? Let the labor element of every kind and character join hands in the movement, labor *vs.* capital, until labor is made the peer and equal of capital in every sense of the word, and so acknowledged by both governments. The co-operative unions of England are reaching out their hands to us across the Atlantic, also offering us their surplus millions to accomplish the new movement, which promises competency and comfort to the entire labor element, as is shown by the practical work of the co-operative unions of England, raising, as they have, the poor laborer from the standard of the mere slave to the position of comfort, independence and the highest respectability. What say the Grangers and Sovereigns of Industry, indeed the whole labor and producing element, especially of California society: shall not the Pacific States be the first agency to make practical this grand reform?

B. PILKINGTON, W. L.

### Lecture at Golden Gate Grange.

A special meeting of the Golden Gate Grange was held Tuesday evening at Grange hall to discuss the subject of "Agricultural Education," and in connection therewith to gather information from a lecture by Prof. Hilgard of the State University. The Professor, as reported by the *Call*, explained the course of instruction, continuing three years, which is pursued at the University in studies germane to agriculture. Of the needs of the University in this department, he considered a garden for the study of economic botany one of the most pressing. Application for means to form this was made to the last Legislature, but unavailingly. Some branches of study in agriculture have been almost ignored, such as stock farming, for the reason that one man cannot do everything, and in the studies now undertaken the Professor finds that he has as much to do as he can possibly attempt. The value of experiments on manures and experiments in relation with the analysis of soils, was also dwelt upon. The analysis of soils he advocated as desirable if carried out with a systematic method, paying due regard to climatology, tillability and the crops sown; and on this subject he pointed out the need there is of having the agricultural peculiarities of the State mapped, as he has himself mapped Mississippi, by delineating broadly the class of soil in the various districts of valley and hill, and the adaptability for products most likely to thrive and be in demand. The geological survey, or rather the publication of its results, stopped at the point where agriculture would have been benefited directly; but some steps should be taken to make the farmer as well acquainted with the capabilities of the soil in the different sections of the State, and what will remunerate it when exhausted, or fructify it when sterile, as the miner is with the regions where he may search for gold or coal. The Professor did not regard manual labor in agriculture at the University as needing encouragement to any greater extent than experiments in a chemical laboratory; a little is necessary to emphasize theoretical instruction; but he who passes through the three years' course in agriculture, should avail himself of a practical course afterward, and for this purpose a model farm would be commendable, and, failing this, the student should complete his studies by engaging in farming occupations. Professor Hilgard lamented the methods of education we pursue, and expressed a decided preference for the kindergarten system. While the child is young and unspeculative, we drill it in subjects which its mind is unfitted to reflect upon and digest, and repress or ignore its natural bent to inquire into the how and why, the shape, the properties, the uses of things perceptive. Children have a natural inquisitiveness, a thirst for all things visible, and it ought to be satisfied and developed, for at no other period of life is the mind so susceptible of impressions or capable of being molded to true conceptions of natural objects. Later in life the mind is speculative, and on matters of detail and on all matters affecting the form and constitution of objects it is difficult to fix the attention. The consequence of our system is, that to the University young men come with very crude and imperfect powers of conception, who fail to observe the essential, distinguishing characteristics of objects, and who give a faulty description of a leaf, a stone or a tree. The commendable quality in the kindergarten system of education is that it leads out the mind, not by drumming knowledge into the pupil by rote, but by training the senses to perceive and compare.

Discussion on the lecture was indulged in to a limited extent, and a vote of thanks was passed to the Professor. In response to an invitation, Mr. Hilgard said he is very anxious to visit the farming sections of the State, and to interest the students practically in agriculture, but the opportunity for these visits is very limited. One member, Mr. Jones, said that besides shaping the agriculture of the State in the most scientific manner, it is extremely advisable to have the farmers instructed on how to make the best of their business financially.

### New Grange in Sacramento County.

EDITORS PRESS:—An unexpected pleasure fell to my lot Saturday, February 17th, in this truly splendid fruit region of our State. Knowing that our period of organization on the Pacific coast is pretty well past, as each farming district is generally supplied with a Grange, I had not supposed, on my return to California, that the opportunity would present itself to add another to the 55 Granges which it has been my privilege to organize in our jurisdiction. But on the above date I organized

#### Courtland Grange

With 29 charter members, in the neat Masonic hall of Franklin Lodge No. 143, in the upper story of Onisbo schoolhouse. It is in the very heart of this fine fruit country, and its officers and members, of the very best material, are as follows:

Edmund Brown, M.; Solomon Runyon, O.; W. H. Barry, L.; D. B. Runyon, S.; Peter Green, A. S.; Miss E. Dunnean, C.; R. Kercheval, T.; O. R. Runyon, Sec'y; S. W. Ralston, G. K.; Mrs. L. W. Brown, Ceres; Mrs. M. Smith, Pomona; Miss E. P. Bloom, Flora; Mrs. M. Kercheval, L. A. S. George A. Smith, A. J. Peek, H. S. Ivey, C. C. Wheeler, T. W. Johnson, D. B. Miller, Mrs. O. R. Runyon, Mrs. A. R. Ivey, Mrs. W. H. Barry, Mrs. Z. Kanady, Miss S. R. Kanady, Miss V. E. Johnson, Miss M. L. Rhoades, Mrs. E. A. Runyon, Mrs. M. J. Runyon, Mrs. C. L. Green.

Postoffice: Courtland, Sacramento county. These good people have evidently united in this work, resolved to do all in their power to make their Subordinate Grange a success. In their rich region of certain crops, along the banks of the Sacramento, they have the means and the power to carry the principles of Grange harmony and co-operation to the highest degree of success. On both sides of the river, and for eight or ten miles above and below Courtland, they have enough good material to work up to make an earnest membership of at least 100.

Yet that all in their neighborhood will not be expected to join is proved by the following lines, found on the blackboard in the schoolhouse the Sunday morning after we organized, and which created considerable amusement. I take the liberty of recording them, to show that the spirit of *Punch* (Query—milk punch?) strays at times even into the quiet regions of our coast. It will be seen that the lines are quite spicy and creditable, though somewhat biased, and based on an incorrect theory about our Grange work. I take them to be original—not knowing the contrary:

"PUNCH."

"If you would rightly sow or reap  
And with the tide of progress keep,  
In fact, be never short of change,  
Send in your name and join the Grange.  
That is, if hay-seed and a plow  
Bound your ambition here below.  
But as for me, well, 'Not for Joe.'"

Now, as regards the keeping up "with the tide of progress" etc., we fully indorse the first four lines of our imaginative "Joe." There he is quite right, but when friend "Joe" takes the ground that "hay-seed and a plow" bound the ambition of the Granger, he never made a greater mistake in his life. One reason why farmers to-day are not near so independent as their noble calling should make them, even with all the Grange has done for them, is that in the past their ambition has not been enough above "hay-seed," "a plow," and kindred ideas, and hence they have left their vital interests too much to the control of others. It is to supply this very defect in part, that the strong educational, all-pervading brotherhood of the Grange, with its varied and ennobling teachings, has been uniting and ever will unite tens of thousands of our best farmers and their families. If "Joe" could only understand this as well as he does writing verses, it is likely he would soon be making a rush for the Grange—that is, if the Grange would let him join.

J. W. A. W.  
Courtland, Feb. 19th, 1877.

ALHAMBRA JUVENILE GRANGE, No. 1.—After the regular meeting of the Alhambra Grange on Saturday last, Feb. 3d, the first meeting of the "Juvenile Grange, No. 1," was called to order by the acting Master, Mrs. M. B. Lander. The number and names of officers are the same as those of the Grange, with the addition of three offices to be filled by Matrons, and respectively designated "Faith," "Love" and "Hope." This idea of the "Juvenile Grange" is due to the Worthy Master and Worthy Secretary of the Alhambra Grange, and the constitution, rules and ritual exercises were also prepared by them. After the ritual exercises, which are really beautiful, the "Little Grangers," each presented some entertainment for the rest of the brothers and sisters. These exercises consisted of recitations, readings, instrumental and vocal music, and the audience, which consisted of the members of the parent Grange, were very much pleased with the interest manifested by the little ones in the "Juvenile Grange," where they are to be prepared for the duties and work of the higher Grange, which they will desire to enter when of the proper age. We hope the young Grangers of Alhambra, No. 1, will soon lead a long list of like institutions. —*Contra Costa Gazette*.

THERE are, we believe, Granges in every State and Territory except Rhode Island; that State has thus far been too small for our Order. —*Colorado Grange*.

### Regarding Grange Growth in England.

A few general conclusions in regard to Grange growth in England are summed up as follows in Brother Wright's report to the last National Grange. We copy from the report as officially published:

1. That the minds of English farmers are now for the first time being fully prepared to accept such a plan of close organization, combination and co-operation as the Grange offers them.

2. That they were almost totally ignorant, before my visit to them, of the Grange, its purposes, its great and good work, and its real adaptation to their pressing wants.

3. That under the efficient guidance of our present Deputy there, who, cordially aided by the editor of the *London Farmer*, is laboring to foster the seed sown, they are being gradually but surely prepared to adopt our system, though it may be in a slightly modified form. Bro. Sheldon says to me in a late letter: "The Order will take root in time in this country. It cannot easily fail to do so."

4. That if the Grange ever grows and flourishes in Great Britain, it must be among the tenant farmers and small land owners, who are distinctly separated socially, and in their material interests, from the landlords, on the one hand, and the agricultural laborers on the other—the latter being combined in unions by Mr. Joseph Arch and his co-workers. Herr Prenzel writes me that the facts are very much the same among German farmers. Mr. Sheldon informs me that a friend in Russia is much interested to see Granges established there, and writes of a Mr. Elliott's wish to try them in Tasmania. Let us hope good seed has been sown the past year for the future growth of our benevolent, practical Order in foreign countries. Why may it not some day form a strong bond of fraternity and peace between different nations? What nobler work for agriculture to perform than such a mission of peace and good will!

### Election of Officers.

CERES GRANGE, No. 64, STANISLAUS Co.—John Service, M.; J. M. Henderson, O.; M. B. Killrell, L.; E. Hatch, S.; Cyrus Lee, C.; Mark Williams, T.; Mrs. L. J. Bronse, Sec'y; Peter Shafer, G. K.; Mrs. J. M. Henderson, Ceres; Mrs. Annie Whitmore, Pomona; Mrs. E. Hatch, Flora; Mrs. Mark Williams, L. A. S.

CONFIDENCE GRANGE, No. 121, SANTA BARBARA Co.—S. D. Triplett, M.; W. McCaheny, O.; James Morse, L.; J. A. Norris, S.; Mrs. S. D. Triplett, A. S.; Mrs. W. W. Wayers, C.; A. Copeland, T.; J. T. Anstin, Sec'y; J. Newlove, G. K.; Sister J. T. Anstin, Ceres; Sister J. W. Hudson, Pomona; Sister Cocke, Flora; Sister B. O. Walker, L. A. S.

LISS VALLEY GRANGE, No. 209, KERN Co.—J. Pascoe, M.; S. E. Reed, O.; S. W. Woody, L.; T. E. Wilkes, S.; Wm. Dony, A. S.; O. D. Dooly, C.; Mrs. E. C. Wilkes, T.; C. Lindsay, Sec'y; T. Waller, G. K.; Miss J. A. Gilliam, Ceres; Mrs. Kate Morrell, Pomona; Mrs. E. Pascoe, Flora; Mrs. P. A. Morrison, L. A. S.

GRANGE HALLS.—We are very glad to perceive that many of our Subordinate Granges have been building or otherwise providing themselves with halls of their own in which to hold their meetings. It is an evidence of prosperity and permanence of the Grange, and should be encouraged. A form of dedication of Grange halls has been provided by the National Grange. This ceremony is very beautiful if properly carried out in detail, and we hope that Granges about to dedicate new halls will use this prescribed form of dedication.—*Cal. Patron*.

MASTER'S RULINGS.—Every member of a Grange is entitled to all the privileges and immunities of the Order, until suspended or expelled. Simply being delinquent, or even refusing to pay dues, does not legally debar a member from enjoying all of the benefits and privileges of the Order. Formal action must be taken by the Grange in accordance with law and the provisions of the Grange by-laws, before the rights of a member can be forfeited or abridged.—*Cal. Patron*.

THE State Grange Treasury of Tennessee contains something over \$10,000, besides the large amount coming from the National Grange, and the general outlook is very gratifying.

THE Grangers of Minnesota are in a great deal better condition now than last year. The amount of dues paid in to date is \$1,000 in excess of what it was at this time last year.

### In Memoriam.

POMO GRANGE, No. 216, Mendocino County, February 10th, 1877.

WHEREAS, It has pleased our Great Master above to remove from our midst our worthy Sister, PIERRE SMITH, therefore, be it

Resolved, By this Grange, that in the death of Sister SMITH, Pomo Grange has lost a worthy and useful sister, and society an exemplary member.

Resolved, That the members of this Grange deeply sympathize with the bereaved husband and children of the deceased.

Resolved, That the members of Pomo Grange wear the usual badge of mourning for 30 days.

Resolved, That a copy of these resolutions be sent to the family of the deceased and one to the *RURAL PRESS* for publication.—E. V. JONES.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**JAPANESE BUYING PLOWS.**—*Cor. Transcript*: Some prominent Japanese visited the Sweep-stake plow factory on Saturday for the purpose of inspecting the agricultural implements manufactured there. The Japanese wishing to see some of the implements work, Mr. Hill, the inventor of Hill's Eureka gang plow, took one of his plows and several other pieces of machinery, and accompanied the Japanese and several citizens, repaired to a field near the limits of the town, and there gave a practical exhibition of the work. All were greatly pleased, especially with the gang plow. The Japanese purchased several specimens of the gang plows, harrows, etc., to be sent back to Japan. It is said that if they work as good there as here, the Japanese government will give the factory a large contract for making plows, etc.

## BUTTE.

**GROWING GRAIN.**—*Record*, Feb. 17: We are told that growing grain never looked more promising for the season, than at the present time. The late sown grain is coming up well, and the summer fallow promises an extraordinary yield.

## COLUSA.

**WILLIAMS.**—*Cor. Sun*: Crops never looked better at this time of year, and prospects were never finer for an abundant harvest. Grazing on the plains is splendid, and stock running at large is doing finely.

## CONTRA COSTA.

**FAIR, CLEAN CROPS.**—*Gazette*, Feb. 17: We have had another gracious rain that, for most part, was no more than a succession of soft mist showers, but which aggregated a measure of 58-100ths of an inch, not an atom of which was lost, but every one went to increase the store already gathered by the earth. Twice the amount of rain in heavy beating showers would not have been near as beneficial as the light measure of gentle fall we have had this season. Exclusive of what fell in July, August and September—which can hardly be accounted of any practical effect—our October, January and February rains so far have given us a measure of 6.24 inches, all well timed and well applied for the best effect. Could we be assured as much more in the next six weeks as we have had in the past four, and the usual showers of April and May, with an exemption from northers, it would be all the promise of a fine crop season we could wish for; but without these assurances we may, on the whole, regard the present situation and prospects us unusually favorable for fair and clean crops, at least; as there will be no heavy growth of May-weed or cheat to draw from the nourishment, choke out and deteriorate the grain.

## FRESNO.

**NEW COLONY SCHEME.**—*Expositor*, Feb. 15: We understand that a new colonization scheme is shortly to be started in this county. We do not know any of the points in the premises, only that a certain landholder owning a large body of land southwest from Fresno is about to divide it up into 40-acre tracts, and offer it for sale to settlers. Water for irrigation is to be obtained from the Fresno Canal and Irrigation Company, so it is stated.

## KERN.

**A CALIFORNIA PLOW.**—*Resources*, *Cor*: Mr. Souther has the largest plow in the world, the "Great Western." This monster plow was made by Mr. Souther, he being a scientific mechanic. The beam is 14 feet long, 18 inches deep in the widest part, and six inches thick, of the most tenacious oak. The mold board is ten feet long and three feet wide, and it cuts a furrow five feet wide, and can cut three feet deep. The plow weighs one ton, and it requires one ton of chains to haul it. It works 80 oxen, and it requires ten drivers and two men to manage levers in holding it. Can our readers fancy they can see this grand caravan moving along, cutting and carrying nearly 100 cubic feet of earth constantly? They cut such a furrow described, in ditching, six miles a day. It can make eight miles. Besides, Mr. Souther has a monster scraper, 28 feet long and 16 feet wide, on which he works 46 mules. It is raised and lowered by two wheels, one fore and one aft. It will remove 15,000 cubic feet a day, traveling 8 miles. He has four Slusser excavators for leveling the surface of his improved lands before plowing them.

**NOTES ON KERN ISLAND.**—*Californian*, Feb. 15: In some parts of the island the farmers are poisoning blackbirds by taking a bottle of strychnine, dissolving it in about a gill of vinegar, which put into two gallons of water and then soak the wheat in it. Thousands are destroyed. Messrs Jewett & Anderson shipped to San Francisco 11 car-loads of fat cattle on Saturday. They were purchased by a prominent butchering firm of that city. They were fattened on alfalfa hay, and were in splendid condition. The supply of hay has become very much reduced, but loads of loose and baled continue to arrive in town from the surrounding country. The price of baled has reached \$20, at which price alfalfa lands at the usual product of ten tons per acre would pay \$140 per acre clear profit, in one year. On the Buena Vista ranch 11,000 sheep are fed on hay. They consume 20 tons per day, and the supply will last about a month, by which time the new alfalfa will provide for

them. Some of our sheep men are selecting the choice of their flocks to preserve, and slaughtering the rest. The carcasses, with the lambs, are being fed to hogs. The Buena Vista ranch has 20,000 sheep. The Haggin & Carr ranches carry 18,000. The hogs on the lower part of the island have a look of thrift that puts to shame the condition of all other stock. The wild lands are irrigated and the hogs live on the grass, nuts and roots which fill the ground. The hog raiser has come to look on a sheep herder with a sort of contempt.

## LAKE.

**CROPS.**—*Bee*, Feb. 15: The crops are looking finely in Big valley, and, so far as we can learn, throughout the county. The season has been favorable to this county, and a larger number of acres have been sown than ever before. All things at the present time promise large crops to the farmers.

## LOS ANGELES.

**ORANGES OR PORK.**—*Herald*, Feb. 17: We should like to see some reliable statistics as to the comparative profit of growing oranges or fattening hogs. We are willing to wager a considerable sum that there is more money in the latter than in the former. Hog raising is by no means as poetical a pursuit, though, as orange growing, and the aroma which attaches to each is of a very different grade. There's millions in pork for all that. The Messrs. Higgins, Speedy & Co., the proprietors of the newly started pork packing enterprise in Los Angeles, assure us that our local staple cannot be surpassed in quality. We believe it, and our ability to grow pork in Los Angeles county is practically unlimited. It will probably be of interest to our farmers to learn that there is now a market for at least twice the quantity of hogs at present alive in Los Angeles county. That is something for a beginning. By the first of March—or the middle of that month, at the latest, the Southern Pacific railway will have reached the Colorado. That will give us a still larger market. In addition, China consumes immense quantities of foreign pork, and there is no reason why the Celestial tooth should not employ itself on our bacon. As we have said, there is hardly a limit to our ability to produce pork. Our corn-fields rival those of the Mississippi valley in productiveness, and there are hundreds of thousands of acres of them. Nor is that all. We have what the farmer of the Mississippi valley has not—alfalfa, the best hog feed in the world. With such signal advantages we should improve them to our great pecuniary profit.

## MERCED.

**DRY AND DOUBTFUL.**—*Argus and Express*, Feb. 17: The weather remains dry, and many farmers are thoroughly impressed with the belief that a failure of crops will necessarily ensue, especially upon the clay or adobe soils. Rain within a few days, however, would materially change their opinion in this respect. Many farmers are summer-fallowing their lands for early sowing next year.

## PLACER.

**THE ALDEN WORKS.**—*Argus*, Feb. 17: Work has already begun on the buildings of the Alden Company. Workmen are now engaged in excavating for the basement, and as soon as the lumber is received the building itself will be put under way. The main building is 36 feet long by 28 feet wide. It is to have three stories and a basement, and when completed will show to good advantage. The basement will be seven feet high, four feet below ground and three feet above. The first story is 11 feet high, the second nine feet, and the third, eight. Wings 12 feet by 28 feet and extending as high as the first story will be added to both ends of the building, giving a room on the first floor of 60 by 28 feet. On this floor the principal part of the work is done. The second floor will be fitted up with a room for the foreman, and bins for the storage of fruit. A platform 12 feet wide will extend along one side of the building, to facilitate the handling of fruit received by wagon. No money will be spent in ornaments, but the building will be put up in a plain, substantial manner.

## SAN BENITO.

**THE SEASON IN DOUBT.**—*Enterprise*, Feb. 17: We regret the necessity of being forced to admit that the agricultural prospects in this section are far from promising. The rainfall for the entire season has been less than three and one-half inches, not enough to cause the moistures to meet, in which case, even with more than the usual number of spring showers, farmers cannot reasonably hope to secure average crops, except in damp localities. A considerable portion of the tillable land of this county was dry sown, and the greater part of the remaining ground has been planted since the rains, all of which look well enough as yet, but unless we get heavy and continued rain during the present month, it is idle to think crops can mature. The season is now far advanced, and each day diminishes the chances for very heavy rain, yet it may still come—we hope it will, but we are now talking of things as we find them. There is plenty of green feed for stock, and will be for three or four weeks to come, but by that time we will want a good share of moisture to keep up the supply. We do not apprehend any serious trouble on this score; the chances are that we will get rain enough to produce feed, and probably a light crop of hay. And notwithstanding the cheery notes of some of our neighboring exchanges, the prospects do not seem to be any better, if as good, in other sections of the State, south of San Francisco. We had an opportunity for practical observation in portions of Santa

Clara, Santa Cruz and Monterey counties this week, and except in the low lands of the Pajaro valley, lack of the necessary moisture is painfully apparent. It is well enough, probably, for those papers to say "only spring showers are needed now to secure bountiful crops, etc.," but every experienced practical farmer in the country will tell you a different tale. He will tell you that none short of from nine to 15 inches of rain advantageously distributed ever gave the valleys of California an abundant harvest.

## SAN JOAQUIN.

**FARMINGTON WATER COMPANY.**—*Independent*, Feb. 15: A number of wealthy farmers of this county yesterday organized a company for the purpose of taking out water from the Stanislaus river and leading it down in flumes, ditches and natural water channels, or either, in a westerly direction towards the city of Stockton, to be used for irrigation, navigation and manufacturing purposes. The name of the company is the Farmington Water Company; principal place of business, Stockton; capital stock, \$250,000, divided into 2,500 shares of \$100 each. The water is to be taken out from the vicinity of Six-mile Bar, above Knight's Ferry, and the canal will be 20 to 30 miles long. It is proposed to make it 20 feet wide on top and seven feet deep. The expense will, it is thought, not exceed \$75,000 to \$80,000. The canal will cover 90,000 acres of land, nearly all of which can be irrigated.

**PROMISING WHEAT.**—Mr. Peter Baker, a farmer living seven miles northwest of Linden, in this county, brought to our office yesterday a specimen of wheat three feet ten inches high. The wheat was grown on summer-fallow land, of which he has 480 acres this year. The wheat is of a dark green, healthy color, strong and thrifty. Mr. Baker, who came to California a very poor man in 1860, in company with Mr. Stamper and Mr. Harrison, has another large farm about a mile and a quarter from Linden, adjoining Captain Ketchum's ranch. The exceptional character of this wheat in an unfavorable season is pretty good evidence that Mr. Baker's prosperity is due to his shrewdness and capacity as a farmer. The soil on which this wheat grew is a black loam mingled with a little clay. Mr. H. S. Sargent also showed us yesterday a specimen of green rye grown in this county that was three feet four inches high.

## SANTA CLARA.

**CALIFORNIA BRANDY.**—*Mercury*, Feb. 17: Gen. H. M. Naglee has received a copy of the award of the judges at the Centennial exhibition upon the grape brandy exhibited by him. The document, stripped of its introductory and other unnecessary verbiage, recommends for award as follows: "Five samples of brandy from one to five years old, distilled from Burgundy and Riesling grape; the only American brandy on exhibition that approaches the fine French spirits in flavor. Very fine in every particular." **JOSEPH F. TOBIAS**, Judge. Approval of group judges: John Bradford, G. F. Sechi de Casali, Dr. Nicolau Moreira, R. J. Brown, W. S. Greene, Guido Marx, Th. Segelcke, E. Martel." The document is further certified to by the various chief officers of the exhibition. This award entitles Gen. Naglee to a gold medal.

## SANTA CRUZ.

**PAJARO.**—*Pajaronian*, Feb. 17: A number of farmers with whom we have conversed during the past week report their crops in excellent condition, and all seem to be very hopeful of a good yield in this valley, with the late rains, which are sure to come.

## SONOMA.

**CROP PROSPECTS.**—*Democrat*, Feb. 17: We do not well see how the outlook for crops could be better at this season of the year than it is in this county at present. If there be any drawback at all it is that early sown grain is too far advanced. We have heard of some farmers who say that wheat is so rank they will probably have to mow it to prevent it from falling. That sown later is growing as finely as could be desired, and the ground is in fine condition for sowing more. There is already an unusually large breadth sown, and as some farmers are still sowing, there will probably be the largest yield ever known in this county.

## SUTTER.

**DIRECT SHIPMENT.**—*Banner*, Feb. 17: Two of our energetic and best known farmers, Messrs. George Harter and Henry Elmer, are making the necessary arrangements to ship a load of wheat to Liverpool on their own account. It will probably be shipped from the Farmers' Union warehouse during the coming week. It is the intention of these gentlemen to ship their grain by the *Three Brothers*, now loading at San Francisco, and which will depart about the 1st. We hope the grain may arrive safely at its destination, and the venture prove an immensely profitable one to the gentlemen engaged in it.

## TEHAMA.

**MAPLE TREES.**—*Tocsin*, Feb. 15: We are pleased to see that many of our citizens are planting maple trees—a tree that is unexcelled for shade and beauty, besides possessing many other virtues. The following, which we take from the *Oregon Statesman*, proves this fact. It says: We have heard that you couldn't get blood out of a beet, but since we have seen some fine maple sugar made out of sap from the maple shade trees of Salem, we can believe almost anything. Mrs. Lewis Johnson, of Piety Hill, sent us yesterday a fine sample of maple sugar made from the sap of the trees in front of her residence, and they are not sugar maples either. The sugar was equal to any from the maple-sugar State of Vermont.

## TULARE.

**MORE DITCHES.**—*Visalia Delta*, Feb. 17: Mr. S. Z. Curtis has 14 teams at work in cutting a ditch from the Kaweah to his place near the Cottonwoods. The ditch is to be 12 feet wide, and is taken from the Kaweah at the point called Bravo. Mr. Samuel Fowler and others have made application to the Supervisors for a franchise to take a ditch out of the south side of the Kaweah, near Everton pass, the said ditch to be fifty feet wide and four feet deep. Mr. Fowler, accompanied by several San Francisco capitalists, viewed out the route of this ditch several days since from Tulare Lake to Everton pass, and pronounced the enterprise practicable. We hope the work may be pushed rapidly forward, and that the now parched plains along the route and surrounding Tulare City may, in another season, blossom as the rose.

**WOOL AND DIRT.**—According to the Assessor's books of last year there were 440,315 head of sheep in this county, which would shear 2,201,575 pounds of wool per year, 733,854 pounds of which is dirt. The owners of these flocks prefer to pay freight on this 733,854 pounds of dirt, and selling their wool at nine and eleven cents, to raise \$80,000 to build a woolen mill and cleaning mill and realizing from 30 to 40 cents a pound for their wool. It is calculated that there are 150 sheep owners in this county.

## VENTURA.

**BEEKEEPERS' MEETING.**—The Ventura Beekeepers' Association met at the school house in Santa Paula, Saturday, February 3d. The meeting was called to order by Cyrus Keeney, Vice-President. The rain probabilities were first discussed, and, although the prospect for an abundant crop of grain was not considered very good, yet it was thought that with three inches more rain we should have as good a honey season as was two years ago, which was one of the very best. It was thought best to abandon the old kerosene can as a honey-receptacle, and adopt a can of uniform size that would be acceptable in any market. If Mr. Corey can have the assurance of 2,000 cans to make, he will make them of good, bright tin, holding about ten gallons and weighing about 125 pounds each, for \$10.50 per dozen. If screw tops are desirable, they can be bought for \$3, \$5 or \$8 per gross as you choose. This particular size of can is very desirable on many accounts. They ship cheaper for one thing. They enable one to reckon up the amount of honey more readily, viz.: four for 500 pounds, 16 to the ton. Large cars go to the European market free of duty. The San Francisco dealers are still buying for that market. Although that shipped to Europe has not been heard from, still we must look to that market for our best and largest sales. Large quantities of poor honey have been shipped East the past summer, which has injured the market to a very great extent. The practicability of uniting with Los Angeles county in an organization to secure a recognition of our first-class honey, was discussed. As our ports of entry are and always will be different, it was hardly to be considered. Ventura county beekeepers must therefore depend on themselves. If we cannot establish a reputation of our own, we had better quit, especially when our honey equals any that goes into the market. It was therefore resolved that this society is in favor of an organization to classify our honey, and a committee of three was appointed to devise a plan and report at the May meeting. The committee appointed were Messrs. Corey, Wilkins and Touchton. Mr. Corey graded his honey last season, and it proved very satisfactory. Thus: white honey, light amber, amber, red. The last is sold at a very low figure to the Chinese.—*MRS. E. G. KEENEY*, Sec'y.

**SHEEP.**—*Free Press*, Feb. 17: The lambing season this year has been exceptionally favorable, the mothers being in good flesh, and therefore disposed to bestow care on their young, while the warm rains have not injured the little ones, and the new grass comes just at the right time. A very large increase of flocks has been the result, and with care in getting the spring clip of wool on the market in a cleanly, merchantable shape, there is no reason why sheep-raising should not this year prove more profitable than almost any other investment.

## YOLO.

**CAPAY CROPS.**—*Democrat*, Feb. 17: Last week your correspondent took a trip over to Capay and Cottonwood. The whole country, that vicinity especially, presented a scene of activity, as everybody was anxious to finish seeding as soon as possible. The early sown grain is in a most healthy condition, and the prospects for a good crop are exceedingly flattering. The area under cultivation may not be as large perhaps as in some other years, owing to the unfavorable prospects previous to the late rains, but the yield to the acre promises to be greater. Give us a few spring showers and Yolo may exult.

**PEARL BARLEY.**—*Mail*, Feb. 17: C. V. Burke, Post Master at Cacheville, this county, sends us a stalk of pearl barley, which measures 28 inches in height. It comes from his ranch in the foothills, about four miles west of Cacheville, and represents the growth of about three acres of barley. The stalk sent us is headed out and in bloom, the head measuring three inches in length. In his note to us, accompanying the stalk, Mr. Burke says: "It is not all headed out like this, but is very thrifty and stood the drouth first-rate." He promises us a report on the crop after harvest.





### Love Lightens Labor.

A goodwife rose from her bed one morn,  
And thought, with a nervous dread,  
Of the piles of clothes to be washed, and more  
Than a dozen mouths to be fed;  
There were meals to get for the men in the field,  
And the children to fix away  
To school; and the milk to be skimmed and churned,  
And all to be done that day.

It had rained in the night, and all the wood  
Was wet as wet could be;  
There were puddings and pies to bake, besides  
A lot of cake for tea.  
The day was hot, and her aching head  
Throbbled wearily as she said:  
"If maidens but knew what goodwives know,  
They would be in no haste to wed!"

"Jennie, what do you think I told Ben Brown?"  
Called the farmer from the well;  
And a flush crept up to his bronzed brow,  
And his eyes half bashfully fell.  
"It was this," he said, and coming near,  
He smiled, and stooping down,  
Kissed her cheek—"twas this: that you were the best  
And the dearest wife in town."

The farmer went back to the field, and the wife,  
In a smiling and absent way,  
Sang snatches of tender little songs  
She'd not sung for many a day.  
The pain in her head was gone, and the clothes  
Were white as the foam of the sea,  
Her bread was light, and her butter was sweet  
And as golden as it could be.

"Just think!" the children all cried in a breath—  
"Tom Wood has run off to sea!"  
He wouldn't, I know, if he only had  
As happy a home as we."  
The night came down, and the goodwife smiled  
To herself, as she softly said:  
"Tis so sweet to labor for those we love,  
It's not strange that maids will wed."

### Offices of Reason.—No. 3.

[Written for the RURAL PRESS by J. G. LEMMON.]

#### The Destroyer of Error.

The brain of man is enveloped by two series of coverings, the inner series immediately clothing it, the outer protecting it. The inner series, the clothing, is composed of three membranes: the soft lining, *pia mater*; the thin, colored *arachnoid*, and the strong, fibrous *dura mater*. The outer series, the cell or house, is composed also of three layers: the cranium, a many-planked double wall; the scalp, a strong air and water-proof canvas, and the hair, a light, trivial thatch.

So the mind of man, the tenant of this brain, is invested as it were, with two similar series of coverings, nourishing and protecting it at first, afterward decaying and becoming hindrances to its development and the particular objects of its life-long labor to overcome. This labor required by the need of the wisdom faculties, is often thwarted by three moods of the mind or mental states. These moods, harmless, even useful helpers at first, if indulged become the worst enemies—the would-be assassins of the mind.

A classified presentation of these correspondences will aid the memory in following the discussion:

#### Envelopes of the Brain and Mind.

##### OF THE BRAIN (MATERIAL).

Clothing, (Pia Mater, soft under-garment.  
Becoming a Shroud. (Arachnoid, ornamental vestings.  
House, (Dura Mater, coarse outer robe.  
Becoming a Tomb, (Cranium, many-planked, double wall.  
Scalp, strong, weather-proof canvas.  
Hair, light, trivial thatch.

##### OF THE MIND (IMMATERIAL).

Clothing of Indolence, (Pia Mater), feeble drowsiness.  
Becoming Fetters, (Arachnoid), senseless apathy.  
House of Ignorance, (Dura Mater), willful laziness.  
Becoming a Prison, (Cranium), stubborn obduracy.  
(Scalp), strong prejudice.  
(Hair), trifling folly.

##### MOODS OF THE MIND.

Love of Gaming, causing distraction, opposed to the law of use.  
Love of Fiction, causing misconception, opposed to the light of truth.  
Love of Stimulus, causing distortion, opposed to the rule of right.

#### Envelopes of the Mind.

Indolence under three names, drowsiness, apathy and laziness, is the clothing, and ignorance under three names, obduracy, prejudice and folly, is the cell or tenement of the mind. The growing intelligence presses on all sides and demands room. Through the rents of the clothing and the windows of the cell the Perceptives escape and bring back information of the wonderful world without. This the reasoning faculties combine and arrange it into an ideal world within, filling in discrepancies and correcting errors of apprehension, dispatching the Perceptives again and again for more materials. Soon the rents and windows are found to be too small to admit the laden Perceptives and the information received is meager and misshapen in consequence. The mind naturally at once commences to enlarge the apertures or to re-

move altogether the hindering integuments. Some tenants, however, remain satisfied within the envelopes of indolence and ignorance and become dormant, stolid and child-like, a case of arrested development. Some nations, and one whole race, the Mongolian, represent this state. Other tenants, becoming eager and resolute under the attractions of the outer world, labor to enlarge their environment or to destroy it by tearing away the fettering garments and hewing down the imprisoning walls, bursting at length into full light and liberty. But a vast number of well roused and intelligent minds, endowed only with inadequate or improper implements, struggle vainly against their environment and need a little help from the free. The envelopes of indolence and ignorance surround the most of us more than we suspect. At first they are beneficial. Indolence is needful rest; ignorance is guileless safety; but with the normal growth of the mind the threefold garments of indolence becoming clogging fetters, and the triple-layered house of ignorance becoming a high-walled prison, must both be destroyed.

#### Moods of the Mind.

The three useful helps becoming, if indulged, hateful enemies of the mind, are love of gaming, love of fiction and love of stimulus. Love of gaming causes, when long indulged, a feverish state of mind—distraction opposed to the law of use; love of fiction causes a false practice—misconception, opposed to the light of truth; and love of stimulus causes a malicious habit—distortion, opposed to the rule of right.

These three ultimate moods, distraction, misconception and distortion, are often such predominant traits that their opposites, the useful, the true and the good, the real, fundamental principles of human life, are scarcely manifested.

See the baneful effects of these moods when controlling the mind. Distraction will not observe the most obvious things, Misconception fails to get the true idea of them and Distortion twists them out of proper shape or relations.

A beautiful object is presented. Distraction won't look at all, Misconception looks the opposite direction, Distortion, looking through colored glasses, declares it ugly.

A heroic deed is commended. Distraction will not appreciate world-enduring records made by Damon and Pythias, Socrates, Leonidas, Kosciusko, William Tell, Columbus, Wilberforce, Nelson, Wolfe, La Fayette, Washington, Putnam, Franklin, Kane, Ellsworth, Lincoln, etc. Misconception believes they braved danger for personal glory or aggrandizement. Distortion declares them all fools.

A high obligation is enjoined. Distraction will not heed that the possession of vast stores of this world's goods or the endowment of brilliant talents is accompanied by commensurate obligations as steward in charge, to use them for the amelioration and improvement of the poor and feeble; Misconception understands the possession to be absolute, not a stewardship while Distortion uses such possession for the commission of abhorrent exactions and crime.

A world-wide truth is uttered. Distraction will not see that the builders of the largest cities in the world, Babylon and Nineveh, and of the highest monuments, the pyramids of Egypt, are themselves unknown; but the names of the meek and lowly Moses and Jesus are on every tongue, because their self-sacrifice for the poor of this world, and the precepts they taught have become the religion of the whole enlightened earth. Misconception believes their doctrines have only a local and temporary application, but Distortion denounces both as impostors.

A grand principle of nature is revealed. Distraction does not care to know that the earth is a vast laboratory or workshop, in which agencies are at work elaborating, refining and storing away materials, to be taken up by other agencies and carried on to the up-building of perfected forms. Misconception is bewildered by the bustle of the shop, and Distortion fixes his eyes on the showing and refuses to believe the end is chaos.

A wonderful fact is stated. Distraction cannot perceive the relations pointed out, of mind to matter, the one a tenant, the other its house; the tenant first fostered and protected, then menaced and assassinated by its envelopes, to overcome and destroy which is the life-long labor of the mind; and that these relations subsist in precisely the same activity in every organized body, every plant and animal; nay, more, as lately revealed by the microscope, are recalled and presented anew in every seed and egg they produce! Misconception examines only to gain false ideas of the phenomenon, but Distortion don't believe a word of it.

A sure guide to happiness is offered. Distraction will not discern that every human act is followed either by blissful rewards or painful punishments, that the distinction between good and evil is thus plainly indicated by the labors of Nature, and that the good fostered by rewards will eventually triumph, while evil punished with disaster will perish. Misconception don't know good from evil; Distortion thinks evil is good.

The use and aim of life is shown. Distraction cannot discern that only the good help to advance the divine idea of humanity onward toward its Creator, passing through all the lower refining forms on the way; and that this progress is a constant warfare, bursting through and destroying the old, seizing upon and adapting the new form, emerging at length a perfected spirit, an angel of light, a son of God. Misconception, relying upon the power and mercy of

the Deity, thinks that he reaches directly down a strong arm to gather his children home. Distortion, taking note of individuals, believes all are going to perdition.

#### Reason to the Rescue.

Reason, marshaling the percepts into line, will combat and destroy all these errors. He will overcome Indolence under whatever name it lurks, by showing that action, growth and progress is the nature of all things material or immaterial, conforming to the law of use; that labor is life; that indolence is suicide.

He will destroy ignorance under whatever name it stalks, by showing that "light is come into the world;" that the means of knowledge is within the reach of all; that education is imperative, and that the blunders of the ignorant are downright murders.

Reason will compel attention to things concerning the spirit's welfare by removing the gambling, dissipating, distracting institutions from society, and supplying equally attractive but useful diversions instead. He will attack false systems and ideas by discouraging the production of purely fictitious and deluding literature, and substituting the sublime revelations of science, art and natural history, popularized by competent minds. He will destroy Distortion by removing its stimulus—the use of alcohol and kindred poisons, the lust of power and related vices, the greed of gold and similar crimes—by judicious legal restrictions and intelligent, conscientious self-control.

Webber Lake (under the snow), Jan. 24th.

#### Educated Fleas.

We are supposed to know something about fleas in this State, but it cannot be doubted that our acquaintance with them is rather practical than scientific. We can perhaps supply our deficiency in one branch of flea science by reading a few paragraphs from an article on "educated fleas" which W. H. Dall writes for the *American Naturalist*:

Some weeks ago, when passing through Broadway, New York, not far from Union square, an accidental glance caught the sign over a doorway, "Exhibition of Educated Fleas." Past memories and present curiosity determined me to make an inspection at once. Half an hour later I had seen all there was to see, purchased a lively little pamphlet by—shall I say the inventor of the educated fleas? and decided that the small fee exacted was well expended. As it does not appear that the *modus operandi* of this exhibition has ever been explained, an attempt in that direction may not be uninteresting.

To make the explanation intelligible it will be necessary to begin with the conclusion, or in other words to first state the essential part of the explanation.

First, the fleas are not educated. Second, all the performances which make up the exhibition may be traced directly to the desire and earnest efforts of the insects to escape. The means employed to give an appearance of intelligent action to these struggles are sufficiently ingenious.

In the first place, each flea is attached to some object in such a manner that it cannot free itself, while the movements of its legs and feet are not hindered or embarrassed.

This was explained by the proprietor. The surface of the insect is so polished that no cement will adhere to it when dry, and should a soft or waxy substance be used the insect dies very soon. (A probable cause of this might be the obstruction of the stigmata.) He stated that by tying a single silk fiber around the flea and knotting it on the dorsal side, a bristle, fine wire, or what not, may be cemented to the knot. I was not able to observe exactly where the fiber encircled the insect. This part of the process is the most delicate and difficult to perform.

The first preparation for their task is stated to be as follows: The wild flea is put into a small pill-box with a glass top and bottom, revolving on an axis like a lottery wheel and forming a miniature treadmill. After a few days' confinement herein, the flea, which in a state of nature is, as we know, excessively inclined to jump, becomes broken of the habit. It is said that the constant raps which it receives, when attempting to jump and thereby hitting the sides of its prison, incline it to work. If this be true, and it might readily be tested by experiment, the flea's education is entirely comprised in it, and so far as it goes, it is a species of training. I am not yet convinced of the accuracy of the statement.

It was noticeable that the surface over which the fleas dragged their burden was composed of compact blotting paper on which their hooklets took good hold, and that whenever the performance of any one individual was not going on, the particular object to which it was attached was laid on its side, or so that the insect was left, feet in air, where it could not exhaust itself by unnecessary efforts. I think that the absence of any proof of education in the above cases is quite plain.

In the second class of cases the efforts made by the flea to escape are precisely the same, but, being fixed itself, it must necessarily show its power by traction upon some movable object or by aimless gesticulations in the air.

Generally the insect is attached to a sort of style or wire in a perpendicular position, with the head uppermost and the limbs extended horizontally. Usually it will remain quiet, but if dis-

turbed by the vibration of its wire, as produced by knocking on the table, it will work its limbs about, seeking something to take hold of. If, then, segments of finest wire, fans of tissue paper, or other representations of objects in miniature are attached to its fore "feet," we shall have it apparently brandishing a stick or sword, fanning, performing on a musical instrument, etc., all of which is much more clearly seen with the aid of a lively imagination.

Two fleas furnished with segments of finest wire on their fore "feet," and placed with their ventral sides so near that the mimic swords can touch, but not the insects' feet, give a representation of a duel not much worse than that usual in most theaters. In their struggles to reach the adjacent objects, it would be strange if the little wires did not clash occasionally.

The most amusing and, at first, most incomprehensible of the various performances, is that of the dancing fleas. The orchestra are placed above a little music-box, whose vibrations cause them to gesticulate violently for a few moments, fastened as they are to their posts. Below them several pairs of fleas (fasten by a little bar to each other in pairs, those of each couple just so far apart they cannot touch each other) are apparently waltzing; an inspection shows that the two composing each pair are pointed in opposite ways; each tries to run away, the "parallogram of forces" is produced; the forward intention, converted to a rotary motion, ludicrously imitating the habits of certain higher vertebrates.

I have sketched the plan of the performance, and it will be noticed that there is nothing in it which cannot be explained on the hypothesis with which we set out, namely, that all the effects produced may be the results of the natural efforts of the insect to escape, the burden of proof being with those inclined to a contrary opinion.

TEACHING THE BABY.—You must take your baby just where he is now, not much more than a little animal, and educate his physical nature, so rapidly developing. For instance, he has just reached the climbing age; every chair and stool is a worry to you, and a pair of stairs is a perpetual terror. Now show him how to get up and down the stairs, how to place his feet in climbing up into chairs. Let him tumble a little; it will only make him more careful. It is but a foretaste of the hard schooling which experience gives us all our lives. Better a little fall with you close by to stop it at the right place than a great one when you are "off guard" some day. (Remember that, too, when he is in his teens.) But I beg of you, if you want to see him grow up active, strong-limbed and agile, do not keep his white dresses too clean, nor tie his sashes after the present uncomfortable fashion, so that he isn't conscious of any legs above his knees. Then, let him feed himself. He'll make a miserable mess of it at first, but protect him well with bib and tin tray, and he'll soon teach his spoon the way to his mouth. Let him burn his fingers a little some day when the stove is not very hot; he won't touch it when it would be dangerous.—"Letter to a Young Mother," *Scribner for February*.

SIR LOIN !—A very pretty story is told of the origin of the word "Sirloin," but we fear it is only a story. However, here it is: Charles the Second, of England, is said to have knighted the loin of beef, on one occasion, after his return from a long chase. Beholding a huge loin steaming on the table, he exclaimed: "A noble joint! By St. George, it shall have a title!" And raising his sword above it, he said: "Loin, we dub thee knight; henceforth be Sir Loin!" Though not an unreasonable tale, it is scarcely probable that it ever took place as related. The word is most likely a corruption of *surlain*, which means the upper part of the loin.

LISTENING TO EVIL REPORTS.—The longer I live the more I feel the importance of adhering to the rule which I have laid down for myself in relation to such matters: 1. To hear as little as possible whatever is to the prejudice of others. 2. To believe nothing of the kind till I am absolutely forced to it. 3. Never to drink into the spirit of one who circulates an evil report. 4. Always to moderate, as far as I can, the unkindness which is expressed towards others. 5. Always to believe that, if the other side were heard, a very different account would be given of the matter.—*Carnes's Life of Simon*.

PAIN.—"Pain" is an ache, or abnormal feeling, produced from an unnatural condition of the nerve or nerves afflicted, and in most cases it is induced by pressure, derangement, disintegration, or the imperfect circulation of the blood in or near them. Proof of the first and last: Rubbing over and near the sensitive nerves by increasing the circulation mechanically, will remove the annoyance.

ALL men need truth as they need water; if wise men are as high grounds where the springs rise, ordinary men are the lower grounds which their waters nourish.

A LADY may always judge of the estimation in which she is held by the conversation which is addressed to her.—*Miss Edgeworth*.

PRINCIPLES are very important, but they need to be adorned by the graces to render them attractive.—*A non*.



## Who Shall Set the Limit to Education.

(Written for the Press by J. SHARAL.)

Education is needful to complete the perfect course of life. How unprepared would we be for the different stages of life could we grasp it at one single effort. What more striking contrast can there be than that between the man of education and the ignorant one.

The ignorant can never be classed as anything but a mere child, with no thought or motive save the purely natural one for food and shelter. Dependent on others for all requirements of the mind, in his very helplessness in anything pertaining to true knowledge, an infant. But let him begin an education, it will not be long before a change will be perceptible. His intellect is awakened, and for this as for everything else, he requires patience and perseverance. But education is a never-ending wonder, novel and strange in every phase and the tyro is too eager to grasp it all at once. But through all he is developing a character of his own. He begins to feel his growing powers. He is no longer dependent on others to supply his mental needs, and consequently he is more self-reliant, conscious of the possession of knowledge and of the ability to impart as well as to receive.

And now we have the man rejoicing in his strength, believing that he has attained the fullness and perfection of knowledge, thinking he has finished his education, he knows everything, understands everything.

And yet, after a few earnest efforts we have the whole-souled endeavorer, a different person. He has tried his powers and tested his strength. Keen observation is now joined with reflection. How he thinks with contemptuous pity of his delusions, especially the greatest delusion of all, that he had compassed the treasures of knowledge. He realizes now that the elevation he had climbed, thinking that he had reached the summit of learning, was but a hill, while above him were mountains yet to be scaled, with the sun shining out bright and clear to illuminate every turn in his path. His interest, hopes, and his attachments are transferred to that path. He finds new and interesting lessons at every turn. A single flower which a few years before was nothing but leaves and color, becomes a delightful study. Even the rocks lying about him contain whole histories, which once were only rocks that must have been there when the earth was completed.

If he is a keen observer he finds some new lesson at every step, and he finds there is no danger of learning too much. We often hear said of individuals who have finished a certain course of studies that "they have finished their education." Education is never finished! There are new lessons for us every day, every hour we live; lessons that would be of lasting benefit if we would but study. Every science has taken life-long labor to bring to light, and yet there is none complete.

**A DICKER.**—A sharp Yankee went into a country store down East, and thus accosted the proprietor: "Squire, do you trade?" "Considerable," was the reply. "I mean do you dicker?" "Some; what ye got ter dicker?" "A egg." "What ye want for an egg?" "Guess I'd like a darnin' needle." The required needle was dickered for the egg, and the Yankee was going away, when he turned and said, "Squire, do you treat?" "Well, I don't mind if I do," replied the good-natured storekeeper. They repaired to an adjacent tavern, and the usual bourbon was produced. "Hold on," cried the Yankee, "my chist's weak, and I never take whisky without an egg in it." The generous shopkeeper handed him the dickered egg, but without asking him for his needle again. The Yankee broke the shell on the edge of the glass, when he exclaimed, "Geewillikins! this egg's got two yolks! Guess you'd better give me another darnin' needle."

**WELL OFF.**—You are well off when you are in a healthy neighborhood, with enough to eat and drink, a comfortable, well-ventilated apartment to sleep in, and you are paying all your expenses and laying up something—even slowly, for a rainy day, and in addition to all this, acquiring knowledge and strengthening your character. Young men whose situation combines all the preceding advantages should be very cautious about exchanging such a certainty unless it be for another certainty. Happiness does not depend upon great wealth so much as it does upon independence and intellectual and moral culture.

No good that the humblest of us has wrought ever dies. There is one long unerring memory in the universe, out of which nothing ever fades.

No man has a right to ask a woman to become his wife unless he has paved the way, by caution and forethought, to a comfortable home for her.—*F. W. Robinson.*

I NEVER KNEW a man in my life who could not bear another's misfortunes perfectly like a Christian.—*Pope.*

If we waited until it was perfectly convenient, half the good actions of life would never be accomplished.—*Alice B. Haven.*



"This is the House that Jack Built."

## Young Folks' Column.

## A Bit of a Sermon.

Whatso'er you find to do,  
Do it, boys, with all your might!  
Never be a little true,  
Or a little in the right.  
Trifles even  
Lead to Heaven.  
Trifles make the life of man;  
So in all things—  
Great and small things—  
Be as thorough as you can.

Help the weak if you are strong,  
Love the old if you are young;  
Own a fault if you are wrong,  
If you're angry, hold your tongue.  
In each duty  
Lies a beauty,  
If your eyes you do not shut;  
Just as surely  
And securely  
As a kernel in a nut!

Whatso'er you find to do,  
Do it then with all your might;  
Let your prayers be strong and true—  
Prayer, my lad, will keep you right.  
Pray in all things,  
Great and small things,  
Like a Christian gentleman;  
And forever,  
Now or never,  
Be as thorough as you can.  
—*Good Words for the Young.*

## The Bee that Saved a Kingdom.

Here is a fable that has never been told in print, though it is very popular in the Bee country:

Once upon a time there was a bad king, and the people wished him to make a certain good law. "No," said he, "I will not make that law, it is too good. It will make peace. Here is the law I will make. Then all my people will go to war."

The two documents lay in front of him on the table all written out, and whichever one he signed would be the law of the land. He took up a big quill pen, and drew the bad law nearer to him, and dipped the pen in the ink.

Just then, a bee began to buzz. It was a wise bee.

"Z-z-z-z-z! No such zlaw zhall pazz!" buzzed the bee, over and over again; but no one noticed him. "Zign ze ozzer—ze ozzer—ze ozzer!"

The king would not listen; so the wise bee lit on his nose and stung him just a little, still buzzing, "Zigu ze ozzer—zign ze ozzer—ze ozzer!"

"Open the window," roared the king, "and drive out this bee, or kill him!"

They opened the window. Out flew the bee, and in rushed the wind. It blew in very hard. The papers flapped and flew across the table. The bad king was so mad that he stamped his foot, seized one of his papers, and signed it in a rage. There was his name, "King Blunderbuss," and nothing could alter it. Then he saw that in his haste and rage he had signed the good law. But he was too proud to own his mistake.

The bee hurried to the garden and whispered to the honeysuckles:

"Zome of your bezt, zome of your bezt! The good law is zigned, and all zhall be peaze and happinezz!"

So the honeysuckles gave him all their best honey, and the people outside the king's palace built great bonfires and shouted with joy:

"Long live the king! Long live the good King Blunderbuss!"

"Oho!" said the king to himself, when he heard this; "that is the best sound I have heard for many a year."

And after that he was afraid to give way to anger, for fear he might sign a bad law, by mistake. The bee did not have to light on his nose again. The king made only good laws, and to the end of his days his people shouted: "Long live the king!"—*St. Nicholas for Feb.*

**MAKING MONKEYS USEFUL.**—It will amuse and surprise our little folks to be told that these mischievous creatures can be taught to work; and yet they are tamed and made to work in two remarkable ways, in the East. First, in the tea-gardens of China, just as an experienced Chinaman works, picking the suitable leaves and letting the others be. In the second place, he has been taught, by the natives of Molacca and the Golden Chersonese, as far as Formosa to the East, to ascend trees, gather the fruit which is ripe, and either give them or throw them down to his master. It may be confidently asserted that in each of these cases the trained ape performs an office requiring more intelligence than that of a chimney sweeper or a crossing sweeper.

## GOOD HEALTH.

## Remedy for Rheumatism.

**EDITORS PRESS:**—To know the special causes of disease and to remove them is generally all that is needed to preserve health, if done in time. Rheumatism is no exception to the rule. Although regarded as a hereditary disease, persons subject to it need favorable conditions to develop it. Dr. Hall says, that persons may bring it on by riding in a top buggy with the sides open, so as to get a current of air against the shoulder.

Four or five years ago I had a severe attack of rheumatism for the first time, though my father was subject to it, and his father was also. I took it in my hands and wrists by exposure about water, and thinking that it was the result simply of heavy lifting of fruit chests during the previous summer, I poured cold water on the hands and wrists to strengthen them. But they got worse instead of better, when I found I had the rheumatism. When I reflected that my Chinamen are not subject to this affliction, although exposed to cold fogs during a portion of the berry-picking season, and when I remembered that they practiced bathing their arms and legs with hot water, I thought I had "struck a lead." So I used hot or warm water whenever I washed my hands, keeping the feet dry and the whole system comfortable by a change of clothing to suit the weather, and I soon cured myself. I am still careful in these habits, avoiding exposure to cold or wet, and applying the warm water still whenever I think it necessary, and although I have now and then threats of an attack, I keep it at arm's length. Santa Clara, Feb., 1877. I. A. W.

## Out-Door Safety.

The fear of the weather has sent multitudes to the grave, who otherwise might have lived in health many years longer. The fierce north wind and the furious snow storm kill comparatively few, while hot winter rooms and crisp summer suns have countless hecatombs of human victims to attest their power. Except in localities where malignant miasms prevail, and that only in warm weather, out-door life is the healthiest and happiest, from the tropics to the poles.

The general fact speaks for itself, that persons who are out of doors most take cold least. In some parts of our country, near one-half of the adult deaths are from diseases of the air passages. These ailments arise from taking cold in some way or another; and surely the reader will take some interest in a subject, which, by at least one chance out of four, his own life may be lost.

All colds arise from one of two causes.

1. By getting cool too quick after exercise, either as to the whole body, or any part of it.

2. By being chilled, and remaining so for a long time, from want of exercise.

To avoid colds from the former, we have only to go to a fire the moment the exercises cease in the winter. If in summer, repair at once to a closed room, and there remain with the same clothing on, until cooled off.

To avoid colds from the latter cause, and these engender the most speedily fatal diseases, such as pleuritis, croup, and inflammation of the lungs, called pneumonias, we have only to compel ourselves to walk with sufficient vigor to keep off a feeling of chilliness. Attention to a precept contained in less than a dozen words, would add 20 years to the average of civilized life: keep away chilliness by exercise; cool off slowly. Then you will never take cold in-door or out!—*Hall's Journal of Health.*

**POISONS.**—For any poison, the most speedy, certain and most frequently efficacious remedy in the world, if immediately taken, is a heaping teaspoonful of ground mustard, stirred rapidly in a glass of cold water, and drank down at a draft, causing instantaneous vomiting. As soon as the vomiting ceases, swallow two tablespoonfuls or more of sweet-oil, or any other mild oil. If no ground mustard is at hand, drink a teaspoonful or more of sweet-oil or any other pure mild oil, melted hog's lard, melted butter, train oil, cod-liver oil, any of which protect the coats of the stomach from the disorganizing effects of the poison; and, to a certain extent, by filling up the pores of the stomach (the mouths of the absorbents) prevent the poison being taken up in the circulation of the blood. Persons bitten by rattlesnakes have drank oil freely and recovered. These are things to be done while a physician is being sent for.

**EXTRACTION OF A LIVING INSECT FROM THE EAR.**—The *Archives Medicales Belges* relates the following case: A little girl, three years old, put an insect, "*bete du bon Dieu*," into her ear. Sharp cries, agitation and convulsive symptoms ensued. Injections of water were made without result. The physician then conceived the idea of asphyxiating the insect by means of chloroform; he dropped four drops of chloroform upon a small piece of cotton, which he introduced into the ear. Immediately the child ceased crying and complained no further of any disagreeable sensation; the insect had become asphyxiated; an injection of warm water brought it away dead, and no further trouble ensued.

## DOMESTIC ECONOMY.

## Hints on the Making of Bread.

As a most difficult branch of a housekeeper's duties, bread-making requires a generous stock of patience and a vast deal of experience. The skill of it is in no sense intuitive, but acquired through repeated failures and doubtful successes; and even the accepted recipe of many a housewife makes a poor apology for a perfect loaf of bread. The best of recipes gets hard usage in unskilled hands, and the indifference which much bread-making betrays would spoil any rule, and offend any table. Teaching is worth something, but in this, as in most other skilled employments, experience is everything. The Woman's Centennial Committee, who compiled the "National Cookery-Book," considered the chief evil of much bread-making to be the use of saleratus or other baking powder, and enjoin upon their sisters to do away with this vicious custom. Were there no such thing as saleratus, considering the uses to which it is often put, the dining tables of the present generation would perhaps offer a more wholesome diet, certainly a more acceptable bread where such a powder is now used; and were the common and unhealthy biscuits, with their so frequently sulphur-streaked surfaces, which require special training of the stomach for even a passable digestion, driven away from every dining-room, the effect would be of immense importance.

Mr. Tegetmeier, in his "Handbook," explains the process by which bakers make their bread so light and spongy. They mix a little of the flour they are about to use with water and the yeast, and set it to rise some time before mixing up the mass of dough. In this way less yeast is required, and by this whole "sponge" acting as a ferment, the bread is much better and softer than is made in the ordinary way. The rising of the dough is quickened by adding to the sponge a small quantity of mashed boiled potatoes. To make half a peck of flour into bread on this system, mash three-fourths of a pound of well boiled mealy potatoes through a coarse sieve or colander, and mix with a pint of flour; mix an ounce and a half of German dried yeast, with a pint and a half of lukewarm water, and strain into the flour and potatoes; beat the whole into a batter; cover with a blanket and set by the fire to rise. In two hours, if kept warm, this will have risen considerably and constitutes the "sponge." Beat this with the hand very perfectly and mix with a pint and a half of nearly blood-warm water, (92° Fahrenheit,) and pour into half a peck of flour, which has already had one and one-fourth ounces of salt mixed with it. Knead the whole into dough and let rise in a warm place—two hours in warm weather, but longer in cool weather. Then turn out on a floured table, divide into pieces suitable for loaves, and knead lightly into proper shape with only flour enough to keep it from adhering to the table. For a still lighter bread a portion of the dough, when ready for the oven, should be well kneaded, with flour enough to make it rather solid, divided into small loaves or rolls, place on a slightly greased tin, and set in a very warm place to rise again. Then wash over the loaves with a little milk, and bake for about 20 minutes. Upon taking from the oven cover with a cloth to prevent the outside from becoming hard. Stale bread, which is far more healthy than new, may be made soft and palatable by covering closely with a tin and placing it for half an hour in a very moderately-heated oven.

## Raisin Pies.

We have become practically acquainted with one way to utilize our vast raisin resources and that is—raisin pies. One was placed on our home table by Miss Matilda Kohl, a lady of rare culinary talent, and so good was the impression which the pie made upon us, and we upon the pie, that we induced Miss Kohl to give us her recipe for publication. We can recommend it to all readers:

For one pie—Take one pound of raisins, pick the berries from the stems, put them in a basin, cover with water and put in a "steamer" and steam for one-half hour. Steaming is better than stewing, because in steaming the skins of the raisins are not broken. When the raisins are steamed, season with cinnamon and sweeten to taste, and put in a dessertspoonful of corn starch to hold the juice between the raisins when baking. Have the crust ready, cover the pie like a tart and bake until the crust is done. Try it.

**BARLEY BROTH.**—Four ounces of Scotch barley, four ounces of onions, four ounces of oatmeal or Indian meal, and two ounces of butter. After washing the barley well, steep it in fresh water for 12 hours; set it on the fire in two quarts of water, adding the onions and a little salt, and boil gently for an hour and a quarter. Melt the butter in a saucepan; stir in the meal till it becomes a paste; then add a little of the broth gradually, till it is a proper thickness to mix with the whole quantity; stir well together till it boils, and mix with a little of the broth a drachm of celery seed, pounded; stir well in the broth; simmer it gently a quarter of an hour longer, and serve.





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. R. EWER. G. D. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. R. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 80 2.00 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, February 24, 1877.

### TABLE OF CONTENTS.

**GENERAL EDITORIALS.** Marketing Lines; Beet Sugar in Europe; Cultivating Orchards; Great Red-breasted Rail, 113. The Week; Washington's Birthday; American Cotswold Association; A Span of Economy, 120. Wonders of Wind; Avenue Ranch Short Horn Herd, 121. Chicory in California; Japan Persimmon; Patents and Inventions; Notices of Recent Patents, 124.  
**ILLUSTRATIONS.** Great Red-breasted Rail, 113. Wonders of the Wind Illustrated, 121.  
**CORRESPONDENCE.** San Felipe Valley—No. 1; The Culture of Coffee and the Cork Oak, 114.  
**SHEEP AND WOOL.**—Vermont and Other Merinos, 114.  
**THE VINEYARD.**—Are Grapevines Pruned to Death; Raisins by Sun or Fire; Origin of the Mission Grape; Test Paper for Wines, 114.  
**POULTRY YARD.** Replies to Poultry Inquiries; Some Points of Interest in Poultry Raising; Weights of Bronze Turkeys, 115.  
**THE SWINE YARD.** Selection in Breeding, 115.  
**THE STOCK YARD.**—Milk Fever; The Angeln Breed of Cattle, 115.  
**ARBORICULTURE.**—Railway Tree Planting; The Catalpa, 115-22.  
**PATROLS OF HUSBANDRY.**—Work for the Grange—International Co-operation; Lecture at Golden Gate Grange; New Grange in Sacramento County; Grange Halls; Master's Rollings; Regarding Grange Growth in England; Election of Officers; Alhambra Juvenile Grange, No. 1; In Memoriam, 116.  
**AGRICULTURAL NOTES** from various counties in California, 116.  
**HOME CIRCLE.**—Love Lightens Labor (Poetry); Offices of Reason—No. 3; Educated Fleas; Teaching the Baby; Sir Loin; Listening to Evil Reports; Pain, 118. Who Shall Set the Limit to Education; A Dicker; Well Off, 119.  
**YOUNG FOLKS' COLUMN.**—A Bit of a Sermon (Poetry); The Bee that Saved a Kingdom; Making Monkeys Useful, 119.  
**GOOD HEALTH.** Remedy for Rheumatism; Outdoor Safety; Poisons; Extraction of a Living Insect from the Ear, 119.  
**DOMESTIC ECONOMY.**—Hints on the Making of Bread; Raisin Pie; Barley Broth, 119.  
**QUERIES AND REPLIES.**—Nuts; Another Swine Disease, 120.  
**HORTICULTURE.**—Lemon Growing in Santa Clara; Packing Oranges in Sand; An Old Orange Tree, 122.  
**THE APIARY.** San Diego Beekeepers' Meeting, 122-3.  
**GENERAL NEWS ITEMS** on page 124 and other pages.

### NEW ADVERTISEMENTS.

Seeds for 1877, Crossman Bros., Rochester, N. Y.; Japanese Persimmon, Geo. F. Silvester, Seedsman, S. F.; Select Garden Seeds, B. K. Bliss & Sons, N. Y.; Fancy Carrots, J. B. Husted, Nussau, Rems. County, N. Y.; The Diospyros Kaki, or Japanese Persimmon, Rev. H. Loomis, S. F.; Rupture Cured, Magnetic Elastic Truss Co., S. F.; Monstache Protector, C. H. Barrows, Willimantic, Conn.

### The Week.

The week has been very favorable for outdoor work, and the plows, harrows and seed have been in active motion in many counties. A little rain has fallen on the foothills of the Sierras, but not elsewhere so far as we have heard. The movement to irrigation has received a new impulse, and new ditches are being marked out in many directions. Each season is bringing the doubtful regions of our State farther into the realm of certainty, and it will not be many years before the weight of California production will be beyond the reach of the elements, except that they will be expected to do their duties in mountain snows to fill our irrigating rivers and canals.

In the parts of the State where the rain does not yet rise to the requirements of a crop, there is still work going on and the plow is running dry. Some are trusting thus to set a trap to turn any rain to fullest account, and others are working cheerily to give their land the benefit of the involuntary fallow, to be prepared for next year's cropping.

The week polishes the commercial side of the coming grain crop until it shines with promise. The English markets, in answer to the plain teachings of the figures of the supply and probable requirements, have elevated their prices, and the welcome for the coming crop seems assured. It is true that the Turk is now setting up with Serbia with banquet instead of bullet, but in spite of the peaceful declaration England puts wheat up. Good for England.

### Washington's Birthday.

As we write it is the eve of another anniversary of the birth of Washington. Time has brought us 145 years from his birth, and yet his name and memory stand where they have stood for a rounded century—first in the hearts of his countrymen. Later years have brought us newer heroes. Other names have been placed beside his in the country's roll of honor, but they do not detract from the glory of him whose patriotism and virtue they have emulated. Rather do they show us that his example has been of force with his people and that his life and work were not in vain.

Did the reader ever contemplate the advantage which we, as a people, have in the memory of Washington? Other nations have their heroes, but none so real, so genuine, so true as he. It has been the tendency of modern investigation to discover signs of unreality in the personages which many nations hold in high esteem. The Swiss have been well nigh robbed of their William Tell. He has been pronounced a myth. The tragic apple, which caught the winged shaft ere its fellow could seek the tyrant's heart, has been declared apocryphal. It has passed through the press of investigation and has run out in the cinder of distrust. Not so with Washington. He was a real and tangible man, for we have his clothes in the Patent Office at Washington. The demon of investigation has done its best to dull the edge of the hatchet which has cut its way down through a hundred and forty years of history and is as keen to-day as when it first scored the shins of the paternal tree. All honor to our Washington. All honor to the hatchet which cuts the fingers of those who would tear it from its place in the national heart.

The thought of Washington is a profitable theme for the American people to contemplate at this time. Never since his birth has his anniversary found his people in such a situation politically as now excites us. There have been trying times when war threatened and afterwards when its dire presence cursed the country. The situation to-day is different and, as we regard it, teaches us a lesson of thankfulness for our national holiday. What trying issues have come before the American people during the last two months! What opportunities for hot-headed counsels and hot-handed deeds. The whole political complexion of the country has been hanging upon the thread of doubt since the election day in November last. It has been impossible to tell which way the scale would turn. What other country in the world would have stood in dignified silence until the supreme law should dissolve the doubt? How many nations could have restrained the arm of tumult and turmoil during such a season of suspense? What people could have so nobly curbed the power of passion or prejudice until peaceful processes should declare the result?

It seems to us that the American people has reason to be proud of itself for its latest achievement. It is a noble attribute to exhibit for the beginning of its second century of national life. It is a most promising surety of its future. It is such an offering as this which the country makes to commemorate a birthday of Washington. It is easy to believe that the calm earnestness and charity of purpose which have been shown in the national behavior during this our latest trial is a fitting reproduction of the spirit which led to victory under Washington. The times called for different manifestations but the spirit was the same. It was a spirit of belief in our institutions and of trust in the idea of popular government. It is true that factionists on either side have made angry threats, but they have found no answering approval in the national heart. That heart has been true and calm, approving the reign of law and order, content to abide such result as ordained methods shall set forth.

In the face of such an experience we rejoice again in the memory of Washington. We recall his quiet dignity, his unfaltering patriotism, his unswerving devotion to the best good of the whole country. We honor him again for his lofty example. We look forward confidently to the unnumbered years during which his spirit shall still guide us, and we trust that in each of those years the American people may see in its growth, in its peaceful prosperity, in its noble and self-sacrificing love of country, some fresh evidence that the founder of the republic builded well. No better monument to Washington can be reared than that in which all of us can build a part, and that is the future of our beloved land.

**MILKING BUFFALOES.**—It is stated in the *Turf, Field and Farm* that the farmers in Nebraska have commenced the domestication of the buffalo. The wild animals, while young, are introduced among the herds of tame stock, only one or two at a time. Half and quarter breeds are found to be very hardy, and in the yield of milk the cows raised of mixed stock give even more than the average yield of rich milk. The experiment promises well, as the endurance of wild animals is imparted to the domestic stock. In this way the extermination of the species will take a new form, and when will buffaloes become legendary creatures the progeny of the race will still exist in modified, though probably more useful form.

ON FILE.—"Tree Planting," S. W. J.; "Flowers," G. D. W.; "Recipe for Pickles," L. J.

### American Cotswold Association.

Breeders of Cotswold sheep in this State will be interested to learn of a movement, which is now in rapid progress, to secure to this class of stock the advantage of recorded pedigrees. An association was organized recently in Iowa, composed of Cotswold breeders, and they invite the co-operation of Cotswold men everywhere. The organization provides for a Vice-President from each State in the Union, and the representative of this State is the Hon. Cyrus Jones, of San Jose. The Secretary is Alexander Charles, of West Liberty, Iowa. To these gentlemen all inquiries and applications for pedigree blanks should be addressed.

Public records of the breeding of the several classes of pure bred live stock are no longer experiments; the most enterprising breeders not only patronize them, but daily consult them, with a view of adding to the value of their herds. The Cotswold is one of the best and most valuable of our domestic animals. It is also true that their value will be greatly enhanced if a proper record is kept of their pedigrees. Breeders whom circumstances or choice have kept outside the list of fashionable pedigrees, need not urge such fact as an excuse for failing to record. Short pedigrees now, with good sheep and good keep and judicious selections for future crosses, will produce such stock as the majority of farmers will seek after, and for which they will be found willing to pay good prices, leaving the longer and more fashionable pedigrees to those who can afford to pay the occasional fabulous prices. The best breeders in the United States and Canada are taking hold of this matter, which will make the "Cotswold Record" the standard authority on all Cotswold matters.

From the official announcement of the new society we quote a few points which show the main features of its management: Its object shall be the collection, revision, preservation and publication of the history, management and pedigrees of pure-bred Cotswold sheep. Each applicant for membership shall be recommended by two or more members of the State, Territory or province in which he resides, as a reliable breeder of Cotswold sheep. Upon the approval of the Executive Committee and the payment of a membership fee of \$25, such applicant shall be admitted as a member of the association. The "Pedigree Record" shall be edited by the Secretary, under the immediate control and supervision of the Executive Committee, and shall be published only with its official approval. Applications for entry of pedigree shall be signed by or accompanied by the certificate of the breeder of the animal to be entered, if such breeder be living, and indorsed by the Vice-President of the district in which the animal is owned. The charge for entry of the pedigree of each animal shall be \$1. The Executive Committee shall exercise a surveillance over all pedigrees presented for entry, and exclude such as are not properly authenticated.

The Association, at the meeting on January, 17th, 1877, adopted the following rules concerning the eligibility of animals to record: "Males having five crosses and females having four crosses by pure-bred Cotswold sires may be admitted to registry, if free from specified disqualifications."

The "Record" is prepared from an American standpoint. Hence no animal is considered imported, except those bred across the sea.

**PROTECTING THE VINEYARDS FROM FROST.**—The safeguard from frost which is afforded by dense clouds of smoke has been frequently mentioned in these columns. The latest testimony in favor of its use was elicited at the late meeting of the St. Helena vine-growers. We read in the *Star* as follows: "Mr. Krug thought the experiment of smoke worth trying on a general scale throughout the valley. It had been used with effect in a small way, and he thought if practiced generally it could protect every vineyard in Napa valley from the possibility of harm. Mr. Heymann coincided. Captain Sayward recalled the time when he 'went down to the sea in ships,' that it used to be a common sight in Italy and up the Mediterranean, to see smoke rising from the vineyards. Thought they used coal tar there burned in small iron vessels. Tar creates a dense smoke, and could doubtless be had very cheap from the gas factories. Dr. Crane proposed the use of the brush from the vines themselves. Have all ready for lighting, and if at 10 o'clock at night the thermometer was down to 35°, frost might be expected. The brush project was overruled on the ground of flashing up and burning out too quick. Mr. Lewelling thought a better thing was to saturate bundles of straw in the coal tar. Mr. Krug translated an account from a German paper as to the salutary effects of igniting a large number of fires on a cold night."

**THE NEW GERMAN PANSY.**—We are in receipt of a colored chromo, representing 12 styles of the new German pansies, ranging through all colors, white, black, carnine, yellow, bronze, etc. The work is exceedingly well done, and the varieties of this beautiful flower, as shown by the chromo, are entirely novel and distinct. This chromo, together with their book of "Everything for the Garden," numbering nearly 200 pages, is mailed by Peter Henderson & Co., seedmen and florists, 35 Cortlandt street, New York, on receipt of 25 cents.

### QUERIES AND REPLIES.

#### Nuts.

EDITORS PRESS:—Can you inform me what the Paradise walnut is and where I can obtain some trees or clons; also where I can get Persian walnut trees or clons?—R. H. GILMAN, Anaheim, Los Angeles Co., Cal.

We do not find these nut trees among tree lists which we have at hand. If any of our readers have them they may inform Mr. Gilman.

The Paradise nut, as we have it in the importers' stores, does not strike us as a walnut at all. It is rather a variety of the Brazil nut (*Bertholletia excelsa*), being longer than the common Brazil nut and with a thinner shell. We are not sure that this classification is correct.

We do not know what the Persian walnut is unless it be *Juglans regia*. This nut is described as a native of Asia. It grows abundantly throughout Europe. It forms a large tree; the leaflets are fewer than in our black walnut, oval, smooth and with entire margins. The fruit is oval; the husk, unlike that of the black walnut, is thin and brittle and readily breaking away from the smoothish, thin-shelled nuts. In Europe, where much attention is given to its cultivation, about a dozen named varieties are known. If we are wrong, perhaps Mr. Gillet or some other reader will set us right.

#### Another Swine Disease.

EDITORS PRESS:—There is a strange disease affecting sucking pigs in the valley, the cause of and remedy for which I should be pleased to learn from you or some one of the many readers of your valuable journal.

The symptoms are as follows: The pigs become blind in one or both of the eyes, generally while yet quite young, and are also affected with a wheezing cough or "snuiles." They carry their heads to one side and seem to be quite simple. They generally die in a short time. Many have been lost in this vicinity lately by farmers. If any of your readers know the cause of this strange disease and its remedy, I should be pleased to hear from such a one. J. H. Compton, Los Angeles county, Cal.

We trust our swine-growing readers will not withhold their experience and advice concerning the disease described above and the one noted last week. By a comparison of experience and information those engaged in this branch of agricultural production can gain valuable points.

#### A Spasm of Economy.

California has a world-wide reputation for large things. It has been thought that as with our fruits and vegetables, so with our enterprises, a thing to gain a hearing must be grandly and peculiarly immense. Our unit of measurement has been the million. This is California as the world knows her.

At home and within the privacy of our columns we have talked to our readers about the necessity for a better observance of the economies in our agricultural production. While we have urged considerations of this kind and have looked for the time when each region of the State should gain a more complete independence in food material, we find there has sprung up a plant in Los Angeles from which economy flows like "ottar of roses from the ottar." For economy concentrated, complete, we know of no illustration so magnificent as the following which we read in a Los Angeles paper:

"Mr. W. H. Moore, who has been experimenting for several months past on the manufacture of fruit extracts and preserves from home products, brought to our sanctum yesterday quite an array of samples of his work. The lot includes citron and orange essence, lime juice, apple and citron syrup, apple jelly, pigs' foot jelly, pickle sauce, etc. Mr. Moore thinks that enough of our products are thrown away to realize many a fortune, were they properly husbanded and utilized. The orange extract was made from the pulp of one orange after it had been used for marmalade. The apple jelly and syrup were concocted from two affected apples which a fruiter threw out as worthless. The pickle sauce is made up of vegetables which cost next to nothing with us, and the compound becomes a marketable commodity all over the world."

What will the world think as it reads that a man in California has been making a jar of jelly and a bottle of extract from two "affected apples?" By the way, how was the apple affected? Was it visibly and painfully affected? Was it deeply moved? Writers on the economies should not be so economical of particulars.

The practical consideration which arises in connection with the experiments noted above is that oftentimes the material with which you start is so poor that the result does not warrant the labor expended. Most products are influenced by the quality of the raw material, and it can often be shown that good raw material can be produced at such cost as to make it more profitable to use in manufacture than refuse. This is a fine point perhaps, but is good to remember when one is at work on an economical problem. There is such a thing as extravagant economy and it is indulged in when more time is devoted to saving a bad thing than would be required in producing a good one. Possibly the time bestowed upon the partial salvation of two "affected apples" would have resulted in the production of a barrel of good ones if it had been devoted to orchard work. And the hours spent in manipulating the juiceless pulp of a marmaladed orange might have been employed to better advantage in the study of the scale bug question. Economy is a vigorous and thriving plant, but it is as worthless as a beet if it runs to seed.



### Wonders of Wind.

We vary the character of our illustrations this week to admit a very interesting study into the wonders which are wrapped up in air currents. Often in our going about over the face of the earth we are struck with the peculiar behavior of the air currents when they meet obstructions, natural or artificial. Some points in their actions may be better understood when the reader masters the following problems.

Visitors at the Centennial remember the wonder which they felt at seeing balls suspended in the air without any visible means of support.

#### The Phenomenon.

In exhibiting the Westinghouse air brake, in machinery hall, a receiver filled with compressed air, at about 70 pounds pressure to the square inch, is required. When the brake is not shown in operation the air of the receiver, being continually supplied by an air pump, is allowed to escape through a nozzle of about one-eighth-inch bore, set to a vertical inclination of about 30°. Over this jet of air is placed a ball (see Fig. 1), which remains afloat in the air without any visible means of suspension. There are five balls; a solid glass ball of one and one-half inches diameter, two solid wooden balls of three inches and three and three-fourth inches diameter, and two hollow rubber balls of three inches and five inches diameter, each of which, when placed in the jet, will show this phenomenon. Even more curious it appears when two balls are suspended simultaneously; the current of air, after leaving the small glass ball, being sufficiently strong to give support to the largest of the rubber balls. The impression this experiment creates is very striking indeed. As a rule, the suspended ball rotates very rapidly in the direction shown by the arrow, but sometimes it remains stationary, owing to the fact of the center of gravity not coinciding with the geometrical center; for the same ball, once made to rotate by an external force, will continue the rotation with increased speed. The vertical inclination of the jet may be changed to about 45° before the ball loses its state of suspension and drops off.

A similar phenomenon, a ball dancing on top of the water jet of a fountain, is often seen, and will likewise remain sustained if the jet is more or less inclined.

#### The Explanation.

The investigation of the cause of this phenomenon was commenced by Mr. H. Bilgram with an examination of the course the air current takes in striking the ball. This investigation revealed the fact that the current  $ab$  (Fig. 2), instead of leaving the ball in the line  $bc$ , as might be expected, follows the curvature of the ball along the line  $bd$ , and at length leaves the ball in the line  $de$ . A light ball, when placed in the jet, is struck nearly centrally (see Fig. 3); the current envelops the whole ball and unites again, leaving the ball in the line  $de$ , appearing as though the current was passing through the ball. It can, however, easily be found that the upper branch of the current is stronger than the lower one.

By a series of subsequent experiments, it was found that any current of air striking a convex surface has the tendency to follow that surface. One of these experiments is as follows: Attach to one end of a small tube, about one-eighth-inch to one-fourth-inch diameter, and four inches to six inches long (which may be made by rolling up a piece of writing paper), a piece of thread or yarn, about four inches to five inches long. Blow through the other end of this tube and direct the current against an object with a convex surface. The thread, following the current, will indicate a deflection, as shown by Fig. 4.

After demonstrating this fact, the next step was to find its cause. It is well known that any current tends to carry along with it the surrounding particles of air; hence, the supposed current  $bc$  (Fig. 2), being freely supplied with air from the left side only, will create a rarefaction of air in the angle  $bcd$ . It is thus exposed to a one-sided pressure, and will therefore be deflected, as mentioned, and follow the curvature of the surface until it meets a counter current sufficiently strong to prevent a further rarefaction. If this view can be substantiated, it is plain that two external forces are acting upon the ball. One, the impact of the air-current at  $b$ , transmitted at right-angles to the surface, acts radially, and can be represented by the line  $op$ . The other force,  $oq$ , is occasioned by the surplus pressure of the atmosphere on the lower side of the ball, over that of the rarefied zone under the curved current, and combined with  $op$  it forms the vertical resultant  $or$ , by which the weight of the ball is sustained.

#### Easy Experiments for Proofs.

The rarefaction of air under the deflecting current can be proved by the following experiments:

Cut a small hole, say one-half-inch square, in a card board, fasten over this hole a cover of the same material, by means of a strip of thin paper and mastic, to form a valve, and bend both the card and the valve into a cylindrical form. If now a current of air is directed against the card, as shown in Fig. 5, the valve will open wide, showing the pressure under it to be greater than that above it.

Or take a strip of ordinary paper, about one

inch to two inches wide, lay it over a cylindrical surface and blow against it in a nearly tangential direction. The end of the strip will then rise as shown in Fig. 6.

Quite a number of other experiments might be mentioned, showing the same facts.

The rotation of the ball is produced by the friction of the air-current passing over the ball, and is therefore a secondary result.

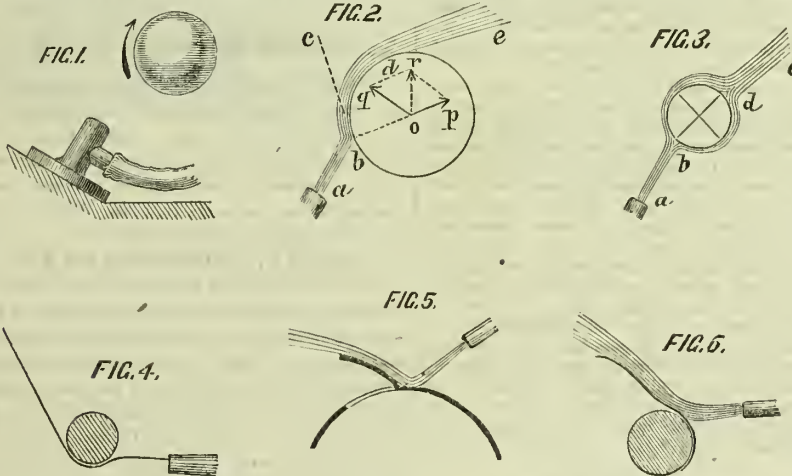
The phenomenon of deflection of a current when striking a convex surface can be brought to bear on geographical and meteorological facts. The Gulf stream follows the curved shore of the United States, for the identical reason that the aerial current follows the shape of a cylinder or a globe, and takes a course which otherwise it would not take. When a current of the higher strata of the atmosphere strikes the peak of a mountain it will be deflected, follow the sides of the mountain, and will sweep the valley.

### Avenue Ranch Short Horn Herd.

On Friday of last week we went to San Jose on invitation of Hon. Cyrus Jones, to visit the Avenue Ranch herd of Short Horns, the property of Cyrus Jones & Co. This herd, which will soon pass under the hammer, for reasons which we shall at once describe, stands high among California herds for the choice selection of animals and purity of pedigree, which are its characteristics. Now that it will be broken up by an entire sale, some facts of its origin and character will be of interest to all our stock-breeding readers.

#### Origin of the Herd.

Five years ago Hon. Cyrus Jones, General Smith and a Mr. Hicks, came to this State from Illinois in search of health, and in choice of a home fixed upon a beautiful and slightly location among the foothills six miles east of San



WONDERS OF THE WIND ILLUSTRATED.

Jose. Having arranged their habitations, and having a fine ranch of 600 acres to utilize, they decided to introduce a herd of thoroughbred Short Horn cattle. This they did in part as a pastime to gratify their love for fine stock, feeling that though their enterprise might not result in any pecuniary advantage to themselves, it would be of value to the county and State as an additional impetus to the general improvement of farm stock. As Mr. Jones had a valuable experience in breeding thoroughbreds in Illinois, he was commissioned by his associates to go to the States and purchase the foundation stock for the herd. Mr. Jones made his selection with most scrupulous care, as the introduction of the animals to this State was not for sale but for breeding excellence and to establish a herd in which its owners might take unalloyed pride. He purchased his animals from the most famous breeders, drawing heavily upon the peerless Kentucky blood. So exceedingly careful was he of orthodoxy of pedigree, that he would not even enter the light shadow which overhangs the "seventeens." The quality of the stock which was chosen will be noted below.

About a year after the founding of the herd Mr. Hicks died, and his share was purchased by Mr. Dawson of Illinois. Last fall General Smith died, and as the surviving partners found it impossible to agree upon a price at which a transfer of the stock could be made, the alternative of placing the cattle upon public sale by an auction was adopted. The sale is advertised in another column, and sale catalogues have just been prepared giving a full list of the animals with pedigrees complete. This catalogue contains the entire herd, which includes 23 females and four bulls.

#### The Cattle.

We saw the herd for the first time on Saturday morning last. The first thing which strikes the observer is the fine red color which is prevalent throughout the herd. Next, perhaps, is noticed the uniformity of style, form and general characteristics which mark the young stock, which indicates the breeding power of the bulls to transmit their own model traits and shapes. The truth of form and point was easily seen, for the cattle are in average ranch

condition and show themselves fully. As the visitor approaches nearer, the gentle disposition and the superior handling qualities are noticeable. We took pains to examine each animal, and shall point out what points of excellence we noticed.

#### The Females.

We shall group the females as far as possible according to their families. First we notice five females of Bates blood running to Imp. "Jessamine" enriched by top crosses of the "Rose of Sharon" family. The Roses of Sharon are rivals of the Dutchesses and at last year's sales in Kentucky and Illinois showed the highest average of all strains. First is the red and white cow, "Cherry 6th," bought in Kentucky. She is not large but finely developed in neck, back and hip, and exhibits the characteristic smoothness of her family. Next is "Maynard's Gem," dam "Cherry 6th." She is an extra handler, soft, silky and fine, and took the first premium at the San Jose fair of 1876 as the best heifer calf. Next is a trim, broad-backed heifer calf, "Jessie Maynard," dam "Cherry 6th." These two heifers of "Cherry 6th" were bred on Avenue ranch and sired by "Master Maynard." The other two females of this family are "Lorena 3d," half sister to "Cherry 6th," due to calve before April 1st. She is a heavy bodied, deep cow, and these qualities are also perceived in her daughter, "May Queen," who shows a peerless brisket for a calf.

There are two representatives of the "Portulacca" family. "Portulacca 2d" is a fine cow, bred by Mr. Jones in Illinois, and showing blood in all her points. She too, and her daughter, "Portulacca of Avenue Ranch," are pure Rose of Sharon. The dam of "Portulacca 2nd" was a celebrated show cow, weighing 1,800 pounds, took prizes in four States and was never beaten in the ring. She was also a deep milker, her calves being unable to drain her bag till they were five months old. "Portulacca of Avenue Ranch" bids fair to reproduce these points. She is coming one year old, is of

Kentucky, which is especially rich in Bates blood, and having but one Booth cross. She traces to "Adelaide" by "Magnum Bonum," the famous cow, and thence backward to a sister of the dam of the white heifer that traveled. No better note of her breeding could be made. She is the dam of the young bull, "Oxford Duke," of whom we shall speak below. She is one of the foremost of the herd in milk and yet has a strong tendency to put on flesh.

We note next two females of pure Oxford blood having but one out cross. They are "Belle Morris" and her calf, "3d Belle of Avenue Ranch." The cow was bred in Massachusetts. Her breeding qualities appear in her calf, which is an exceedingly fine animal, with a beautiful head and neat under-pinning. She is half sister to one which was sold to Hon. C. S. Abbott, of Salinas.

Last of the females are two pure Bateses. "Belle Brent 6th" is a richly bred and good cow. She is up to model at all points, her back being especially notable. She was bought by Mr. Jones at Hughes & Richardson's sale, and he refused a considerable advance for her immediately after the sale. She is rich in "Duke of Airdrie" blood, and her daughter, "Second Belle of Avenue Ranch," adds the "Rose of Sharon" from her sire, "Master Maynard."

Thus we have hastily classed the females and commented briefly upon some of their points. We can but remark again in conclusion the uniformity of fineness which prevails among the younger stock. They are unusually true to the best points and fairly embody the design which has prevailed in Avenue ranch breeding.

#### The Bulls.

We come now to the bulls. That they have occupied no inferior place in the success attained in Cyrus Jones & Co.'s herd is apparent, and we have seen in it another of the many illustrations of one of the truest things in stock-breeding, and that is the necessity of perfect sires if the breeder expects to approach his ideal of animals. The influence which "Master Maynard," 14,881, has exerted by the power to transmit his peerless shape and handling qualities, is evident to any one who lays eye or hand upon the stock. He is a noble animal, gentle as a child, and as he has just passed his fifth birthday, he has still a future. "Master Maynard" is pure "Rose of Sharon," and was bred by Warnock & McGibben, of Kentucky. He took prizes as a calf in his native State, and when one year old took the premium as a yearling and as the head of a herd of young stock at Paris, Kentucky, that great Short Horn center. He was brought to this State as a two-year-old and took first premiums in his class at Sacramento, Stockton and San Jose, on his way to Avenue ranch.

The prince of the herd is "Mason Duke," 14,875. He is worthy of his honors. He is massive and yet fine in his symmetrical anatomy. His measurements, heart, flank and tip to tip, are almost equal. He is splendidly full along the back and hips and is exceedingly fine on shoulder points, showing fullness with no projecting features. He has a kingly bearing and is upright and deep in form and spirited in manner. This bull is among the foremost of the State in fame. He was brought to this State by Mr. Jones when one year old. After eight days on the cars he was stopped at Sacramento and took the first premium in his class, pressing close for the sweepstakes. At Stockton he took first in his class and the sweepstakes and at San Jose he repeated this double victory. His latest record at fairs was at the San Jose fair of last year, where he was beaten by "Sonoma," of the "Cotate" herd, but turned upon "Sonoma" at the same fair and carried off the sweepstakes. "Mason Duke's" quality as a getter is seen by his calves in the Avenue ranch herd and by none perhaps more than in "Oxford Duke," who is now the heir apparent to "Mason Duke's" crown.

This "Oxford Duke" is the third bull on the sale catalogue. He was a year old Dec. 15th, 1876. He is out of the fine cow, "Myra Oxford," and is all "Bates" except one out cross. He took the first premium at the San Jose fair last fall, and of this award Col. Younger, having himself animals in competition, said: "If there ever was a prize fairly awarded it was to 'Oxford Duke.'" The young bull is finely laid out for growth and development. He has a noble head, a full eye; he is deep-bodied, smoothly built over flank and hip and well outlined fore and aft. He has the fancy point in a flat horn. He promises something very fine.

The last bull of the catalogue is "Leopard," a promising red calf got by "Master Maynard" out of "Leopardess Eighth," and thus blending the "Rose of Sharon" with the "Young Mary." He is a bright and shapely calf.

We have perhaps noted the main features of this fine herd of catalogue fully enough to indicate their high standing for pure blood and faultless pedigrees, coupled with many of the traits and forms which are the result of such careful breeding. It cannot be doubted that for show points and qualities the herd contains material which is unsurpassable. We don't not the sale will awaken wide interest.

After our study of the herd we returned to San Jose, lunched at the Auzerais house, where we met Mr. Churehill, its enterprising proprietor, and Mr. Emerson, of whose cattle our readers shall hear at another time. Catching a train thereafter, we returned to our sanctum, regretting that our office work forbade our tarrying to visit other friends in the live stock and other interests of San Jose. At other times we will supply the lack if our friends so desire.

There is one cow, "Myra Oxford," bought in



Continued from page 115.

to elapse after the completion of the work before the purposes for which the eucalypti are to be planted will be realized.

It is also proposed to set out a large number of catalpa trees along the Central Pacific road. The wood of the catalpa is considered among the best for sleepers, telegraph poles, etc. It is very hard and is very little affected by moisture. Mr. Scipham received Tuesday a large number of catalpa seeds, gathered in Ohio. These are to be planted here, and should the experiment of raising trees from them in this State prove successful, a large number of young catalpa trees will be planted along the railroad with the eucalyptus trees.

### The Catalpa.

Mrs. Grayson-Crane writes from St. Helena, Napa county, to the *San Jose Mercury*, as follows: "I infer from several notices of the catalpa and inquiries for its seeds in late numbers of the *RURAL PRESS* and *Bulletin* that it is not generally known that the tree has been long enough in California to feel itself quite at home in our soil. As early as 1854, the late A. J. Grayson, on his return from a visit to his native State (Louisiana), brought a variety of semi-tropical seeds, among which were those of the *Catalpa cordifolia*. They were planted in our garden on Julian and Fourth streets, and when we left San Jose, two years later, they were growing luxuriantly.—[The trees, four in number, are now large, beautiful trees, fully 30 feet high, with broad tops. The trunks are smooth, and some seven or eight inches in diameter.—*Ed. Mercury.*]

We have catalpa trees in this neighborhood, but whether of the same variety as the above named I am not prepared to say, neither do I know that any of them will flourish here as well as they did near the Ouachita river, where in them were both utility and ornament combined. The trees were sufficiently near together to serve as fence posts, while their umbrageous branches made a delightful shade. The blossoms, too, were not only beautiful, but impregnated the atmosphere with a rich aroma.

"The usual height of the *Catalpa cordifolia* is from 30 to 50 feet, with lateral branches and cordate leaves, placed opposite at every joint. The flowers are large and showy, in branching panicles, of a dull white color, with purple spots, and stripes of yellow on their inside, two-lobed, bell-shaped border, four-lobed, unequal."

## HORTICULTURE.

### Lemon Growing in Santa Clara.

We made mention not long since of some successful experiments in growing the Sicily lemon in Santa Clara county. We now find some further account of the experience in the *San Jose Mercury*. A representative of the *Mercury* recently visited the fine place of Supervisor W. H. Rogers, at Los Gatos, and while there made such personal investigations and inquiries as to leave no doubt that what he has undertaken as an experiment will not only prove a valuable investment, but demonstrate that Santa Clara valley can produce these semi-tropical fruits with perfection and certainty. Four years ago Mr. Rogers chanced to be in Los Angeles, and while there purchased some 100 or so two or three-year-old lemon and orange trees for himself, also some for Dr. McMurtry, at Los Gatos. They set them out in February and March, though subsequently learned that those planted in April grew more vigorously, on account of the weather being warmer and more suitable for their nourishment; the only trouble in planting in that month is owing to the fact that the trees require a little more care by shading for a week or so, to prevent the leaves from falling off before the roots have set. From experiments which Messrs. Rogers and McMurtry have made (whose experience, expensive in some cases, others may profit by), we learn the following in relation to the planting of lemon and orange trees, their care, yield, etc.:

Though they will grow upon any soil in this valley—undoubtedly the best in the foothills in one respect, on account of the climate being somewhat warmer than in the center of the valley—their home is in sandy soil, rather damp than otherwise, such as for instance the Willows section. In their planting, no barn manure should be used, as the heat of the same is rather a feverish than natural warmth, and will invariably kill the plants. Bone manure is good for them; even common bones broken up will aid materially the growth of the trees, if thrown in with the dirt in setting them out. The trees should never be planted deeper than they originally grew. Dig the pit deep enough so that with the orange trees the "tap-root" will go down straight. The roots of the lemon trees are more spreading, yet they also should never be set out deeper than the original plant. Lemons will grow best in a little wetter soil than the oranges require. Though Messrs. Rogers and McMurtry planted their first trees about 12 feet apart each way, they considered them too close for thrift, and subsequent plantings of other trees have demonstrated the truth of their theory, that on account of the properties of the soil which the trees require, they will grow best if planted, say 16 feet apart. The trees should not be transplanted at less

than four years of age. The larger the trees the better. They should be watered about once a week during the dry season. In winter they need no care whatsoever. As an evidence of the hardihood of these trees, Mr. Rogers states that owing to the past cold winter which they have had in Los Gatos—the coldest in years, the thermometer having gone as low as 28°—a heliotrope in his front yard had its leaves completely frozen off, while on his lemon trees blossoms partly out were not injured, small lemons safely passed the ordeal and ripe lemons upon the same trees did not suffer in the least. The greatest care in the culture of orange and lemon trees must be not to plant them in the neighborhood of the eucalyptus, the Lombardy poplar and other trees of like vigorous growth, for the latter will invariably thrive, while robbing the former of the properties of the soil required for even a tolerable existence.

The peculiar growth of these trees is such that scarcely a more picturesque appearance in shrubbery can be conceived than they afford. Being planted at the best period, which, as before said, is April, it will be two to three years before they begin bearing, though they retain their foliage throughout the season, and are thus especially desirable for shade trees, if nothing more. Three-fourths of the blossoms will come out upon the trees in April and May, though straggling blossoms will continue coming all through the summer months, and in fact during the year around. The fruit begins ripening the following November, continuing until March.

During every month of the past year Mr. Rogers has picked ripe lemons from off his trees. A singular feature of the experience of the two gentlemen to whom we refer, and which they cannot solve, is that while the lemon trees of Mr. Rogers have been bearing for two years (one small tree the past season having produced over 100 fine lemons), he has not, until the present spring, had even blossoms upon his orange trees, while Dr. McMurtry has had abundance of oranges and no lemons. The present season, both gentlemen will raise each kind if present indications are borne out.

As to the time intervening between the planting of the trees and their fruitage, it will depend somewhat upon the age of the trees when transplanted. Orange trees usually bear in seven to nine years from the planting of the seed, and lemon trees one and a half to two years sooner. Dr. McMurtry raised 20 oranges the past year upon one tree, the seed of which he planted nine years ago. When transplanted at, say four years of age, the lemon trees will begin bearing in two or three years. From inquiry we learn that a number of our people have started, or are contemplating starting, groves the coming spring; Capt. Cleaver, of Evergreen, being reported as intending to set out 1,500 trees. Mr. Rogers has also a grove of 800, one, two, and three years old, growing from the seed and doing finely. Both of the Los Gatos gentlemen have banana plants doing well, and expect to raise a few bunches the present year.

### Packing Oranges in Sand.

It seems that Florida orange growers are trying experiments with preserving oranges in sand so that they may market them later in the season when the highest prices prevail. The following is a report on these experiments made to the *Florida Agriculturist*:

On the 20th of last June I took one and a half dozen sweet oranges, cut fresh from the tree, with the stems intact, and carefully packed them in perfectly dry, clean sand in a box, put on the top, and set in a dry, cool place. One-third of them I wrapped in oiled paper, another third in plain paper, and the rest put bare in the sand, but each one separately so as not to touch the others.

To-day, just three months since they were put away, I unpacked them, and herewith I send you some specimens of each portion. You will notice they are perfectly sound, and the color much changed, and upon tasting them you will perceive the flavor is entirely unimpaired, as I found all I tried. All of the oranges were old ones, having been hanging ripe on the trees for six or seven months, and more liable to decay sooner than if just ripened. Some were rusty and a little shriveled, and others mottled. Taking cognizance of this item, and also the season in which they were put up, not only adds value to the experiment, but indeed renders it a more thorough test. It seems one portion has kept as well as another, but I deem it best to put them bare into the sand, that is without any wrapping.

Several times, and also during our hottest weather, when above 90 degrees Fahrenheit, I tested the sand with a thermometer and found the temperature always 81 degrees several inches below the surface. Now it appears somewhat singular that fruit, especially of such a perishable nature as the orange, will keep so long and so well in such a substance at such a temperature, yet such is the fact. But it may be accounted for, I presume, in this way: The dry sand absorbs the redundant moisture and juice of the rind, prevents the evaporation of its essential oil, and completely precludes the action of the atmospheric air; conditions necessary and conducive to the preservation of the fruit, and the prevention of decomposition. A week or two after the commencement of this experiment, I noticed in the July number of the *Semi-Tropical* that Mr. J. Robinson, at the sugges-

tion of Mr. S. Fairbanks, had tried the same method, and had put up two dozen oranges in sand on the 6th of December last, and on unpacking them on the 20th of June found them to be fresh and good. This is principally the reason why I now report (so soon) the result of my trial. I have, however, reserved a portion of the fruit, and intend to let them remain in the sand until they show indications of decadence. But these two experiments—though not novel or original it may be, only in regard to this kind of fruit—I consider already demonstrate that oranges can actually be preserved throughout a good portion, if not the entire year, in our hottest weather, as well as in the winter and spring months. All other fruits of the citrus genus may be kept likewise, and probably pineapples, bananas, guavas, etc., for a considerable period. This simple means for the perfect preservation of oranges for some length of time in the natural state, which has hitherto been such a desideratum, needs not to be extolled, or even expatiated on; its importance and advantages are too obvious and striking. When from 50% to 75% or more can be realized above the common prices of fruit by keeping to a certainty from three to five months, not many fruit growers, dealers or speculators will have to be very strenuously prevailed on to adopt this method.

AN OLD ORANGE TREE.—The Paris journals announce the death of a famous orange tree in its 455th year, known as the Grand Bourbon. In the year 1421, the Queen of Navarre gave her gardener the seed at Pampeluna; the tree was subsequently conveyed to Chantilly, remaining there until 1532, when Charles V confiscated this among other goods, and it was sent to Fontainebleau, whence in 1684 Louis XIV transferred it to Versailles, where it remained the largest, finest and most fertile member of the orangery.

## THE APIARY.

### San Diego Beekeepers' Meeting.

We find in the reports of the late meeting of the San Diego Beekeepers' Association, as printed in the local papers, so much that is descriptive of the condition of our honey industry and the methods of its progress and the obstacles yet to be overcome, that we devote much space this week to this department.

#### Markets for California Honey and Wax.

In the report of the President, E. W. Morse, we read as follows: One of the objects of the association being to extend our market for honey and beeswax, I have corresponded somewhat extensively to that end, and I am satisfied that the little strip of country (small indeed compared with the whole of the United States) situated in Southern California, though yielding the very finest honey in abundance, cannot overstock the markets of the world with these articles. I find that comb honey has been successfully and profitably shipped from New York to Scotland. We all know there is no difficulty in shipping strained honey, and if comb honey can be shipped the European market is certainly large enough to take all our surplus of both kinds. In correspondence with parties in Mexico and Central America, I was told that those countries produced enough honey for their own consumption, but imported considerable quantities of beeswax, and this singular fact is shown: that the merchants residing on the Pacific coast of those countries purchased beeswax in St. Louis, shipped it by rail to San Francisco, and then by steamer to destination, which shows the circuitous routes the currents of trade will sometimes take. My correspondents informed me that they paid in St. Louis 50 cents per pound. And yet perhaps the same identical pound of wax could have been purchased in San Diego for less than 30 cents, saving the cost of a 3,000-mile trip to St. Louis and back. These things, in time, will regulate themselves, and the advantage of an organization is, that we can greatly hasten the time to our own advantage.

#### The Business of the Association.

R. G. Balcom, Secretary of the Board of Directors of the association, made a report, from which we take the following facts concerning the business enterprise of the society: They obtained a good brick building as a warehouse, employed an experienced man as grader, made contracts for drayage, etc., had prepared printed certificates of grades to be affixed to cases of honey and made arrangements with the steamship company for careful transportation and other minor details. Under these arrangements they have during the past six months received, stored and graded as follows:

Cases of comb honey.....	1,433
Cases extracted.....	13
Barrels extracted.....	21

They have shipped as follows:

Cases of comb honey.....	1,058
Cases extracted.....	13
Barrels extracted.....	21

Total.....	1,092
Leaving in the warehouse at date of February 1st.....	375

The distribution was as follows: To Cincinnati, Ohio, 1 car-load; to St. Louis, Mo., 1 car-

load; to St. Paul, Minn., one-half car-load; to Boston, Mass., one-half car-load.

All the honey shipped has been received and acknowledged by those to whom it has been sent, but no returns have as yet been made of sales.

#### Conditions of the Honey Industry.

We find in the report of C. J. Fox, the special agent of the society, many interesting topics:

The honey business of Southern California, though of very recent origin, has grown to large proportions. San Diego county alone produced in 1876 about one and a quarter million of pounds, four-fifths of which was shipped in the comb and one-fifth strained or extracted. Our facilities for raising honey and increasing our stock of bees are the best in the world. Throughout our honey range, which extends back from the coast to the high mountains, a distance varying from 40 to 100 miles, ice and snow are unknown, while frost occurs so seldom as to be very little regarded. During eight or nine months of the year no rain falls, no hail or thunder storms interfere with the breeding or working of the bees, and there are not more than two or three months when they have any difficulty in providing for themselves. The season for the production of surplus honey lasts from four to six months, during which there is an almost constant succession of wild honey-producing plants or shrubs, and there is probably no other place in the world where honey is gathered so rapidly as it is here while the white sage is in bloom. Our apiarists do not need to plant clover or buckwheat or mignonette, for the white sage and other indigenous plants produce honey as white and of as fine flavor; they do not need to build houses and warm them or put their bees in cellars to protect them from the winter cold, for while our Eastern friends are contriving how to save their colonies through the long period of ice and snow, our bees are flying abroad providing for themselves. Under these circumstances it would seem that the business here should be more profitable and make a better return for capital and labor than anywhere else. But there are some drawbacks as there are in every business and it is for the purpose of meeting and overcoming the difficulties of position that our association was formed and that I am now addressing you. The problem of how to raise honey in large quantities has been solved, mainly by the indomitable energy, perseverance and skill of our townsman, Mr. Harbison, to whom we are indebted for the commencement and most of the methods at present in use among us. The first question in regard to any article of commerce is how to produce it, the second is how to transport it, and the third is how to dispose of it properly. As I said, the first is practically solved among us. Improvements can yet be made, no doubt; economy of labor and increased production may be attained, but we can already produce an amount much larger on the average than anywhere else that we know of.

#### Transportation.

The second question, that of transportation, has been only imperfectly solved and much yet remains to be done. Several difficulties stand in our way. One is careless handling and too many re-shippments; another, high rates of freight and irresponsibility of railroads and shipping agents. During a trip of three months East, the past season, and while acting as agent of our association, I made efforts to meet some of these difficulties. I found the owners of the steamship line from San Diego to San Francisco willing to do everything in their power. They issued orders to their employees to handle our comb honey with great care; to have it all carried by hand on and off the steamers, and to see that it was not thrown down or roughly treated. Since these orders were issued we have had but little to complain of in this respect, but a good deal of difficulty is encountered in the way the Central Pacific Railroad Company do their business. Though they understand thoroughly the very great damage certain to occur to a car-load of honey by its being transferred from one car to another *en route*, they will not guarantee its through shipment, as they do with fruit. They will not afford any warehouse room even for a night. The rates of freight are exorbitantly high, a car-load of wool, for instance, being transported to New York for about one-half the charge on a car-load of honey. These difficulties should be met in some way, either by a more favorable arrangement with the railroad company, or by procuring warehouse facilities near the railroad or the steamship company's wharf. Possibly, if our association does a larger business in forwarding honey, we may obtain some more consideration. The style of packing honey in the cars invented by Mr. Harbison and used by our agent is an excellent and safe one. We have a further difficulty to contend with in the unloading and transporting of our honey at its destination, and to guard against injury there.

#### Marketing.

The system adopted by our association of careful repacking, grading and marking with reliable certificates, meets with favor and appreciation among dealers, who will be able, as soon as our system is understood, to sell by sample, saving the time and injury to the honey, understood by every man who has every handled it, of opening every case for inspection by customers. We have to compete in prices with the product of the Eastern States, at the disadvantage of distance and cost of freight, but we ought to make up for this by our superior facilities for production, and if we get less per pound



net, produce more pounds per hive or man. A matter of the greatest importance to us is to put our produce directly in the hands of Eastern dealers, without paying intermediate profits. This is well understood by them, and several parties, among them a firm in Liverpool, England, have talked or corresponded with me for this purpose. Our best and only way to sell to good advantage is to send forward a good and reliable article, avoid unnecessary competition by consigning to a few dealers and open direct trade with places that have hitherto only received honey indirectly or not at all. I found, while East, that the Cuban honey, though of very poor quality, had in a great degree ruled the market, and that the great superiority of ours was only gradually becoming known; but wherever it has been used it is acknowledged to be superior to any other, except the white clover honey of the Eastern States, and that is not produced in very large quantity. Although our white comb honey is difficult to ship and must sell at high prices to realize any reasonable return to the producers, it will probably always be the favorite as a fancy article for table use.

#### Profit in the Extractor.

It is unquestionable that good extracted honey is the purest and best form in which it can be eaten, and that when the public can become convinced that extracted honey shipped from here is a pure article, it will be preferred to comb honey. Unfortunately a great deal of manufactured or adulterated honey has been put on the market in the Eastern States by unprincipled dealers, and the public has lost confidence in any not in the comb. We know that the honey we ship is perfectly pure, simply because it can be raised here at a less price than it could be manufactured for, and this assurance was believed by the Eastern dealers with whom I conversed. But they said it was difficult to convince the public of this fact. I believe it can be done, by our shipping only to a few dealers of unquestioned integrity, whose guarantee would be received by their customers, and once the reputation of the extracted honey shipped by the San Diego Beekeepers' Association is established, we will have no difficulty in disposing of it at prices as good as can be obtained by any one. If this can be attained, many advantages will be found in producing extracted instead of comb honey. First, it will diminish very much the cost of the packages in which it is shipped.

#### Shipment in Casks.

I have had some correspondence on the subject of furnishing casks of a superior quality, and the cost, to contain an equal amount of honey, will be less than one-half that of section boxes and cases. Second, it will save a large amount of freight. On each package of comb honey the tare is 14 lbs., as at present calculated, or, at three cents per pound freight, 42 cents per box of about 56 lbs. net of honey, or over four-fifths of a cent per pound dead loss. On a cask holding 20 gallons the tare is 20 lbs., at three cents per pound is 60 cents, or about one-fifth of a cent per pound on 280 lbs. net of honey; so that on each net ton of honey shipped in comb, we pay \$12 more freight than on a ton of extracted honey. Third, we should save a large amount now lost by breakage of comb, for all that has been shipped in casks has gone through in good order. Fourth, we should gain a great advantage in being able to ship or have our agents ship in small quantities and to all places. Few people realize the difficulty of sending less than a car-load of comb honey by any public conveyance, especially in the Eastern States. Neither express companies nor railroads nor steamboats can handle it without great loss by breakage, and it practically almost reduces consumers to those living in large cities, while on the contrary the extracted honey can be shipped in large or small quantities to any place, domestic or foreign. Then, again, comb honey, when once put on the table and cut, is difficult to keep fit to use again, while the extracted can be kept with the same ease and safety as any kind of syrup, and owing to its consistency, is a more economical article for daily use than any of the syrups in general use. These and other reasons make it better and more profitable to raise and ship extracted than comb honey, but we can do even better. It is the testimony of those who have tried it, that fully double the amount of honey can be made from the same number of bees by the use of the extractor. This, combined with the saving in the ways above mentioned, will enable us to put extracted honey on the market at a much less price than comb honey, and realize for ourselves as good a return for our labor. It is the experience of the world that cheapening the price of any article increases the demand, and if we can get our extracted honey before the public all over the world, on its merits as a good and pure article, at a price much lower than comb honey has hitherto sold, we shall have no difficulty in disposing of all we can raise.

#### Election of Officers.

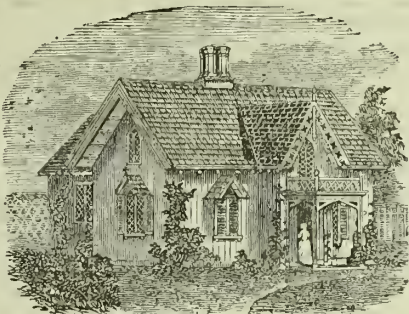
The Association elected the following Board of Directors for the present year: E. W. Morse, R. G. Balcom, J. G. Frazier, F. Ritzke, E. J. Rhodes, C. J. Fox, A. P. Herrick, L. Saunderson, R. Rea; and adjourned to meet at the next regular monthly meeting, the first Thursday in March, at the office of C. J. Fox.

The Directors then organized by electing for President Chas. J. Fox, for Vice-President E. W. Morse, and for Secretary and Treasurer R. G. Balcom.

#### Irrigation of the Rhone Valley.

The inhabitants of the Rhone valley have, of late years, been remarkable sufferers from a variety of causes—the devastations wrought by phylloxera, the disease which has attacked the silk worms, and the necessity of giving up the cultivation of madder, which is no longer able to compete with artificial alizarine. It is known that a project was started a little time ago for making an irrigation canal from the Rhone. M. Dumont was charged to make the necessary studies and observations, and his scheme, as now matured, has been brought before the French Academy by M. Lesseps. The canal would begin above Condrien, and terminate in the outskirts of Montpellier, 61 meters above the sea level. The total cost is put at 110,000,000 francs. An irrigation zone would thus be formed in five departments, Drome, Vancluse, Gard, Herault and Aube, with an irrigable surface capable of producing annually 450,000 tons of hay, and of supporting at least 100,000 head of large cattle more than at present. The canal could be easily applied in submersion of at least 80,000 hectares of vines on the plain, and thus afford an effective remedy against phylloxera. It would be complete in four years. M. Dumont considers that it need not be injurious to navigation, but that the present condition of the bed of the Rhone greatly needs improvement. It is desirable to obtain in the interior system of navigation a sufficient and uniform draft of water.—*Eng. Mechanic.*

#### CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

#### THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

#### The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

#### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.



#### WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

#### TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPAREIL TYPE, FORMERLY USED ON THIS PAPER FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,

224 Sansome Street, San Francisco.

#### LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

#### DAVIS & SUTTON,

75 Warren St., New York,

#### Commission Merchants in Cal'a Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

#### Wakelee's Bath for Sheep.

SUPERIOR EFFICIENCY IS CLAIMED FOR THIS BATH, IT BEING ALSO 50 PER CENT CHEAPER THAN ANY OTHER IN USE.

H. P. WAKELEE & CO.

Importing and Manufacturing Druggists,  
Cor. Montgomery & Bush Sts., S. F.

#### BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OVA RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

#### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

#### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

#### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahma, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

#### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

#### PUBLIC SALE

—OF—

#### SHORT HORN CATTLE,

TO BE SOLD

On Thursday, April 5th, 1877,

AT THE

Fair Grounds, near San Jose,

CALIFORNIA.

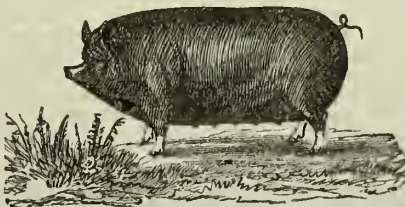
CIRCUMSTANCES RENDER IT NECESSARY FOR US

TO CLOSE UP OUR PARTNERSHIP AFFAIRS;  
WE SHALL THEREFORE SELL, AT PUBLIC  
SALE, THE ENTIRE AVENUE RANCH  
HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to breeders, and all parties wishing to purchase high bred Short Horns.

Full Sale Catalogues furnished on application.

CYRUS JONES & CO.



#### R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,

NAPA, CAL.

#### BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

#### INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

#### Practical

#### BOOKS

—AT—

#### BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

CIVIL ENGINEERS,

FARMERS,

MACHINISTS

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

#### Fraud! Fraud!!

#### COLLINS & CO'S CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

#### COLLINS & CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

#### MUSIC BOOKS

—FOR—

#### Schools, Academies & Seminaries.

THE HIGH SCHOOL CHOIR, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin"), is filled with genial, pleasing songs for Common Schools.

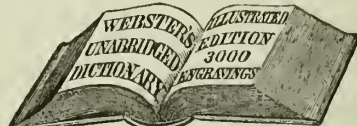
AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

#### OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.



3000 Engravings; 1840 Pages Quarto.  
FOUR PAGES COLORED PLATES.  
A WHOLE LIBRARY IN ITSELF.  
INVALUABLE IN A FAMILY.

The sale is 20 times as great as the sale of any other large Dictionary.  
More than 30,000 copies have been placed in the public schools of the United States.

Recommended by 23 State Superintendents of Schools, "Indispensable to every student of the English language."—M. J. Waite, Chief Justice United States.  
Published by G. & C. MERRIAM, Springfield, Mass.

#### The Patron's Almanac for 1877.

Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,

Mechanicsville, Bucks Co., Pa.

#### Rupture.

Metal Trusses, being rigid and unyielding, are often displaced from their position by the motions of the body, in consequence of which they ENLARGE rupture instead of healing it. Their pressure is often wrought upon parts of the body which are healthy, thereby causing lumbago and other diseases of a dangerous nature. Call on the MAGNETIC ELASTIC TRUSS CO., 69 Sacramento Street, S. F.



## Chicory in California.

We are well supplied with drinkables in this country. If one's temperance principles restrain him from our gold medal wines and brandies he still has the choice of milk, buckthorn or chicory. The chicory resources of the State are little known. There have been a good many experiments in growing the roots, but the low market price, coupled with the fact that few know how to prepare the product for the market, has restricted the production. The only chicory factories of which we know in this State are at Stockton and Sacramento. The Stockton *Independent* has done the commendable service of interviewing the proprietors of the factory near that city, and we take pleasure in producing the facts for the information of our readers: The successful cultivation of chicory depends on having the right kind of soil. It must be a rich, mellow loam, with sufficient clayey texture to make it firm and moist. It should be plowed in the fall to a depth of 12 or 15 inches, and pulverized and rolled with as much care as is usually given to a flower garden. The seed is very fine, like the carrot or lettuce, and is put in in drills about 15 inches apart. Great care must be taken to put it in the proper depth, a half inch of soil over the seed being sufficient. The seed is sown the last of February and through the month of March, if the ground is moist enough. The seed is imported from Germany, it being found impossible to raise it in California successfully, as the plants from California grown seed all run to tops and produce a small, tough, gummy root of no value. The seed, however, is not expensive, costing, delivered here, about 32 cents per pound, and only one and a half to one and three-quarter pounds are required per acre. The roots of the chicory grow about the size of the average carrot, sometimes attaining a weight of four pounds and upwards. The yield is from 10 to 18 tons per acre if sown at the right time, upon proper soil and with thorough cultivation, but if sown too early the plant grows woody and runs into stalks and stems. The harvest begins about the first of August and runs through the month of September. It is desirable to harvest them when the sun is hot, as the chicory is best when sun dried. The roots are thrown out of the ground with a sub-soil plow, Chinamen following after to cut off the tops and throw the roots in heaps. Sheep, cattle, horses and hogs are very fond of the tops of the chicory and eat them with avidity. As the foliage of the top is very heavy, making several tons to the acre, its value for feed is no inconsiderable amount, although not usually calculated upon at all.

The roots are hauled to the factory or mill, where they are chopped into blocks about an inch square and spread on a board platform in the sun. Here they are exposed four or five days, being turned over every day. At the end of that time they are put into a revolving iron roaster, where they are baked to a crisp of dark brown color. From the roaster they are passed into the grinding mill, after cooling off, and ground to about the fineness of ground coffee. In the process of drying and roasting the chicory loses a little more than two-thirds of its weight, so that ten pounds of roots will make about three pounds of marketable chicory.

The cultivation of chicory, when rightly understood, is very profitable. It costs but about \$5 a ton to raise the roots, including seed, cultivation, digging and hauling, while the prepared chicory is worth from \$125 to \$250 a ton in the market. The net profits per acre is as high as \$300 to \$500, according to the market price. At present the market for chicory is dull on account of an overstock of the foreign article.

It is said that the chicory grown in California is superior to that grown in Germany. In the latter country, about the cities of Magdeburg and Brannschweig, an immense area of country is devoted to chicory alone, millions of dollars being invested in the manufactures. Very little, if any chicory is raised in the United States, outside of California. One of the sources of profit in the manufacture of chicory is the use of the residue or pulp from beet sugar factories to mix with the roots in the roasting pan. A large percentage of this inexpensive article can be put in without deteriorating the general quality. A large amount of unmarketable dust from the grinding mill is also made available by sprinkling it with molasses and water, by a secret process only known by the manufacturers.

The chicory factory on the San Joaquin, a few miles southwest of Stockton, is owned by Messrs. W. H. C. Braudt, Manager; Martin Ott and Augustus and Charles Dangers. To Messrs. Martin Ott and August Bachman, both experienced in the culture of chicory in Germany, as well as in California, we are indebted for the information detailed above. When the tule lands are thoroughly reclaimed it is thought they will be most admirably adapted to the growth of the chicory.

The resident physician at the small-pox hospital reports to Mr. Gibbs, chairman of the hospital committee of the Board of Supervisors, that during the week ending last Saturday night 25 patients were received, four were discharged cured, and seven deaths occurred. The total number of patients under treatment was 67.

## Japan Persimmon.

There is nothing like an advertisement to awaken interest in a subject. For example, there is the Japan persimmon, which is now the most talked-of tree in the city. We are reminded that it has been grown for a number of years by Messrs. Shinn & Co., of Niles, Alameda county, and they announce in our advertising columns that the trees may be found at Silverster's seed store on Washington street. That Shinn & Co. are entitled to pioneer fame in the introduction of this tree for sale purposes, we find proof in our files for January, 1875, when the following item appeared:

The Japanese persimmon tree is beginning to attract the attention of our fruit-growers. Those who have seen the fruit in Japan pronounce it very fine, unlike anything grown in this country. General Capron, former Commissioner of Agriculture, and since for several years residing in Japan, states "that the persimmon is the best of all the native fruits of that country, and well worthy of introduction in California." The tree is described as finely shaped, having a rich, dark green foliage, and is an ornament anywhere. It produces fruit in Japan in from six to eight years from the seed. It would not be surprising if it came into bearing earlier with us. The experiments of Messrs. Shinn & Co., nurserymen, at Niles, Alameda county, show conclusively that our soil and climate is well suited to this foreigner. They have several thousand successfully grown, large enough for orchard planting. We gladly notice any effort on the part of our culturists to introduce valuable fruit and other trees. The successful introduction of one choice variety will repay for many failures.

**HEAVY PORK SUIT.**—The *Chronicle* notes that suit has been brought by Thomas Farley against the stockholders of Goodall, Nelson & Perkins Steamship Company to recover \$15,000 damages on material consigned to their care for transportation, and which was, he alleges, abused. The plaintiff says that on March 14th, 1876, he delivered on board the defendant's steamship *San Luis*, at San Pedro, 700 hogs alive and well, which he desired brought to San Francisco. By reason of delay and neglect, when he got the hogs they were woefully bruised and generally in ill health, and their number was reduced to 550. On January 30th, 1876, he again tried the company, and put on board the *Gipsy* 301 more healthy hogs at San Pedro, but when he got this lot finally to San Francisco 28 of them had disappeared, and the remainder of them were in need of medical treatment. On the 24th of February, 1876, he shipped on the *Kalorama*, another of the company's vessels, from Santa Monica, 370 hogs, 70 sacks of corn, two sacks of salt and a case of salted pork, but he only received 245 hogs, and even they were bruised and starved. The plaintiff agreed to pay one cent a pound for such transportation, but inasmuch as he believes the damage was caused by neglect and carelessness, and he was compelled to pay money for the resuscitation of the porkers, he prays for \$15,000 damages and legal interest.

**THE ISTHMIAN CANAL.**—The latest rumors concerning the isthmian canal are not favorable to its speedy construction. It has been reported that the government of Nicaragua has given a franchise to Harry Meiggs, the railway builder, and that he has gained it merely to cut off the enterprise from other hands and not to accomplish the work himself. Another report denying the foregoing, states that the government of Nicaragua is determined to make the canal a source of profit for all time and will levy such restrictive taxes upon it that no one will undertake the project. If Nicaragua adopts any such policy as that it will be standing directly in her own light so far as success and development are concerned. It is to be regretted that a little sunshine country on the isthmus should so conduct itself as to stand in the way of a work which will be of advantage to all the world. We are not lawyers, but we cannot see why some sort of an international congress could not condemn the route and then lay it open for public benefit. But the matter is not settled yet. We only give the prevailing rumors.

**NEW MUSIC.**—Among Ditson & Co.'s attractive issues of sheet music are: "Shall I Wear a White Rose?" a song so popular as to be published in two keys; a sweet little lay: "Little Birdie Mine," by Watson, and one of Piusotti's elegant Italian melodies with English words, entitled: "What we have Loved, we Love forever." Also a concert-polonaise of some difficulty, by Bohm, with the name: "With Chime and Song;" a gavotte: "Secret Love," good hearty music, by Resch, and a powerful "March aux Flambeaux," or "Torchlight Procession March," by F. S. Clark.

**LIVE STOCK PICTURES.**—While at Avenue ranch last week we found that Andrew P. Hill, the artist, whose work we have mentioned before in the PRESS, had been executing a fine herd picture for Hon. Cyrus Jones. The work is very satisfactory to Mr. Jones, and shows that the artist is developing his subtle power very rapidly. He has done several portraits which are lifelike, and is now at work upon two landscapes for Mrs. General Smith, of which the scenes are commanded from the piazza of her handsome home. He has also live stock work engaged for Hon. Jesse D. Carr and others.

## General News Items.

MR. WORTHOUGH, Pay Inspector in the Navy, is appointed Paymaster General.

A HEAVY storm has prevailed for several days at the mouth of the Columbia river.

THE damage by fire to the St. Louis bridge across the Mississippi will not exceed \$50,000.

A CORRESPONDENT at Pera telegraphs that peace with the Principalities is considered certain.

ALL the papers have specials from Montreal, giving details of the panics on the Stock Exchange there, occasioned by troubles in the Merchants' Bank.

A BOARDING house for women only is about to be opened in this city. It is intended especially for the accommodation of girls who are sent in from the country to attend school.

THE rinderpest has appeared at Hull, England. It cannot be traced to contact with infected cattle. The strongest measures are being taken to prevent an outbreak.

THE Health Officer is prosecuting people for misdemeanor who do not report small-pox cases. Several aggravated instances of concealment have transpired within a week.

FIVE car-loads of machinery from Cincinnati have been received in this city and will be sent to Melbourne by next steamer for exhibition at the international exhibition in Australia.

OUR export trade during the first 15 days of the current month amounted to \$1,932,700, of which \$1,781,400 was in wheat. For the corresponding period in 1876 the total was only \$1,037,500.

RUSSIA has 600,000 men, or two-fifths of her army, organized. About half are on the frontier, ready to begin operations. The Russian army south of the Caucasus, on the Asiatic frontier of Turkey, is in readiness for action. It numbers 115,000 men, with 35 field batteries and 250 heavy siege guns.

THE President and Mrs. Grant will be the guests after March 4th, till April, of Mr. and Mrs. Sartoris. They will remain in Washington till May, then go to Europe. Ulysses, Jr., goes to New York to practice law. Fred returns to Chicago. The President will give no more levees or dinners. The President will go West before sailing for Europe.

THE Board of State Prison Commissioners on Saturday accepted the boilers, engines and shafting in the new workshop of the prison. All the bills presented were ordered paid, leaving a balance of \$50,000 out of the \$200,000 originally appropriated by the Legislature. This money will be used in building additional cells in the prison.

JUDGE DWINELLE, of the Fifteenth District Court, filed an opinion on Monday adverse to the city in the suit brought against it by the Spring Valley Water Works. The suit relates to the payment of a contested bill of \$92,000, which Auditor Ashbury refused to audit. The council for the city and county will at once appeal the case to the Supreme Court.

THE Central Pacific Railroad Company has recently purchased the marsh land extending from the south line of Bay View homestead to the San Antonio estuary, on the other side of the bay. It is surmised that this purchase, which adjoins the railroad company's 60 acres of upland at Oakland Point, is intended to be the site of a portion of the railroad workshops and also a rolling mill.

**NEW YORK SEEDSMEN.**—At No. 35 Barclay street, N. Y., is one of the finest seed stores in the United States. The senior proprietor of the establishment was favorably known by us while he resided in Springfield, Mass., more than 20 years ago. Since then he has built up a very large business in the metropolis, and we are glad to say with great credit to himself. One of the most complete displays of agricultural products at the Centennial was that of choice seed potatoes, by this firm. We were surprised at the great variety and universally fine samples exhibited. No kind of farm product is more benefited by change of seed than the potato, and we should like to see our producers pay more attention to improving their crops by introducing really choice varieties from such firms as Messrs. Bliss & Sons. When visiting New York, our agriculturists would find a visit to this establishment time well spent. Their annual illustrated circular is one of the best issued in the land.

**CLEANING SILK.**—The following mode of cleaning silk garments, says the *Manufacturers' Review*, has been successfully tested. The garment must first be ripped and dusted. Have a large flat board; over it spread an old sheet. Take half a cup of ox gall, half a cup ammonia and half a pint tepid soft water. Sponge the silk with this on both sides, especially the soiled spots. Having finished sponging, roll it round on a stick like a broom handle, being careful not to have any wrinkles. Silk thus washed and thoroughly dried, needs no ironing and has a luster like new silk. Not only silk, but merino, barege or any woolen goods may be thus treated with the best results.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING FEBRUARY 13TH, 1877.  
EARTH AUGERS.—George Watson, Oakland, Cal.  
SHEEP SHIRERS.—William George, Modesto, Cal.  
HARVESTERS.—Edward D. Stewart, Wheatland, Cal.  
FRUIT DRIERS.—Russell B. Blowers, Woodland, Cal.  
UNDERGARMENTS.—Coelia C. Curtis, S. F.  
SHACKLES.—Henry William Dill, Portland, Ogn.  
COMPENSATING CRANKS.—Robert D. Milne, Santa Barbara, Cal.  
MITER MACHINES.—John P. Tierney, Sacramento, Cal.

TRADE-MARKS.

BORAX.—Smith Brothers, S. F. and New York, N. Y.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

**EGG HATCHER.**—Walter Masterton, Stockton. Before incubation begins, and during several days after it has begun, the germ of the future bird lies on the top of the egg; for this reason the inventor applies the heat to the top of the eggs and maintains a lower temperature at the bottom of them. Air is necessary to incubation and passes freely through the pores in the shell of the egg during the process, and therefore a current of air is caused to circulate among them continually. A current of hot air in passing through the eggs and out into the atmosphere continually, will either destroy the vitality by excessive evaporation, or else impair it to such a degree that the birds will be feeble and few of them will live till maturity. To prevent this the inventor moistens the air with vapor of water before it mingles with the eggs. Notwithstanding the moist air constantly about the eggs, evaporation actually takes place and tends to stick the soft parts of the eggs to the shells. To prevent this and for the further purpose of bringing the germ into contact with as large a portion of the egg as possible during the early part of incubation, the eggs are turned over once a day. The patented arrangement of the several parts of the apparatus are intended to accomplish these general purposes.

**REFRIGERATOR.**—John W. Stewart, S. F. This patent covers certain improvements in the construction and arrangement of such structures as are used for storing and preserving by refrigeration such perishable articles as fruits, vegetables, meats, etc. The improvement consists in the construction of an air chamber with a main refrigerating chamber and one or more surrounding chambers or passages in such a manner that an automatic circulation of cold air will be maintained through the chambers and passages, the temperature of which will vary according to the distance the passage is situated from the main refrigerating chamber. By the peculiarities patented of a concentric arrangement of air passages by which is produced a continuous current of air and a consequent variety of temperature, fruits, etc., can be accommodated to the most natural temperature. In this single structure the inventor combines the elements of a refrigerating process adapted to all varieties and kinds of perishable articles.

A MOST effective remedy for the PHYLOXERA is a weak solution of carbolic acid, one gallon of the strength of Calvert's Sheepwash, with about 450 gallons of water sprinkled over the stem and roots of the vine. The same wash is useful for preserving WET HIDES, even after it has served for SHEEP DIPPINGS. For the latter purpose its advantages over tobacco and other remedies are now beyond question. A sheep farmer in Ireland, Captain Laprimandays, of Newport, Mayo, writes on the 26th December last: "I find my savings in a flock of 2,000 to be about £30 (\$150) a year, merely for dressing (not to speak of dippings), as against tobacco juice and spirits of tar." Those who have used it most in California speak equally highly of its merits, finding it not only the cheapest, but decidedly the most efficacious remedy they have tried. As a disinfectant for stables, etc., it is as useful as the more expensive preparations of carbolic.

SANTA CLARA, CAL., April 6th, 1875.  
MESSRS. DEWEY & CO.—Gents:—We have just received Patent No. 160,535, for J. T. Watkins & Co.'s Mammoth Road Grader, which was patented through your Agency. It is the nearest and best that we have ever received. We feel proud of it and thankful to you for the care and attention that you have given it, and when we have anything to do in that line of business, we will surely give you a call. Very respectfully, J. T. WATKINS & CO.

THROUGH the length and breadth of the land the celebrated SILVER TIPPED Boots and Shoes are sold by the million, for parents know they last twice as long as those without tips.

Also try Wire Quilted Socks



S. F. MARKET REPORT.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Feb. 21, 1877.

The week has brought a revival of trade in some lines, while in others there has been a downward tendency. The chief interest has been awakened by the advance in the English Wheat market, and the result is a return of local prices to the marks of two and three weeks ago. It seems all the clearer at this date that the points we made last week concerning the future of the Wheat market were well grounded. The Wheat shipped from this port in the present month will exceed the quantity sent away in January. Quite a reaction has taken place recently in the local market and considerable quantities have changed hands at improved rates.

Directly after our issue of last week the reaction began in the cable rate, and that it has continued during the week may be seen from the following:

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	10s	5d@10s	7d	10s	8d@11s	—
Friday.....	10s	7d@10s	9d	10s	8d@11s	2d
Saturday.....	10s	7d@10s	9d	10s	9d@11s	2d
Monday.....	10s	8d@10s	9d	10s	11d@11s	3d
Tuesday.....	10s	9d@10s	11d	10s	11d@11s	4d
Wednesday.....	10s	9d@10s	11d	10s	11d@11s	4d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875.....	8s	11d@9s	3d	9s	3d@9s	10d
1876.....	9s	11d@10s	2d	10s	3d@10s	10d
1877.....	10s	9d@10s	11d	10s	11d@11s	4d

The Foreign Review.

LONDON, February 19th.—The Mark Lane Express, in its weekly review of the Corn trade, says: Advice from the rural districts continue fairly favorable as to the condition of winter-sown Wheat, which is looking well on most lands and where it has not suffered injury from the recent frosts. In the southern countries Beans are also said to be unusually forward for this time of year, and vegetation generally is rapidly advancing. Very little alteration is noted either in the quantity of English Wheat marketed or the condition of samples, which, owing to the Grain never having become thoroughly dry in store, have been damp and inferior in condition. Consequently a further decline of 1s per quarter has occurred, but farmers, as a rule, have not pressed sales. In some country markets it has been difficult to buy at the decline. The week's import of foreign Wheat into London has been moderate. Until the close of the week trade was extremely quiet, sales being effected with difficulty, although prices were not notably lower. On Friday, however, a decided reaction set in. A steady demand was experienced from millers at improving prices, especially for red varieties, which received most attention, owing to the scarcity of fine milling samples, and this class of Wheat occasionally realized a slight advance. Politics have produced no apparent effect on trade, and the return to firmness, connected with the improvement in the demand, seems to result from the continued short imports, with an advance in American prices, and the extremely short shipments recently advised from Atlantic ports. The inquiry for feeding stuffs has been very light throughout the week, and grinding Barley, Oats and Maize have given way 6d per quarter, with moderate arrivals at ports of call. Floating cargoes of Wheat have met with a steadily increasing demand, at an improvement of 1s to 2s per quarter, chiefly upon red sorts. Maize has also ruled a shade steeper.

Freights and Charters.

There has been a fair demand for tonnage during the past week, says the Commercial News. In Wheat charters rates have been firmly held. Our local Wheat market preserved a tone of strength during the period under review, as if anticipating further advances abroad. Quotations are nominally as follows: Wooden ships to Cork for oranges, £2 7s 6d; iron do held at an advance on these prices. We have at this writing 24,700 tons of tonnage in port engaged for Wheat, and 8,292 tons for miscellaneous purposes. The list of disengaged tonnage foots up 20,583 tons. Following are the engagements of the week: for Wheat, ship Charger, 1,442; Wheat to Cork, U. K., £2 5s; Continent, £2 10s; ship Charles H. Marshall, 1,683; Wheat to Cork, U. K., £2 3s 6d; Continent, £2 8s 6d; ship Importer, 1,276; Wheat to Cork, U. K., £2 5s; Br ship Compadre, 800; Wheat to Cork, U. K., £2 7s 6d; Continent, £2 12s 6d; Br ship City of Calcutta, 984; Wheat to Cork, U. K., £2 7s 6d; Continent, £2 12s 6d; Br ship Thomas Bell, 838; Wheat to Cork, U. K., £2 7s 6d; Continent, £2 12s 6d; Br bk Norman Macleod, 854; Wheat to Cork, U. K., £2 6d; Continent, £2 11s.

New York Grain Market.

NEW YORK, Feb. 18th.—The dead-lock in the Wheat market continues, and the export trade remains at a stand. The more warlike cables the past few days led to two or three venturesome purchases for England, but unless there shall be a sudden upward turn on the other side, shippers will be considerably out of pocket. Chicago is still confident, and the moment a disposition is shown to realize here the agents are instructed to buy. Several loads of Spring have thus been picked up during the week at \$1.45@1.49 for No. 2 Chicago and Milwaukee. Millers have bought only sufficient to cover their contracts for Flour for tropical markets. New Corn has advanced about one cent during the week, prime shipping selling at 48c to 50c. Barley continues depressed, with one cargo of feeding sold for Germany at 49c@49½c. Malt barley has sold from 65c to \$1.06 for ordinary to prime. Flour has ruled firm but quiet at \$5.90@5.75 for shipping.

Chicago Grain Market.

CHICAGO, February 18th.—The Breadstuffs markets have been rather monotonous during the week, and prices generally pretty well sustained. A general freight agent, who has been making a tour of the Northwest, says there is a vast amount of Grain in that section which will be sent forward in the spring when navigation opens and better prices are expected to prevail. At present there is not much confidence on Chicago that any great amount of Wheat can be found for spring shipments. Wheat during the week has sold from \$1.20 to \$1.32, closing at \$1.31½. Corn sold at \$1.41@1.42; closed at 42½. Oats, 34½@36½; closed, 34½. Receipts for the week have been—Wheat, 62,000 bushels; Corn, 294,000; Oats, 112,000. Shipments—Wheat, 72,000; Corn, 234,000; Oats, 81,000. Same period last year, receipts were—Wheat, 251,000 bushels; Corn, 418,000; Oats, 109,000. Shipments were—Wheat, 114,000; Corn, 325,000; Oats, 105,000. There has been more interest in Provisions than in Produce, and a tumble in values has occurred which has caused several minor failures and much excitement. Prices close at nearly insulo figures for the week; Pork at \$15.20 to \$15.25; lard \$10.40.

Eastern Wool Markets.

NEW YORK, February 18th.—During the first three days of the period under review there was an exceedingly limited inquiry for Wool, but toward the close manufacturers entered the market in considerable numbers, and their purchases were on a scale quite large compared with re-

cent transactions. The attention of buyers has been attracted principally to the finer grades, the quality of present manufactures calling for these descriptions. Inferior grades are occasionally sought after, but as a rule short fall Wools are avoided, and with a large supply in stock there is some anxiety to dispose of them, and lower prices are generally accepted. The sales for the week are: 5,000 lbs Mexican at 17½c; 80,000 lbs fall California, 14@23c; 107,000 lbs slightly burry sprung do, 20@24½c; 50,000 lbs Oregon and lambs, 23½@27½c; 60,000 lbs Western Texas, 16@23c; 60 bags super pulled, 35@37½c; 30,000 lbs selected Ohio, 49c; 20,000 lbs XX do, 47c; 20,000 lbs old do, 43c; 5,000 lbs fine combed and delaine do, 48c; 1,200 lbs washed State do, 54c; 30,000 lbs unwashed Ohio do, 32c; 1,000 lbs Indiana, 31c; and 31 bales Buenos Ayres, 75,000 lbs spring California, 10,000 lbs fall do, 60,000 lbs Western Texas, 2,000 lbs scoured do, 13,000 lbs Eastern do, 25 bags super pulled, 6 do combed do, 7 do X do, 330,000 lbs Ohio and Western fleeces, and 15,000 lbs State on terms reserved.

BOSTON, Feb. 21st.—Wool is in steady demand; desirable lots of Fleeces held firm, and purchases can only be made at full rates; sales, Ohio and Pennsylvania, at 43c@50c; Michigan, Wisconsin X, and New Hampshire, 38c@40c; Combing and Delaine, 45c@54c; Super and X pulled in fair demand at 40c@47c; California unchanged; prices ranged from 15 to 20c.

Domestic Produce.

The following table shows the S. F. Receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Jan. 31.	WEEK. Feb. 7.	WEEK. Feb. 14.	WEEK. Feb. 21.
Flour, quarter sacks..	23,226	55,377	84,135	15,772
Wheat, centals.....	159,151	133,553	356,523	87,537
Barley, centals.....	11,136	4,873	8,101	8,537
Beans, sacks.....	1,391	919	656	1,405
Corn, centals.....	2,027	2,586	4,249	1,024
Oats, centals.....	1,852	5,854	3,804	3,368
Potatoes, sacks.....	12,934	9,567	19,144	11,081
Onions, sacks.....	1,064	1,586	1,736	480
Wool, bales.....	63	36	86	148
Hops, bales.....	2	87	144	—
Hay, bales.....	826	920	931	760

Bags—There is reported rather more activity in the Bag market. The price for Standard Wheat Bags is still 9c wholesale, jobbing at 9½c. Wool Bags are now in good request and prices are ruling at 50c@55c, according to weight. The supply of Wool Bags comes from home manufacturers and there is at present no appearance of a scarcity.

Barley—Barley sales have been within range noted last week. We note sales as follows: 900 sks Coast Feed, in two lots, \$1.20@1.25 per ctl, silver; 12,500 sks Coast Feed, in lots at \$1.25, silver; 200 sks Coast Feed, \$1.25, silver; 200 sks Coast Feed, \$1.25, silver; 500 do poor do, \$1.20, silver; 650 sks Coast Feed, \$1.25 per ctl; 500 sks do do, \$1.20 per ctl, payable in silver.

Beans—A slight improvement is noted in Pea-Beans. Other kinds are unchanged.

Buckwheat—Unchanged, at \$1.80 per ctl, silver.

Corn—The corner in Corn seems fully made, and the price has advanced to \$1.45 per ctl for the best large sorts. Receipts are exceedingly small. We note sales: 150 sks Large Yellow, from warehouse, \$1.37½ per ctl, gold; 100 sks Small Round, \$1.47½; 200 do choice large, \$1.40; 700 do good, \$1.35; 100 sks Small Yellow, \$1.45, silver; 500 sks fair Large Yellow, \$1.35; 800 do good do, \$1.37½; 100 do small do, \$1.47½; 125 sks choice large Yellow, \$1.40; 100 do do, \$1.45; 200 sks Large Yellow, \$1.40 per ctl; 800 do do, in three lots, \$1.37½ per ctl; 700 do do, \$1.35 per ctl; and 100 do Small Round, \$1.47½ per ctl, all sales payable in gold.

Dairy Produce—The Butter Market is reported flat and prices somewhat unsettled, quotable a little lower than last week. There is no change in the outlook, except that some of the producing counties are expressing fears of a short season because of the light rainfall. Cheese is unchanged.

Eggs—Eggs are a shade lower.

Feed—Ground Feeds have turned upward this week. Bran is now quoted by millers at \$18 per ton; Middlings at \$30 and Corn Meal at \$32.50. These are all higher than a week ago. Hay rises a trifle in sympathy and \$16 is now outlaid for the best Wheat. We note sales of Hay as follows: 40 tons fair Wheat at \$15 per ton and 20 tons stock Hay, \$11.50; 24 tons good Cow, \$11.50; 54 do good Wheat and Oat, \$14.50.

Fruit—State Limes and Oranges have been received in large quantities and are cheaper. Pears are scarce. Prices may be found in our Fruit table.

Hops—The market is without trade, and it is thought sales could only be forced at rates much below our quotations, but we retain rates at which transactions were last reported. Emmet Wells reviews the New York market for the week ending February 10th, as follows:

The dullness and depression which has so long characterized the market has finally culminated into a decline of from two to five cents per pound. Ten to 20 cents now being the ruling price for the last growth, excepting Californians and Oregon, of which there have been no sales this week, and on which our quotations for the present are nominal. A decline in the price in London, reported by cable, is probably the direct cause for a break in values here, though it was hardly expected that our choice Hops would suffer so sudden and serious a decline on account of their scarcity. Quotations—New Yorks, good to choice, 10 to 20c; New Yorks, low to fair, 10 to 13c; Eastern, 13 to 15c; Wisconsin, 10 to 15c; Yearlings, 8 to 12c; Olds, all growths, 4 to 6c; Californians (nominal), 23 to 25c; Oregon (nominal), 23 to 25c.

Oats—Oats are unchanged from last week. We note transactions as follows: 100 sks choice Feed at \$2.15 per ctl, gold, and 200 sks common do, at \$2 per ctl, silver; 250 sks good Feed, \$2.15, half silver; 200 sks ordinary Feed, \$2, silver; 100 do good, \$2.15, gold; 300 sks Humboldt Feed, \$2 per ctl, silver.

Onions—Receipts for the week have been very light and prices have been maintained.

Potatoes—The course of the Potato during the week has been hard. Our quotations show a wide range in price. Sales have been chiefly made at about 45c@50c per ctl. It has required something very excellent to get top prices. The trouble has come from an over-supply. The features of this condition the Call notes as follows:

The condition of demoralization now existing in the Potato market was probably never before equaled. There is a complete glut in the poorer qualities, and sales in many instances do not realize enough to pay for the sacks and freight. Large quantities are sold at 25c@30c, while the choicest cannot be placed above 75c in round lots from first hands. Receipts have not been excessive since the 1st of January, the arrivals not having exceeded the usual requirements of the market. Some other cause must, therefore, be sought for the present glut. A statement of the monthly arrivals for a few months past will throw some light upon the subject. The arrivals since September have been as follows:

	Common Sks.	Sweet Sks.
September.....	68,269	12,650
October.....	66,848	12,414
November.....	113,507	9,737
December.....	89,167	6,941
January.....	59,410	2,880
February, to date.....	37,457	1,168

The ordinary requirements of the market are about 60,000 sacks per month, and when the receipts exceed this quantity, prices decline, and when the supply falls below it, prices generally advance. It will be seen that the receipts were heavy during September and October, and excessive in November and December. The market became overstocked by the unprecedented arrivals during the last two months of the year, and with a supply about equal to the consumption since the 1st of January, it has failed to recover.

Provisions—Fresh Beef is more plenty and has sold lower. Mutton is still so abundant that low rates cannot be raised. Dressed Pork is also a little cheaper, while live Hogs to-day are steady and unchanged because of light arrivals on foot. The market for Cured Meats is quiet and unchanged, excepting for Hams. Eastern Hams have been received in large amount of late and prices are easier. California Hams are looking up a little at which we rejoice.

Poultry and Game—Prices for Poultry are lower all around than last week. Turkeys are especially abundant just at this time. Hare and Rabbits are cheaper.

Rye—Rye is now quoted at \$1.50@2.

Seeds—There is no change in prices. The local supply of Rye Grass is reported exhausted.

Vegetables—Asparagus is now quotable at 12½@18c.

Peas, Mushrooms and Rhubarb are also slightly lower.

Wheat—Sales have been made during the week as follows: 18,000 sks Choice, in warehouse at Valjejo, \$2.11½; 11,000 do choice Colusa, \$2.10; 250 do Sonora, \$2.05; 500 do fair Milling, \$2.05; 800 do do, \$2; 1,600 sks choice Milling, in two lots, \$2.15; 2,000 do do, \$2.10; 250 sks fair Milling, \$1.95; 3,680 do fair Shipping, in lots, \$2; 200 do good Milling, \$2.05; 24,000 do good Shipping, at Stockton, equivalent to \$2.05 here; 100 tons choice Milling at \$2.05 per ctl.

Wool—Rates are still nominal. There are lots of Wool still held above the market. Trade is expected to open out next month, as Eastern buyers will be here by that time. We note sales of 46,000 lbs fall at 12½@17c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., February 21, 1877.

<b>BEANS.</b> Bayo, ctl..... 2 50 @ 2 75 Butter..... 1 50 @ 2 00 Pea..... 2 12 @ 2 25 Red..... 2 75 @ 3 00 Pink..... 2 75 @ 3 00 Smt White..... 2 00 @ 2 25 Lima..... 2 75 @ 3 00 <b>BROOM CORN.</b> Common, lb..... 2 00 @ 2 25 Choice..... 2 75 @ 3 00 <b>CHEESE.</b> California..... 4 00 @ 4 25 German..... 6 25 @ 6 50 <b>COTTON.</b> Cotton, lb..... 15 15 @ 15 25 <b>DAIRY PRODUCE, ETC.</b> Butter..... 22 00 @ 22 25 Cal. Fresh Roll, lb..... 22 00 @ 22 25 Point Reyes..... 22 00 @ 22 25 Pickled Roll..... 22 00 @ 22 25 Firkle..... 22 00 @ 22 25 Western Reserve..... 16 25 @ 16 50 New York..... 25 00 @ 25 25 <b>CHEESE.</b> Cheese, Cal., lb..... 12 00 @ 12 25 Old..... 12 00 @ 12 25 Eastern..... 12 00 @ 12 25 N. Y. State..... 15 00 @ 15 25 <b>EGGS.</b> Cal. fresh, doz..... 27 00 @ 27 25 Ducks..... 25 00 @ 25 25 Oregon..... 25 00 @ 25 25 Eastern..... 25 00 @ 25 25 <b>FEED.</b> Bran, ton..... 18 00 @ 18 25 Corn Meal..... 32 50 @ 33 00 Hay..... 10 00 @ 10 25 Middlings..... 30 00 @ 30 25 Oil Cake Meal..... 32 50 @ 33 00 Straw, bal..... 75 00 @ 75 25 <b>FLOUR.</b> Extra, bal..... 6 50 @ 6 75 Superfine..... 4 75 @ 5 00 Graham..... 5 50 @ 5 75 <b>FRESH MEAT.</b> Beef, 1st quality, lb..... 6 00 @ 6 25 Second..... 5 00 @ 5 25 Mutton..... 3 00 @ 3 25 Spring Lamb..... 10 00 @ 10 25 Pork, undressed..... 6 00 @ 6 25 Dressed..... 8 00 @ 8 25 Veal..... 5 00 @ 5 25 Milk Calves..... 7 00 @ 7 25 <b>GRAIN, ETC.</b> Barley, feed, ctl..... 1 20 @ 1 25 Brewing..... 1 25 @ 1 30 Chevalier..... 1 25 @ 1 30 Buckwheat..... 1 80 @ 1 85 Corn, White..... 1 30 @ 1 35 Yellow..... 1 30 @ 1 35 Oats..... 2 00 @ 2 05 Milling..... 2 30 @ 2 35 Rye..... 1 85 @ 1 90 Wheat, shipping..... 2 05 @ 2 10 Milling..... 2 10 @ 2 15 <b>HIDES.</b> Hides dry..... 17 00 @ 17 25 Wet salted..... 18 00 @ 18 25 <b>HONEY, ETC.</b> Beeswax, lb..... 25 00 @ 25 25 Honey in comb..... 10 00 @ 10 25 Strained..... 6 00 @ 6 25 <b>HOPS.</b> New Crop..... 16 00 @ 16 25 Cal. Walnuts..... 8 00 @ 8 25	<b>ALMONDS, hd shd lb</b> Soft shd..... 15 00 @ 15 25 Brazil..... 14 00 @ 14 25 Pecans..... 17 00 @ 17 25 Peanuts..... 4 00 @ 4 25 Filberts..... 15 00 @ 15 25 <b>ONIONS.</b> Union City, ctl..... 75 00 @ 75 25 Stockton..... 75 00 @ 75 25 <b>POTATOES.</b> Petaluma, ctl..... 40 00 @ 40 25 Salt Lake..... 1 50 @ 1 55 Humboldt..... 30 00 @ 30 25 Cuffey Cove..... 75 00 @ 75 25 Early Rose, new..... 1 00 @ 1 05 Sweet..... 1 00 @ 1 05 <b>POULTRY &amp; GAME.</b> Hens, doz..... 6 50 @ 6 75 Roosters..... 6 00 @ 6 25 Broilers..... 4 50 @ 4 75 Ducks, tame..... 8 00 @ 8 25 Geese, pair..... 2 00 @ 2 25 Wild Gray..... 2 00 @ 2 25 Turkey, live, lb..... 15 00 @ 15 25 Dressed..... 15 00 @ 15 25 Quail, doz..... 1 00 @ 1 05 Snipe, Eng..... 2 00 @ 2 25 Rabbits..... 1 00 @ 1 05 Hare..... 1 50 @ 1 55 <b>PROVISIONS.</b> Cal. Bacon, Lt, lb..... 13 00 @ 13 25 Medium..... 13 00 @ 13 25 Heavy..... 13 00 @ 13 25 Lard..... 13 00 @ 13 25 Cal. Smoked Beef..... 10 00 @ 10 25 Eastern Shoulders..... 13 00 @ 13 25 Hams, Cal..... 13 00 @ 13 25 Lard, Dupes..... 16 00 @ 16 25 Davis Bros..... 16 00 @ 16 25 <b>SEEDS.</b> Alfalfa, Chile, lb..... 8 00 @ 8 25 California..... 16 00 @ 16 25 Canary..... 10 00 @ 10 25 Clover, Red..... 22 00 @ 22 25 White..... 22 00 @ 22 25 Cotton..... 6 00 @ 6 25 Flaxseed..... 21 00 @ 21 25 Hemp..... 5 00 @ 5 25 Italian Rye Grass..... 10 00 @ 10 25 Perennial..... 10 00 @ 10 25 Millet..... 10 00 @ 10 25 Mustard, White..... 35 00 @ 35 25 Brown..... 35 00 @ 35 25 Rape..... 3 00 @ 3 25 Ky. Blue Grass..... 30 00 @ 30 25 2d quality..... 29 00 @ 29 25 Sweet V. Grass..... 75 00 @ 75 25 Orchard..... 30 00 @ 30 25 Red Top..... 8 00 @ 8 25 Lugarian..... 50 00 @ 50 25 Lavender..... 20 00 @ 20 25 Mezquite..... 10 00 @ 10 25 Timothy..... 10 00 @ 10 25 <b>TALLOW.</b> Crude, lb..... 6 00 @ 6 25 Refined..... 8 00 @ 8 25 <b>WOOL, ETC.</b> Free..... 12 00 @ 12 25 Choice..... 14 00 @ 14 25 Northern..... 17 00 @ 17 25 Burry..... 20 00 @ 20 25 Oregon, Eastern..... 20 00 @ 20 25 Valley..... 25 00 @ 25 25 <b>LUMBER.</b> WEDNESDAY M., February 21, 1877.
---	---

SEEDS.			
Extra, bbl.....	5 00 @ 56 87 1	Alfalfa, Chile, lb.....	8 @ 13
Superfine.....	4 75 @ 55 0	California.....	16 @ 19
Grubam.....	5 50 @ 66 0	Canary.....	22 @ 25
FRESH MEAT.			
Beef, 1st quality, lb.....	6 @ 61	Clower, Blue.....	22 @ 25
Second.....	5 @ 51	White.....	50 @ 55
Third.....	3 @ 4	Cotton.....	6 @ 10
Mutton.....	3 @ 4	Flaxseed.....	7 @ 8
Spring Lamb.....	10 @	Hemp.....	5 @
Pork, undressed.....	6 1/2 @ 7	Italian Rye Grass.....	— @ —
Dressed.....	8 1/2 @ 9	Perennial.....	— @ —
Veal.....	5 1/2 @ 6	Millet.....	10 @ 12
Milk Calves.....	5 @ 8	White.....	10 @ 12
GRASS, ETC.			
Barley, feed, ctf., 100.....	20 @ 21 25	Brown.....	3 1/2 @ 4
Brewing.....	1 25 @ 1 27 1/2	Rape.....	3 @ 4
Chevalier.....	1 25 @ 1 40	Ky. Blue Grass.....	30 @
Bookwheat.....	1 80 @ —	2d quality.....	29 @ —
Corn, White.....	1 30 @ 1 45	Sweet V Grass.....	75 @
Yellow.....	1 30 @ 1 45	Orchard.....	30 @ 35
Oats.....	2 00 @ 2 20	Red Top.....	25 @
Milling.....	2 00 @ 2 20	Bungarian.....	8 @ 12
Wheat.....	85 @ 90	Lawn.....	50 @
Wheat, shipping.....	2 05 @ 10	Mezquite.....	20 @ 25
Milling.....	2 10 @ 15	Timothy.....	10 @ 10
HIDES.			
Hides, dry.....	17 1/2 @	Crude, lb.....	6 @ 6
Wet salted.....	8 1/2 @ 9 1/2	Refined.....	8 @ 8
HONEY, ETC.			
Beeswax, lb.....	9 @ 9 1/2	WOOL, ETC.	
Honey, comb.....	10 @ 15	FALL.	
Strained.....	6 @ 8	Free.....	12 @ 14
HOPS.			
New Crop.....	16 @ 20	Choice.....	14 @ 16
NITS-Jobbing.			
Cal. Walnuts.....	8 @ 10	Northern.....	17 @ 21
		Burry.....	10 @ 16
		Oregon, Eastern.....	20 @ —
		Valley.....	25 @ —

GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., February 21, 1877.

<b>BAGS—Jobbing.</b> Eng Standard Wheat, 9 @ 9½ Neville & Co's..... 9 @ 9½ Hand Sewed, 22x36..... 9 @ 9½ 24x36..... 9 @ 9½ 24x40..... 10 @ 10½ Machine Sew, 22x36..... 9 @ 9½ Flour Sacks, halves..... 9 @ 9½ Quarters..... 6 @ 7 Eighths..... 4½ @ 5 Hessian, 60 inch..... 11 @ 12 45 inch..... 8 @ 9 40 inch..... 7½ @ 8 Wool Sacks, 3½ lb..... 50 @ 55 4 lb..... 55 @ 60 Standard Gunnies..... 11½ @ 12 Bean Bags..... 7 @ 8 <b>CANDLES.</b> Grant's..... 16 @ 16½ Mitchell's..... 18 @ 20 Assorted Pie Fruits..... 25 @ 30 2½ lb cans..... 2 75 @ 3 00 Table do..... 3 75 @ 4 25 Jams and Jellies..... 4 25 @ 5 Pickles, hf gal..... 3 50 @ 4 Sardines, c box..... 1 65 @ 1 90 Hf Boxes..... 3 00 @ 3 50 <b>FISH.</b> Australian, ton..... 5 25 @ 5 50 Coos Bay..... 8 00 @ 9 00 Bellingham Bay..... 8 00 @ 9 00 Seattle..... 9 00 @ 9 00 Cumberland..... 14 00 @ 17 00 Mt Diablo..... 5 75 @ 7 75 Lehigh..... 20 00 @ 22 00 Liverpool..... 50 00 @ 9 00 West Hartley..... 14 00 @ 15 00 Scotch..... 8 50 @ 9 00 Seranton..... 13 00 @ 16 00 Vancouver Id..... 10 50 @ 12 00 Chareol, sacks..... 75 @ 80 Coke, bbl..... 60 @ 65 <b>COTTEE.</b> Sandwich Id, lb..... 21½ @ 22 Costa Rica..... 23 @ 25 Guatemala..... 20½ @ 21½ Java..... 23 @ 25 Maula..... 20 @ 21 Ground, in cs..... 25 @ 28 <b>SAC'D DRY COT.</b> Boneless..... 8½ @ 9 Eastern Col..... 7 @ 7½ Salmon, bbls..... 9 00 @ 10 00 Hf bbls..... 4 50 @ 5 00 2 lb cans..... 3 00 @ 3 50 Philad, bbls..... 22 00 @ 25 00 Hf bbls..... 11 00 @ 12 00 Mackerel, No. 1..... 9 50 @ 10 50 Hf Bbls..... 4 50 @ 5 00 Extra..... 12 00 @ 12 50 In Kits..... 1 85 @ 2 35 Ex Mess..... 3 50 @ 4 00 Phil Herring..... 3 00
---



## Nurserymen.

FRUIT AND ORNAMENTAL  
TREES,

Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco.  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

FRUIT, EVERGREEN, NEW AND RARE  
TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Priehardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF  
ALL PALMS.

## FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

TREES,  
TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURS-  
ERIES, SACRAMENTO. A FULL ASSORT-  
MENT OF EVERYTHING IN THE NURS-  
ERY LINE, BOTH WHOLESALE  
AND RETAIL AT LOWEST  
MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORT-  
MENT OF FIELD, GARDEN, LAWN AND TREE  
SEEDS, WHICH WE OFFER AT VERY LOW  
RATES, BOTH TO THE TRADE AND  
PLANTER IN LARGE OR SMALL  
LOTS.

Catalogues, Price-Lists, and Printed Directions free  
on application. Address,

W. R. STRONG & CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

200,000

## Australian Gum Trees For Sale,

—AT—

## STRATTON'S GUM TREE FOREST NURSERY,

HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high,  
transplanted regularly into boxes 30x20 inches square,  
weighing 150 pounds. 150 or 500 in each box, in  
splendid condition for transplanting to their permanent  
location. Price, \$6 to \$12 per 1,000. Will con-  
tract to plant the trees, or furnish superintendence, on  
low terms. Cash must accompany orders for less than  
\$50, or if greater than that amount, city reference must  
be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE,  
PEAR, PLUM, CHERRY, PEACH, APRICOT,  
ALMOND, QUINCE, OLIVE, FIG,  
GRAPEVINES, AND SMALL  
FRUITS.

EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER,  
ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing  
to plant largely will study their own interests by giving  
us a call before purchasing elsewhere.

HANNAY BROTHERS.

P. O. Box 32.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Ever-  
green Shrubbery.

## LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, - - - San Jose, Cal.

A large and general assortment of

## Fruit and Ornamental Trees,

Evergreens, Flowering Shrubs, Roses, Greenhouse  
Plants, Grapevines, Small Fruits, etc. I offer for  
sale a well assorted stock. Low-topped,  
sturdy fruit trees a specialty. Address,

S. NEWHALL, - - - San Jose, Cal.

**SQUILLS.** Camellias, Pond Lilies, Begonias, Ferns,  
Dahlias and Roses, sent safely by mail  
at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

## H. W. JOHNS' PATENT

ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS,  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS

FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

## One Million Pear Seedlings,

From two to three-sixteenths of an inch in diameter;  
well branched roots, just the thing for grafting. Sent by  
mail, securely packed, postage paid, for five dollars per  
thousand, or delivered at the express office here, boxing  
free, at two dollars per thousand. Pear root-grafts made  
to order, five dollars per thousand. Terms, cash.

HUNTER & BREWER, Springwater,  
Livingston Co., New York.

## PETALUMA NURSERIES.

Established - - - - - 1860.

We offer this season a large and well-selected stock of  
Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general  
assortment of Evergreen Trees and Shrubs. We have 1,000-  
000 Gums from \$5 per M up, according to size. We have also  
an over-stock of Pinus insignis, Monterey Cypress, Pure  
White Pampas Plants, large plumes, Large Araucaria Ex-  
celsa, American Elm, Black Walnuts and Blackberry Roots,  
at very low rates. Price List sent on application. Address,  
WM. SEXTON, Petaluma, Cal.

## PEACH SEEDLINGS

FOR SALE,

For Grafting and Transplanting,  
IN LOTS TO SUIT.

Address, W. A. T. STRATTON, Petaluma, Cal.

Trees, Plants, Bulbs. Fall Price List and Bulb  
Catalogue GRAYS, Address, F.  
K. PHENIX, Bloomington Nursery, Ill.

Trees, Plants. Spring Lists free. F. K. PHU-  
NIX, Bloomington Nursery, Illinois.

## The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Flor-  
ist or Seedsman in the country. It gives the name,  
Postoffice and Business of those engaged in any of the  
departments of the Nursery Trade, alphabetically ar-  
ranged by States and Postoffices, making the Book of  
easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,

Publishers, Galena, Illinois.

## NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Graz-  
ing Lands to be sold to actual settlers at a small advance  
on first cost, on eight years' time, interest at seven per  
cent. per annum. Valuable lands for fruits, vegetables,  
and cereals, and requiring no irrigation. None but  
stockholders to be purchasers of the lands. In subscrib-  
ing for stock, ten per cent. is required at time of sub-  
scribing, \$100 on each share of stock of the par value of  
\$1,000. All percentages paid in on stock are received on  
first payment for lands. Ample provision is made for  
Schools, Library, Churches, etc. The manufacture and  
sale of intoxicating liquors will not be allowed on the  
lands of the colony. These lands are located in Santa  
Barbara County, Cal., near the Lompoc Temperance Col-  
ony, and situated for twelve miles on the Santa Ynez  
River. Full particulars, contained in the regular Pros-  
pectus, will be mailed to all persons addressing the officers  
of the company at Lompoc, Santa Barbara County, Cal.  
JAMES W. WEBB, President.

CHARLES MALTBY, Secretary.

CALVERT'S CARBOLIC  
SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is use-  
ful for Preserving Wet Hides, Des-  
troying the Vine Pest, and for  
Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole  
Agent for the Pacific Coast.

## Seedsmen.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and  
Ornamental Trees, etc.

We call the attention of farmers and country merchants  
to our unusually low prices. All Seeds warranted  
fresh, pure and reliable. Trade price list  
on application.

We have just issued the most complete guide to the  
Vegetable and Flower Garden ever issued upon this coast.  
It is Handsomely Illustrated, and contains full descrip-  
tions of Vegetables, Flowers, Grasses, Trees, etc., with  
full instructions as to their culture; mailed free on ap-  
plication.

SEVIN VINCENT & CO.,

607 Sansome street, S. F.

P. O. Box 1023.



My annual Catalogue of Vegetable and Flower Seed for  
1877 will be ready by January, and sent FREE to all who  
ply. Customers of last season need not write for it.  
I offer one of the largest collections of Vegetable Seed ever  
sent out by any seed house in America, a large portion  
of which were grown on my six seed farms. Printed di-  
rections for cultivation on every package. All seed sold  
from my establishment warranted to be both fresh and  
true to name; so far, that should it prove otherwise I  
will refund the order gratis. As the original introducer  
of the Hubbard and Marblehead Squashes, the Marblehead  
Cabbages, and a score of other new vegetables, I invite  
the patronage of all who are anxious to have their seed  
fresh, true, and of the very best strain. New Vegetables  
a specialty.

JAMES J. H. GREGORY,

Marblehead, Mass.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## SPANISH CHUFA

## SEED FOR SALE.

Address

L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Dewey & Co. { 224 } Patent Agt's.  
{ Sansome St }

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self-Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the  
Pacific Coast in the towns  
and farming districts for  
over four years, and wher-  
ever they have been sold  
(and there are thousands of  
them out) they are doing  
their work as well as when  
put up. A careful perusal  
of our Circulars gives a fair  
representation of them and  
shows their simplicity.

We are prepared to fill orders for all sizes, from a  
PUMPING MILL to a 24-foot POWER MILL for running  
Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT)

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now  
been tested to entire satisfaction  
of all, and meets the demand for  
an article of that kind that has  
not been supplied on the Pacific  
Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars  
and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match  
in Stockton, in 1870.

This Plow is thoroughly made by practical men who  
have been long in the business and know what is required  
in the construction of Gang Plows. It is quickly adjusted.  
Sufficient play is given so that the tongue will pass over  
cradle knolls without changing the working position of the  
shares. It is so constructed that the wheels themselves  
govern the action of the Plow correctly. It has various  
points of superiority, and can be relied upon as the best  
and most desirable Gang Plow in the world. Send for  
circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

## EXTRAS.

## EXTRAS.

## For the Kirby Machines.

D. M. OSBORNE & CO. ARE READY TO SUPPLY

ANY DEMAND FOR EXTRA PARTS FOR ANY

"KIRBY" EVER MADE. ORDERS

SHOULD BE SENT IN BEFORE

THE HARVEST SEASON

ADVANCES.

Address, D. M. OSBORNE & CO.'S

BRANCH HOUSE,

254, 256 Market St. } SAN FRANCISCO, CAL.  
and  
8, 10 Front St., }

## LEVI STRAUSS &amp; CO.,

Patent Riveted

Clothing,

14 & 16 Battery St.,

San Francisco.



These goods are specially  
adapted for the use of  
FARMERS, MECHANICS,  
MINERS, and WORKING  
MEN in general. They  
are manufactured of the  
Best Material, and in a  
Superior Manner. A trial  
will convince everybody of  
this fact.

Patented May 12, 1873.

USE NO OTHER, AND INQUIRE FOR THESE  
GOODS ONLY.

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.



GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).

R. O. HAILE, (VICE PRESIDENT).

JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).

THOS. UPTON.

I. C. STEELE.

THOS. FLINT.

G. P. KELLOGG.

W. L. OVERHISER.

O. HUBBELL.

D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO., - - - SACRAMENTO, CAL.

Ask Your Grocer for Them.



Use None Other.

TRADE-MARK.

B. B. SCOTT, General Agent, - - - Sacramento, Cal.

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco,

Taber, Harker & Co., San Francisco,

Newton Bros. & Co., San Francisco,

J. A. Folger & Co., San Francisco,

A. P. Whitney, Petaluma,

Luther & Schroeder, San Jose,

Chas. Jones, Oakland,

J. H. Seymour, Los Angeles,

Adams, McNeil & Co., Sacramento,

T. M. Lindley & Co., Sacramento,

Booth & Co., Sacramento,

H. S. Sargent, Stockton.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliancy cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE & CO., Agents.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT.....GILBERT W. COLBY.

MANAGING DIRECTOR.....C. J. CRESSEY.

CASHIER.....ALBERT MONTELLIER.

SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

HEALD'S

BUSINESS COLLEGE.

No. 24 Post Street,

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

CALIFORNIA FARMERS' MUTUAL Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - \$200,000 00

ASSETS, DEC. 31, 1876, - 310,793 69

MUTUAL PLAN.

AMOUNT.

PREMIUMS.

Risks written to Dec. 31, '76. \$0,202,435.00

Less Amount Canceled..... 435,419.00

\$136,622.18

9,568.38

Amount in force, Dec. 31, '76..\$5,767,016.00

Losses paid.....\$16,330.00

CASH PLAN.

AMOUNT.

PREMIUMS.

Risks written to Dec. 31, '76...\$3,605,935.00

Less Canceled and Expired..... 1,587,246.00

\$71,865.16

28,585.16

Amount in force, Dec. 31, '76...\$2,018,689.00

Losses paid.....\$12,718.71

\$43,280.00

OFFICERS.

J. D. BLANCHARD.....PRESIDENT

I. G. GARDNER.....VICE-PRESIDENT

G. P. KELLOGG.....TREASURER

A. W. THOMPSON.....ATTORNEY

FERD. K. RULE.....SECRETARY

TRUSTEES.

J. D. Blanchard.....San Francisco

G. P. Kellogg.....Salinas

I. G. Gardner.....San Francisco

Chas. Laird.....Salinas

Uriah Wood.....San Benito

A. B. Nally.....Santa Rosa

A. W. Thompson.....San Francisco

A. D. Logan.....Colusa

I. C. Steele.....San Mateo

G. W. Colby.....Butte County

A. Wolf.....Stockton

C. J. Cressey.....Oakland

J. C. Merryfield.....Dixon

E. W. Steele.....San Luis Obispo


C. S. Abbott.....Monterey

Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. II. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. II. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

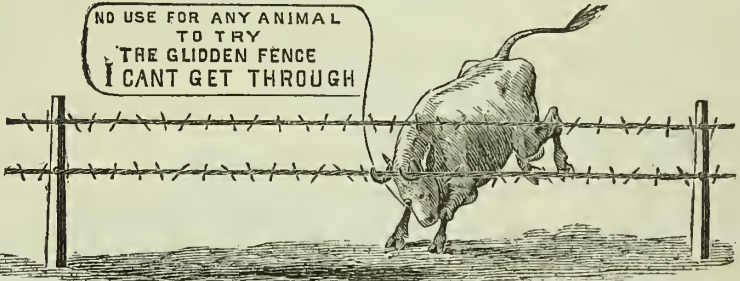
A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

NO USE FOR ANY ANIMAL TO TRY THE GLIDDEN FENCE I CAN'T GET THROUGH



About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.

2. The only steel wire barb.

3. The only barb that cannot be displaced with thumb and finger or cattle's horns.

4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.

5. The only coiled barb with broad base on main wire, which renders it immovable.

6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.

7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.

8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.

9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

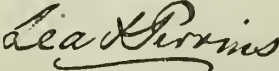
JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,



which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

LOOK!



ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.

B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR, Ceres, Stanislaus County, Cal





## DEWEY & CO. American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

DEWEY &amp; CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.



Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious, able, and well conducted journal.

Because it is the largest and best agricultural weekly west of the Rocky Mountains.

That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.

That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.

That the Rural, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

SUBSCRIPTION, \$4 a year in advance.

DEWEY & CO., Publishers.  
San Francisco, 1877.

### Designing and Engraving at This Office.

We are prepared to do fine Wood Engraving for illustrating Landscape Scenery, Buildings, Machinery, Works of Art, Manufactured Articles, Trade Marks, Seals, etc. We have a first-class

### Machine for Engraving

A portion of the work, which can be finished thereby more perfectly than by the eye and hand alone. Our patrons can depend upon first-class work always, and at reasonable prices. Samples can be seen at our office.

DEWEY &amp; CO.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte and Sutter counties.  
G. W. MCGREW—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMPION—Tulare, Kern and Fresno counties.  
A. W. STONOG—Lake, Napa and Solano counties.  
G. KETNOV—Santa Barbara, San Luis Obispo and Ventura counties.  
W. H. WHITE—San Bernardino and Los Angeles counties.

### Our Poultry Department.

E. H. Cheny writes from Bolaca, Sonoma county, as follows: "Your paper is worth its subscription price yearly to any farmer who keeps two dozen chickens, to get Mr. Eyre's opinion upon the value of the different breeds of fowls, the proper treatment for them, the diseases to which they are liable and the remedies. I became acquainted with Mr. Eyre through your columns, and I have no cause to regret it, for in my dealings with him I find everything as represented, and without any disparagement for others, I can recommend him as one in whom confidence will not be misplaced."

PACIFIC RURAL PRESS.—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the framers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribe at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid.—*Mountain Messenger*, Dec. 16th.



### RUPTURE CURED

USE NO MORE METALLIC TRUSSES! No more suffering from Iron Hoops or

Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Tender, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.

Send for Illustrated Circular and Price List.  
MAGNETIC ELASTIC TRUSS CO.,  
609 Sacramento Street, San Francisco.

**SEEDS, SEEDS**  
For 1877.  
Pure, Fresh and Reliable.  
CROSMAN BROS. will send their beautifully illustrated Catalogue, containing a Magnificent Colored Plate, to any address on receipt of two 3c. Stamps.  
CROSMAN BROS.,  
[Established 1840.] Rochester, N. Y.

### A New and Delicious Fruit.

## THE DIOSPYROS KAKI, Or, Japan Persimmon.

BEAUTIFUL IN COLOR,  
DELICIOUS IN FLAVOR,  
MAGNIFICENT IN SIZE.

Average Weight, One half to One Pound Each.

Four Varieties, Warranted Genuine, and will Bear in from One to Three Years.

ALL GRAFTED AND RELIABLE STOCK, PERFECTLY ADAPTED TO CALIFORNIA, AND NOW GROWING IN SANTA BARBARA, SAN FRANCISCO AND SONOMA COUNTIES.

"Its introduction will be a boon to our country."  
J. M. RODGERS, Admiral U. S. N.

"A magnificent fruit."  
J. C. WATSON,  
Commander U. S. Navy.

"Worthy to be ranked with the peach and pear of California."  
P. V. VEEDER, D. D.,  
Tokio, Japan.

Fruit on exhibition, and Trees, Clons and Seeds for sale by REV. H. LOOMIS, at R. J. TRUMBULL'S Seed Store, 421 Sansome street, San Francisco. Send for circular.

## JAPANESE PERSIMMON.

Just received and For Sale, a choice selection of Trees, 3 and 4 years old, of this new, rare, and Valuable Fruit.

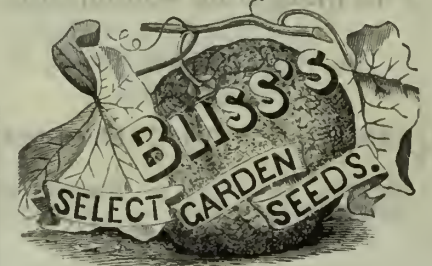
SOME OF THIS STOCK HAS BEEN GROWN BY SHINN & CO., NURSERYMEN, NILES, ALAMEDA CO., CALIFORNIA, FROM SELECTIONS OF THE CHOICEST VARIETIES KNOWN IN JAPAN.

Other portions of the stock now offered is from an importation made by that enterprising firm this season, of the variety known as the SEEDLESS PERSIMMON. Both (the California grown and the imported) are in every respect reliable.

The former will have the preference with experienced fruit growers, as being already naturalized and surer to bear transplanting. Price, for the California grown, \$1 each; for the seedless, \$2 each. Samples can be seen and orders given at 317 Washington St.

GEO. F. SILVESTER, Seedsman, S. F.

## Four Grand Prize Medals AWARDED OUR EXHIBIT AT THE CENTENNIAL.



Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—18 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, B. K. BLISS & SONS,  
34 Barclay street (P. O. box 5,712), New York.

## MOUSTACHE PROTECTOR.

Will fit any Cup. Everywhere a Favorite. See the figures and strike, AGENTS, while the iron's hot. STORE-KEEPERS sell streams of them to the LADIES for presents. Moustached gentlemen look on them at sight. Its a gem, and sells itself. Try it. Profits immense and a sure thing. Nickel plate only 25c., \$1.50 per doz., six doz., \$6. Gold gilded 50 cts., \$3 a doz. by mail.

C. H. BARROWS, WILLIAMSTIC, CONN. Refers by permission to Mer. Loan & Trust Co., J. Brown, P. M., and Ed. Journal, Williamstic.

Dewey & Co. { 224 } Patent Agt's.  
{ Sansome St }

## SEEDS. SEEDS.

### IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New

Sweet Corn.

Early Canada } Yellow Flint Corn.  
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe  
White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

## OAKLAND POULTRY YARDS, Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.  
NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,  
P. O. Box 659, San Francisco, Cal.

R. J. TRUMBULL,  
Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

## M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

## THOROUGHbred FOWLS, BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

SAFE ARRIVAL

Eggs Shipped to

OF FOWLS

Any part of the

GUARANTEED

Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

25 FANCY CARDS, 16 styles, with name, 10c.; 25 Snowflake Cards, 7 styles, with name, 20c.; 20 Fancy Scroll Cards, 15 styles, no name, 10c., postpaid. J. B. HUSTED, Nassau, Reness. Co., N. Y.

NOTICE.—Wm. J. Lawrie is no longer agent for us in this State.  
Jan. 31st, 1877. DEWEY & CO.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, MARCH 3, 1877.

[Number 9.]

## Movement for a Botanic Garden.

The idea of a public botanic garden is not a new one to our readers. It has been advanced by our correspondents and has lately engaged the attention of our Legislature. The law makers did not favor it, and without arguing whether they were right or wrong, we express an opinion that a matter of this kind is a very graceful subject for private enterprise and investment if our rich men have the disposition to make it thus. This, we learn, they have, and we are informed that there is a reasonable prospect that a botanical garden will be established. We find the prospectus of the enterprise in the *California Horticulturist*. The following things are proposed: To collect and cultivate specimens of trees, shrubs and plants of every kind, whether useful or ornamental, that can be adapted to our soil and climate, and to arrange them at a botanical garden in such manner as to make it a desirable place of public resort, as well as study; it being the intention to supply to scientific and educational establishments specimens of plants free of charge, for subjects of botanical lessons and lectures. With the garden it is proposed to connect a nursery and seed farm, etc., for the raising and cultivation of various products which are certain to yield a large profit, not only amply sufficient to cover the expenses of the garden, but also to make an excellent return to the stockholders.

For this purpose it is proposed to purchase the establishment now known as the Exotic Gardens, on Mission street, opposite Woodward's Gardens, with all the stock, buildings, improvements, good will and lease of land unexpired, (nine years). The location of the Exotic Gardens is most favorable for the enterprise, and the business itself is so far established that the actual profits from rent, the sale of plants, seeds and other products, place it in a paying condition. The enterprise, however, does not represent sufficient capital to carry out all the requirements. The most suitable locality for the Botanic Garden is in Alameda county, in the immediate vicinity of the railroad, so that the Garden might be easily reached, and the products be shipped without inconvenience to any part of the State. The amount of capital required for the purchase of the Exotic Gardens, with all the stock and improvements belonging thereto; the purchase of the necessary land in Alameda county and for the improvements on the land; for the laying out and planting the Botanic Gardens, and for carrying out all the propositions above mentioned, will not exceed \$130,000. For this purpose it is the intention to form an incorporated company with a capital of \$250,000, divided into 2,500 unassessable shares of \$100.

A large list of our prominent citizens is printed as commendatory of the enterprise. So far as we can see it is a praiseworthy enterprise. We hardly look for much success to the business departments which are proposed, nor should we expect any very large dividends to stockholders. If the other features were successfully developed we rather think the rich patrons of the enterprise would be fully compensated by the thought of having done a good thing for the public. Our money makers have wider resources from which to draw dividends than seed pods and flower pots. They will be content to have the institution self-sustaining and to look elsewhere for dividends.

GENERAL DIAZ has been sworn in as President of the republic of Mexico,

## The Potato Market.

We have shown for several weeks the dullness in the potato market resulting from an apparent over-production. During the week there was a shipment of 100 sacks overland to New York, which is a very interesting feature of the season. It has been shown the receipts of potatoes in this city have been much greater than for several years and perhaps greater than ever before. Although this is so, the supply of potatoes have not yet so over-supplied the demand as they did the first few years they were grown here. We find an interesting piece of potato history in Halley's Centennial Year Book of Alameda County, which is just published: "In early days potatoes were raised in Washington township in great abundance, until they became a drug. In 1851 Beard & Horner bought the Alvarado ranch and went into the cultivation of them. The part they enclosed

## California Fruit Confections.

We have received from Mrs. Wm. R. Smith, of the Oakshade orchard, Davisville, Yolo county, some excellent California fruit confections. This manner of putting up fruit is a new thing in this State, nearly all the candied fruits consumed in this country coming from France. The French confections are esteemed as great delicacies, and are very expensive; yet the fruit is in many instances artificially colored in order to give it a handsome appearance.

The fruit put up by Mrs. Smith is a perfectly pure article, in its natural color, and is all prepared on the farm mentioned. It is manufactured with a rude apparatus, which is capable of much improvement to do the work on a large scale. Fruits of many varieties are put up in this manner. We have samples before us of apples, peaches, nectarines, red and white plums, apricots, etc. These were put up last

## The Regulator Windmill.

We give on this page an engraving of a very comfortable residence with a very important attachment—a good windmill. We have seen many such houses in our country villages and on our ranches. Whatever may be the producers of comfort in the house and in the garden we are sure that the windmill is not the least of them. Without it the thick grass and thriving trees and shrubs of the foreground could not be enjoyed in some parts of our State. The windmill becomes then a great producer of beauty and minister of comfort.

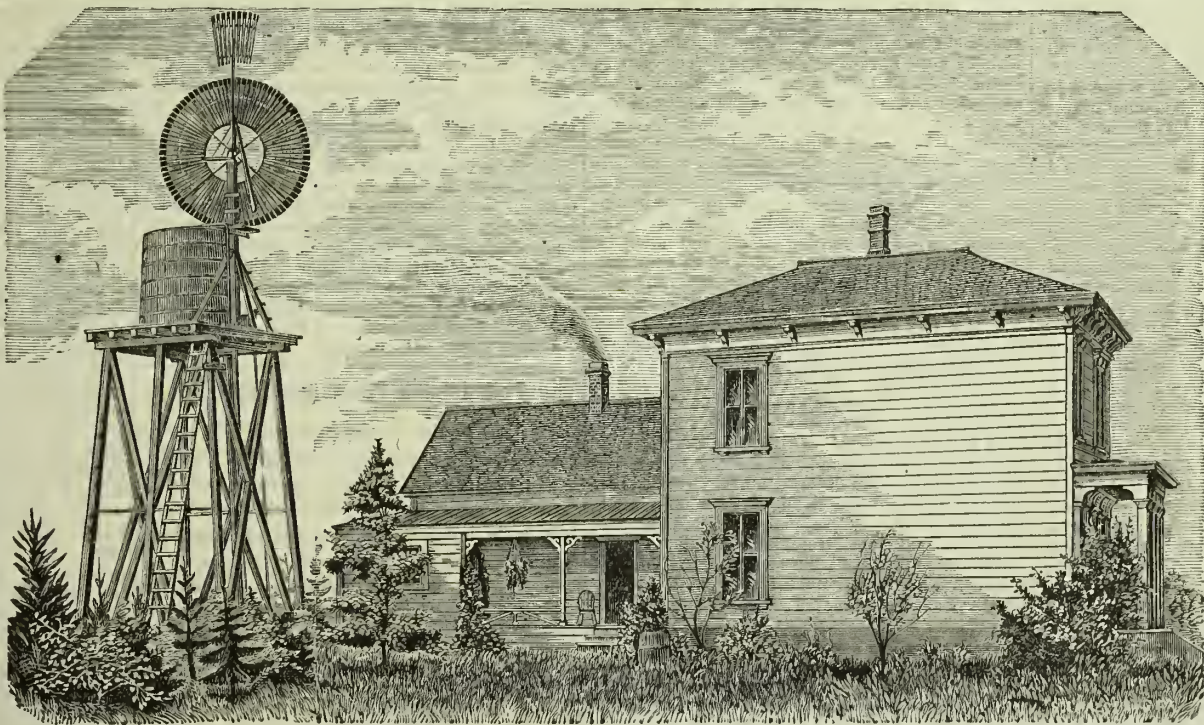
The windmill can be shown to be the cheapest appliance for furnishing water where much is required; for instance, the cost a first-class windmill, with tank, frame and pump, as shown in the engraving, will not exceed \$250. The interest on this amounts to but eight cents per day. This would raise water 50 feet at the rate of 800 gallons per hour, pumping 10 hours a day would supply water at one cent for each 1,000 gallons. If this be compared with steam or horse power it would show about 100% in favor of the windmill. It is for this reason that the windmill is becoming indispensable and because of its cheap and efficient service it is appreciated by all those who have town or farm property.

The windmill shown in our engraving is known as the "Regulator." It was invented and patented in 1871, and has been manufactured since by the Marshall Windmill, Engine and Pump Company, of Marshall, Mich. The first efforts of the inventor were to make a windmill which should be a self-regulator without the complications which were relied upon in some other devices. This was said to be impossible because heavy winds were frequent, and it was thought essential to have a windmill in which the sail surface could be suddenly reduced to save it from destruction. After repeated trials the "Regulator" was brought out, and, although in a crude shape, was considered a great success and was largely adopted because of its simplicity and

solid wheel. Since then it has been improved and remodeled. Three new patents were taken out, and its manufacturers are now very loud in their claims of its complete superiority.

The speed of the mill is controlled by the upright vane, which may be seen rising above the center of the mill in the engraving. This vane is made with fans similar to one section of the wheel. It is attached to one end of a long bar, with a heavy weight attached to the other. Being hinged in the center, the weight holds it upright until the wind increases with sufficient force to drive the wheel too fast. Then the vane is borne downward to one side, affording a leverage to turn the mill edgewise to the current, thus reducing the sail surface and keeping the motion about the same as in moderate winds. The regulator is also provided with an appliance doing away with the jerking motion given to pumps by many mills. There are now over 300 of these mills at work in the State of California. They took prizes at our State fairs in 1875 and 1876, and at the Eastern fairs for a number of years. Marcus C. Hawley & Co., of San Francisco and Sacramento, are conducting their sale both at wholesale and retail. We are informed that no mills are sent out without full guarantee and all necessary instructions concerning erecting and running is furnished to purchasers.

The rates for telegrams from California to Europe have been reduced.



THE REGULATOR WINDMILL.

was that now owned by the Haleys. In 1852 their crop averaged 200 sacks to the acre, and sold for upwards of \$100,000. The following year everybody cultivated them, and there was a plethora. Down in the Pajaro valley 20,000 sacks were one day bet on a horse race. Messrs. Beard & Horner made contracts for the disposal of theirs in advance; they sold them for two and two and a half cents per pound, to the San Francisco commission merchants—Brigham, Garrison and others. Garrison took a million pounds of them; they were never removed, and were allowed to rot on the ground, in consequence of the low price, caused by the great abundance of the crop. The firm of Saunders & Co. purchased a large quantity of them, which they stowed away in a hulk in the bay. The warm weather coming on, they commenced growing and threatened to burst the vessel open, when the owners ordered them to be removed. They commenced dumping them into the bay at San Francisco, but the harbor master interfered and stopped it, necessitating the expense of removal to some other locality.

THERE are now 21 vessels in port under engagement to load wheat, representing 27,800 tons of tonnage, with a carrying capacity of 800,000 centals. There are also 30,000 tons of disengaged tonnage in port.

Fox's theater, Philadelphia, was destroyed by fire on the 25th ult.

June and are still fresh and soft. Mrs. Smith informs us that she has some put up over a year ago which are just as soft. Experiments have been made with different varieties of apples and several of the varieties are used to make these confections.

Nothing is used with the fruit and sugar except in some cases a flavor, so that the article is perfectly pure. The candied fruit is put up in neat one-pound boxes and sold for 50 cents a box—less than one-half what the French confections are sold for. It is very neat in appearance, is perfectly soft, and of excellent flavor. Mrs. Smith also puts up apple, apricot, and other jellies, the residuum of the fruit. The apricot jelly was made from the earliest variety of apricot and is very clear.

ORANGE BLOSSOMS.—Mr. G. P. Rixford made us a call on Monday afternoon. He was fresh from his father's ranch in Sonoma county, and brought a handful of the fragrant blossoms of the Bouquet orange. This is rather early for orange blossoms. He brought also a Pinalo orange, the first fruit of a graft of this variety which he set in a lemon tree two years ago. The Pinalo stock was, we believe, imported from Java by Capt. Clark of Los Angeles in 1870; it is a very large, coarse, pear-shaped orange and not, perhaps, of great value except as a novelty. Mr. Rixford brought also the fruit of a seedling lemon which he raised which promises very well.



## CORRESPONDENCE.

### San Felipe Valley.—No. 2.

EDITORS PRESS:—My first impression on visiting San Felipe valley was, that it was really a place of much more importance than I had supposed. And as I drove round among the farms and the orchards and the gardens, getting acquainted with the people, examining and admiring the wonderful fertility of the soil, as abundantly exemplified by the superior products of each department, learning the considerable extent of the favored region, its fine warm sheltered climate, its beautiful romantic mountain views, its grand water privileges, not only from strong artesian wells but also from clear mountain streams, I became more and more deeply impressed with it as a very desirable place to live.

I was also favorably impressed with the people I met as to general intelligence, enterprise, good taste in their improvements, pleasant manners, and all the social virtues, as far as my observations extend.

As an institution of general interest to the whole neighborhood, and one of which the people here may be justly proud, is their district schoolhouse. This building, which is large, substantial, well arranged, and quite attractive in appearance, has a central, convenient location, on a wide and valuable lot, which when planted with choice trees will greatly add to its beauty and comfort.

Not far from the schoolhouse on the south and conveniently located for business near the cross-roads, is another institution of much importance in a business point of view to the whole neighborhood—the establishment of the “village blacksmith,” Mr. Calvin McCullough. He has 17 acres of choice land under a good state of improvement, his blacksmith shop near the road, and a neat new-looking house farther back, well surrounded with young but thrifty looking trees, vines and flowers. Here the good people of the valley get their agricultural tools and implements manufactured and repaired in a substantial and satisfactory manner.

At Mr. E. Nason's fine place I was met by the hearty cordial greeting of the genial proprietor, saying he “was always glad to meet and welcome a representative of the PACIFIC RURAL PRESS.” Mr. N.'s place consists of 76 acres of choice land, part of it planted to fruit trees of various kinds, and part of it devoted to dairy purposes. In looking over this place I remember crowding a good deal of sight-seeing, mixed up with many exclamations of surprise and admiration, into a short space of time—as I was feeling somewhat hurried just here. Yet I have rather more than vague recollection of walking with Mr. Nason and Mr. Buck, who accompanied me, through little forests of trees, teeming with fruit and beauty; of admiring fresh green plots of alfalfa, marvelous as to its number of crops per year and the yield per acre, of passing among some kind of huge long squashes that did not quite cover the ground, of examining a model new little dairy-house, and of an artesian well that gushed out water enough to run a mill. I also remember something of the front door fence; and hope when next I visit San Felipe valley to find that the miserable, rickety, tumble-down fence has been utilized for kindling wood and one more fitting the other improvements may fill its place.

We found Captain Richard Perry at the roadside, busy at work in his field, though I had noticed his cozy little cottage, all covered with vines, a little further down the road. If I remember aright he is a retired sea captain, and certainly could not have found a more beautiful, quiet rural spot to spend the remnant of his days. He has 70 acres of this good land, and is mostly engaged in dairying.

Mr. C. A. Wood, in the same neighborhood, has a new and very pretty cottage house with everything around it to correspond. His place consists of 30 acres of land, and if I were to judge of its quality by the trees and crops I should say that it is decidedly rich. That field of squashes near the road! When first I saw it, at some distance, as I drove up the road, I thought it a vast pile of squashes; when I and behold, I found them just as they had grown in the field! Scattered among the squashes in the same field were quite a number of fine specimens of another branch of San Felipe productions, contrasting more strikingly in contour than size to the white squashes on which they were feeding; I mean a small herd of fine, fat Berkshire hogs. And as I passed by the field some weeks later, I could not say that the squashes were perceptibly fewer in number, though I knew it must be so, as the hogs were decidedly larger.

The place of Mr. I. White is located on the south side of the road, and consists of 25 acres. Being comparatively a new comer in the valley, I judged, after a hasty survey of the property that he had been very fortunate in securing a home for his family in so pleasant a locality, which, if not exactly made to order, nevertheless seemed so well adapted to their wants and tastes.

Although not a large place yet Mr. White pursues quite a system of diversified farming, raising good crops of corn, hay, potatoes and vegetables; besides devoting close attention to good lines of hogs and poultry. His place is also rich in trees, both fruit and ornamental; two good artesian wells afford abundance of fine water for all purposes.

A mile or so further west, and out of the bounds of the so-called willow land, I found the fine land of Mr. R. E. Shore. He has 230 acres all under cultivation, yielding satisfactory crops. At the time of my calling Mr. S. was very busy helping to sink a new artesian well, making the third on his place; hence I failed to receive such items of interest as his fine improvements would have afforded. He had just finished building a large and somewhat stylish farm house. And his barns, stables and grain houses looked commodious and conveniently arranged.

I made a pleasant call at Mr. W. K. Dunlap's place, fronting the south road, and near the creek; it consists of 80 acres of San Felipe's best land. Mr. D. said he had raised 100 bushels of shelled corn to the acre, and showed me a field yet ungathered, which he estimated would come up to that mark. After examination I could have no doubt as to the correctness of his estimates, although that is a big yield per acre anywhere. There was also a pretty fair crop of squashes grown among this corn. He has paid special attention to the hog business; his land always producing abundant crops of green feed and succulent roots, so well adapted to the rapid growth and development of this kind of stock.

As a striking and attractive feature of the place, as I remember it, is the grand old sycamore grove occupying the back ground from the road; valuable for shade, wood and beauty.

Adjoining Mr. Dunlap's place on the west is the pretty, comfortable, home-like place of Mr. Tarbott. I am sorry I lost my notes taken here, for I was much pleased with the neatness, convenience and thrift marking every department around the house, barn, orchard, yard and stock houses. The land is equal to any in the neighborhood, judging from the products I saw of grain, fruit and vegetables. I found Mr. T. at the barn, storing away as fine a lot of corn as can be raised anywhere; large, solid ears with not a “unbbin” to be seen. Mr. T. has a splendid flowing well conveniently located and arranged abundantly to supply all the wants of the place—house, dairy, stock and poultry yards, garden and orchard, when needed. With Mr. Tarbott I spent a very pleasant half hour's chat while looking round his nice place, which I hope to repeat not many weeks hence.

Mr. A. C. Ricker has a new purchase of ten acres, for a home, near the fine property of Mr. I. D. Culp and the tobacco lands of the Consolidated Tobacco Company. Ten acres would be considered by some a small farm to support a family on. But there are differences of opinion on that subject. It is all owing to circumstances; what kind of land you have; where located; what use you put it to, and how well or poorly you understand and tend to your business. My recollection is that Mr. R. paid \$2,500 for his 10 acres, and my humble opinion is that if any ten acres located so far from any great market will support a family, that of Mr. Ricker will do it and do it well.

There are other valuable and beautiful places in the valley, which I should like to notice but failed to secure any notes. At the time of my visit last fall several of the proprietors were from home, and the appearance of a heavy rain kept me away from others I hoped to have seen. I hoped also to have devoted some special attention to Mr. Culp's place, his magnificent well and valuable grounds, and also of the lands and works of the Consolidated Tobacco Company, and have something to say about the property and dairies of Messrs. Dounely & Dunne.

P. S.—I see by the last number of the PACIFIC RURAL PRESS, in my San Felipe letter, I describe the encalypsus tree at Mr. Buck's place as being 28½ inches in diameter. That is a bigger story than I intended to tell; it should be in circumference.

G. W. M.  
Santa Clara, Cal., Feb. 23, 1877.

### The Peppermint Oil Experiment.

EDITORS PRESS:—In the PRESS of February 17th I find some inquiry in reference to an experiment we made here with the cultivation of peppermint. Two years ago we brought one ear-load of plants from Michigan, and planted about 28 acres. The plants came in rather bad condition, being badly heated. We planted about the 1st of November. Our location was low and subject to overflow, consequently the greater portion of the plants were covered up with debris from the floods. We cut and reduced a few acres the July after planting, and found a greater yield of oil where we had a full stand of plants than any we had ever known elsewhere. We had portions of the plantation that would yield at the rate of 40 pounds of oil per acre from a single crop, while we know of no crop yielding more than 28 pounds of oil per acre in Michigan or New York, where they make peppermint oil a business.

A few words in reference to the oil in our markets here. While the oil of peppermint was worth \$6.50 per pound in New York, the best we could do here was \$3.75 per pound, while our production was equal to any of our Eastern oils, so far as we had the means of testing it.

I am well satisfied mint can be made a profitable business in California, but the location should be carefully selected. I find there should be but little alkali in the soil. I think the up-river tule lands would be just the place for it; there is not the least danger of drowning the plants; the water may cover the plants for weeks in the winter, and it seems to grow the better when it comes to the light. With us it was wholly a matter of experiment. Our object was to determine whether we could produce two crops per year, but our location being rather unfavorable, we have stopped short of a full solution of the matter, though I am much inclined to the opinion that two good crops can be grown each year on locations which can easily be selected in many of our up-river tule lands.

It is useless for me to give the mode of planting or reducing, as that is all given in full in the PRESS.

San Jose, Cal.

[We are glad to receive this communication, as it supplies what was lacking in our article on peppermint oil in a late issue of the PRESS. As we said then, before the producer can get as good price for California oil as is now obtained for the known brands of the East, there must be analysis of the oil made and wholesale druggists must be induced to try it in their manufactures by giving them it at a low price at first. When the article becomes known, then there will be no difficulty about price if the product is up to the standard.—EDS. PRESS.]

### Egyptian Corn.

EDITORS PRESS:—In your last issue I notice an inquiry for seed of Egyptian corn. Mr. Sam Drollinger, of Bachelor valley, has raised it for some time past, and could, if desired, furnish “H. M. J.” with any reasonable quantity. Mr. D. raises the corn on a very poor, gravelly bar, and as it is raised only for fodder and the chickens, after planting it receives no attention. On that land it produces about 25 bushels to the acre. It would be naturally supposed that on better land the product would be larger and of better quality.

It is a very peculiar production. Growing something like broom corn, it produces on top a large compact panicle of the fruit, containing numberless grains considerably larger than wheat. After the blades and seeds are perfectly ripened the stalk is yet green and makes excellent fodder. Indeed, the whole plant is eaten with the greatest avidity by all kinds of stock. The juice of the stalk is very sweet, not much less so than sorghum, and perhaps might be turned to account in the same way. Mr. D. has experimented with it as chicken feed in connection with corn and other grain, and finds that chickens will keep fatter, grow faster and lay more on it than with twice the quantity of any other feed yet tried.

E. C. PARKER.  
Upper Lake, Lake Co., Cal.

### The Philadelphia Permanent Exhibition.

EDITORS PRESS:—I imagine a few lines as to the progress of the coming permanent international exhibition in the main building will not be uninteresting to you. The management are busy bringing order out of chaos, and one can begin to see that for beauty of arrangement it will far excel any single building of the late Centennial exhibition; in fact, it will have the cream of the whole of them concentrated in that one building. On the east side, is space appropriated for educational exhibits, illustrating the various systems used in schools and seminaries, which department extends up to the center of the building. Returning to the opposite side we find abutting on the machinery department, various exhibits of implements, tools, etc., also exhibits of edge tools, etc., and near which will be a magnificent fountain and aquarium 200 feet long, reaching to the statuary and fine art department. A good many fine pictures are in position and also quite a number of the most notable statuary in the art gallery ranged along the principal aisles near the center of the building. A large space in the center of the building, opposite the Roosevelt organ, is appropriated for the purpose of holding musical festivals, and there will be a sloping platform, supported on iron pillars, reaching from the organ to the floor at the towers in front of it, a distance of 100 feet or more. In addition they are going to erect beautiful arcades, stretching from the side of the organ to the square towers in front. Speaking of this part of the exhibition I have to mention the humble part I have taken in this matter. I occupy the entire space inside of the northwest tower, 48x48 or 2,214 square feet, as a California exhibit; in the center of which space I have erected a rustic pavilion, 18 feet in diameter, decorated with the magnificent cones of the Pacific coast. It is hexagonal in shape, similar to the arbor I erected in San Francisco two years ago, but more magnificent in outline and finish. I propose exhibiting a beautiful bazaar of California curiosities in the pavilion, also display the finest fruits and products of California, and I have a large amount of space where I

propose erecting tables alongside of the pavilion for the proper display of any meritorious California exhibit which may be forwarded to me for exhibition, and I cordially invite any one having anything fine in the way of natural products of California to forward them to me at the international exhibition and I will attend to exhibiting it without cost to the owner after it arrives in Philadelphia. I particularly request those parties engaged in drying California fruits to forward samples, also honey, etc. There is no doubt but this exhibition the coming season will be a great success.

J. BEGG.  
2236 N. 5th street, Philadelphia.

## HORTICULTURE.

### Semi-Tropical Fruits in Ventura County.

EDITORS PRESS:—I send you in this letter some notes upon oranges and their culture, the result of my three years' experience in this climate. It seems to me that our people are not quite up to the requirements of the times and the probable wants of the future in their feeble efforts at culture of oranges, lemons and kindred fruits. Hence these brief notes.

It is common to say that though our climate is delightful, the chances are limited for poor men to make a living and attain comfortable homes. This county, though but little developed, produced last year over 100 tons of honey, is quite advanced in growing hogs and barley, and I have not a doubt will excel in culture of limes, lemons and oranges. There are several orchards of English walnut trees quite young but each containing from 100 to 1,200 trees.

The only territory in the United States peculiarly adapted to the orange, lemon and lime is southern and a portion of central California. We have an equal advantage in the culture of almonds and walnuts. In most places we have no frost severe enough to injure the trees, nor spring frosts to injure the blossoms. These two points give us superiority to the Gulf States, where severe freezes occur as often as every fourth or fifth year. The culture for commercial purposes, in other words mainly to supply distant markets, will surely become a leading industry in southern California. The amount of land required, compared with that needed for the production of staple crops of grain, wool, meat, butter or cheese, is surprisingly small. “Ten acres enough,” will become a true proverbial saying applied to these products when measured by the probable net results per tree. In proper locations almonds will net \$100 per acre, walnuts \$200 per acre, limes, lemons and oranges at least \$500 per acre. The orange is especially a long-lived tree and subject to few insect pests or diseases. They bear when 10 years old from the seed and do not need grafting when seeds of good oranges are planted. Seeds of the wild or bitter orange of Florida of course will not bring good fruit. All the bearing trees in Los Angeles county and vicinity are from seed of decayed oranges from Tahiti or the Friendly islands. Trees of this kind are furnished now nearly as cheaply as grafted apple trees of the same age. They are not particular about soil, they do well in sandy or even on black adobe soil. Irrigation or flooding the land is not necessary; a small stream around or near the trees two or three times during the dry season is amply sufficient; a barrel of water to each tree, say three times during the summer, is abundance for small or moderately large trees. The trees are easily transplanted at any time of the year by a liberal use of water around the trees. Low tops for a young tree are best to shade the stem and make the leverage between the top and roots as short as possible. Shelter from severe winds while young is desirable. Gophers must be in some way destroyed. Cats, traps and strychnine are valuable aids to their extermination. Some may be shot. Plant small patches of alfalfa to attract them, so situated that they can be irrigated, and the gophers will most of them be drowned. As an ornamental tree the orange has few equals; the leaves are dark, glossy green, the general shape of the tree upright, with dense round head, the fruit mostly on the outside in view and when ripe, or nearly so, of a most beautiful golden color. Few crops combine nearly so much profit and beauty and regularity of crops and permanency of investment as the orange. For the young to support them through manhood and old age and for the old to leave as a legacy for their children, I know of nothing so surely reliable, pleasant and enormously productive as orange groves.

The same requisites are essential to the culture of the lemon and Mexican lime. The lime is said to endure less frost than the orange, and being acid, both this and the lemon will probably do well nearer the coast in this region than the orange. I feel sure, though, that we have much more good orange territory than is generally supposed. Very many places now supposed to be too bleak or cold will be so changed by the growth of shelter belts of trees as to produce this fruit in perfection. The lemon grown from imported seed varies little more than the orange. As a tree it inclines to be irregular, low and bushy, and grows more rapidly than the orange—bears in eight years. The lime is a lemon on a small scale, grows on a bush rather than a tree, and planted three or four feet apart makes a good hedge, which will also produce fruit. To work into lime juice it may safely be grown to any extent—bears in five years. The



orange, lemon and lime, carefully handled, keep a long time and are well adapted to distant shipments by rail. For shipping through the tropics by water they require to be packed so green as to prevent their attaining perfection. By rail during winter and spring months to the Territories and Eastern States, they can be safely sent when fully ripe.

For the reason mentioned above, Los Angeles oranges command better prices in San Francisco than those from Tahiti.

The Chinese lemon is a dwarfish variety of early maturity. The fruit varies greatly, and is generally not of any value nor saleable at any price. The trees are used as stocks to dwarf oranges upon, causing them to bear young, but probably they will be shorter lived than upon orange roots. They are easily budded, but somewhat more difficult to transplant than the orange. The roots of all the orange and lemon family run deep, so that there can be little objection to low cultivated crops, such as beans, potatoes or peanuts, in young orchards.

The almond seems somewhat particular as to location, and must be grown where spring frosts are not so severe as to destroy blossoms. It does well in Carpinteria, immediately on the coast, and bears in four years. Walnuts do well on all deep rich soils, and so far as I know are not liable to destruction by spring frosts. They bear in eight years. HENRY SHAW. San Buenaventura, Feb. 17th.

### The Japanese Persimmon.

EDITORS PRESS:—There is no fruit in Japan more common or popular than the persimmon. It has been crossed and recrossed until it is to Japan what the apple is to America. The fruit is found in about the same varieties of climate as the wild persimmon of the Eastern States, and appears to be equally as hardy. Not only will the tree stand the frost, but they flourish where there are four months of winter. It grows in China as far north as Peking and will probably grow to perfection in Oregon and even Washington Territory. Its adaptation to the whole of California is beyond all question. The various experiments made have proved that the trees can be readily transplanted from Japan and succeed here. Dr. Burdell, of Marin county, brought with him from Japan a year ago a dozen trees, all of which are thrifty and promise well. The grafted trees bear in about four or five years, while the seedlings require double the time, and like the apple or peach, are not reliable.

There are two principal varieties of the fruit, the first of which is large, round, shaped like the Rhode Island Greening. The flesh of this resembles the pear or apple, and it is eaten in the same manner. Its color is rich golden, and the meat "juicy, vinous and firm." It ripens in November and keeps well until March. We have seen specimens four and five inches in diameter, and it could be readily transplanted to any part of the country.

The second variety is oblong, resembling in shape a minnie ball. This has a deeper, darker shade than the other, is soft, sweet and custard-like; is eaten with a spoon, and with cream and sugar is one of the most delicious fruits that I have ever tasted. This fruit attains a very large size. I have seen specimens that would weigh over a pound. It ripens the last of October and lasts until the new year. It is the variety mostly dried and prepared like figs for market.

There are many varieties that might be introduced into this country, and which would undoubtedly prove very desirable. It is unquestionably destined to become one of our most common and popular fruits.

I have just received from Prof. W. E. Griffis, the author of "The Mikado's Empire," the following statement:

"As regards the value of the Japanese Persimmon, there can be but one opinion. The tree itself is one of the handsomest of fruit trees, and in the fall, with its golden-hued fruit hanging to the branches after the leaves have fallen, forms a beautiful and striking picture in a landscape.

"The timber furnished by this tree is very valuable and is much used by the Japanese for carved work, cornices, solid articles of furniture and such objects as require a comparatively heavy and close grained wood, which by its color and tissue is well suited for ornamentation and handsome utility. The juice expressed from unripe persimmons forms a very useful liquid for staining wood, giving it a rich brown color, like walnut.

"Much of the carved wood and wooden utensils and cabinets from Japan, often supposed to be walnut by our people, is in reality only common wood, stained with persimmon juice. Some of the most elegant wood carvings at the Centennial were of this nature.

"As to the fruit itself, it is nutritious, palatable and to a high degree charged with those chemical ingredients which give most fruits their value in preserving the health and purifying the blood. This fact is insisted on by the Japanese doctors, some of whom I have known to cure their patients by a 'persimmon cure' like that of the 'grape cure' of Southern Europe.

"The most luscious Japanese persimmons are ripened by air-tight closure in casks containing kaki (a kind of beer made of rice), which in

two or three weeks perfect a remarkable flavor. Unlike our fruit, the Japanese species ripen without frost, though frost improves the common varieties.

"The large amount of 'grape' sugar in this fruit has set some persons experimenting on them to determine whether sugar could be extracted in paying quantities. I do not know whether satisfactory results have yet been obtained. The fact of their containing so much saccharine matter is the reason of the ease with which they may be dried or cured, in which form they are sold as sweetmeats in Japanese shops." HENRY LOOMIS. S. F., Feb. 26th, 1877.

## ARBORICULTURE.

### Tree Planting.

EDITORS PRESS:—One object in writing on this subject now, is to call the attention of your patrons to a new and well tried process of setting out any kind of choice tree that is to be located upon soils that do not usually carry sufficient moisture to advance the necessary growth of top and bottom; a proper foot-hold to mature or secure the tree permanently on the spot where it is desired it should stand. You may well remember of my speaking of this novel way of planting out trees six years ago, which process proved more than a success. We covered over three-fourths of an acre with various sorts, such as we cared to grow around our dwelling at Rio Bravo sheep ranch, and found it to work like a charm. This process was applied to prevent or keep off the heated earth at the roots, and to retain the moisture applied and that which would naturally ascend from below to meet the demands of the tree.

Firstly, in removing the earth a hole was left in the form of a deep dish, about three feet across on the earth's surface and nearly the same in depth—some were more shallow. This depends upon the size of the tree and roots to be buried. All around upon the outside we placed a layer of chip-mold, or straw-mulch, about three inches in thickness. In those cavities we set some large peach trees, full three inches in diameter, with a fair-sized ball of earth, which was raised with the roots. After filling up the space around the roots to within five or six inches of the surface, then covered over the whole with chips and filled up nearly level—leaving the ground a little dishing. Now, you see, as we used to pour on a few pails of water about every fourth or fifth day, this would settle all around the outside of the tree rapidly. Besides this, chips and other mulch act as a very good non-conductor of heat from above, and all round from below. It therefore keeps the tree more cool and moist. One-third or one-fourth the application of water, in this case, would bring as good results and more effectual than it would have been if these trees, large and small, had been set out according to the common custom. I think trees which require irrigation, as little water as possible should be applied; then the roots, by a natural attractive law, will descend for moisture and not spread out near the surface, as they otherwise must when the land is continually moist.

It is well to lean the tree from two to four degrees in the direction of the prevailing winds, so as to face them. The first year the tree is most liable to lean. Light tops, at setting, are advisable. A tree that is blown about by every wind is kept loose at the roots; it cannot hold or grow as fast as one permanently fixed. Many different methods may be applied to remedy this movement where it becomes, in many localities, absolutely necessary. In most any good soil, after the tree is well started, but little water need be applied, and, in general, will stand without artificial means. S. W. JEWETT. Merino Farms, Kern Co., Feb. 19th.

## THE VINEYARD.

### Reply to Mr. Blowers

EDITORS PRESS:—Without wishing to provoke a controversy with Mr. Blowers or any other person as to the difference in "the yield of raisins, cured by sun heat and in the evaporator," the following is respectfully submitted as corroborative of the statement that in some section of the State the yield by sun-drying is not as large as Mr. B. reports it to be "in his vineyard." According to the Santa Rosa Democrat, "Mr. DeTurk's experience is that it takes about five pounds of grapes to make one pound of raisins by sun-drying." Col. Chalmers Scott states, according to the Los Angeles Herald, "that the bees and other insects have developed such a great fondness for grapes, as to almost ruin the vineyards in some parts of San Diego county. The grapes form as of yore, but the juice is sucked out by the insects, thus anticipating the wine press and raisin maker." A great amount of similar testimony might be offered, but the above will show that there are two sides to this question.

It is not to be doubted that in some localities where large, firm and sugary grapes are raised, and where there is comparative immunity from devouring insects and the grapes are dried on trays instead of on the plowed ground, and the bunches are carefully handled, the loss is not so great as when the conditions are less favorable.

In the evaporator, the yield is uniformly about one pound from three pounds. Upon this point there is no dispute, nor will there be as to the eating and keeping qualities of such raisins when they shall have become better known—it is only a question of time.

A full description of the proposed Alden factory at Riverside would make this letter too lengthy, but we shall take pleasure in explaining to Mr. Blowers and others interested, if they will call at our office, the *modus operandi*, by which five tons of grapes can be converted into superior raisins, every 24 hours, in two of our enlarged and improved evaporators and our finishing chamber. We can only say here that the grapes will remain in rapid currents of moderately heated air for about six days, and that there will be no additional outlay for labor and fuel.

We are prepared to guarantee such work in a factory constructed and operated according to our new plans and instructions, which our competitors should seek to fully understand before saying "you can't do it." This is an age of sharp competition; inventive ingenuity is wrought up to the snapping point, and, judging from the numerous fruit driers that have been patented since the discoveries of Mr. Chas. Alden, it is evident that fruit drying by artificial means is receiving a large share of public attention. In raisin making we are all "beginners" and should help one another, for it promises to become, in connection with fruit drying, one of the leading industries of the State. The Alden is the oldest and, as we think, the best method, and in trying to introduce it and in stimulating the planting of the finer varieties of fruits, we have expended a large amount of money and have, we think, done the fruit interest of the State no damage. We shall not knowingly "mislead" any one nor attempt to build up our business by pulling down our rivals. The intelligent fruit growers will judge us all by our works and consign to the capacious and already well-filled grave-yard of dead processes the weak and defective ones. It will be with fruit driers as with everything else, "a survival of the fittest."

ALDEN FRUIT PRESERVING COMPANY. S. F., Feb. 25th, 1877.

[We have also received from Mr. P. M. Gill a communication containing statements in harmony with those in the above letter. It will be unnecessary to print both.—EDS. PRESS.]

## THE STOCK YARD.

### "Horn Ail or Hollow Horn."

In a lecture before the Vermont Dairymen's Convention, as reported by the *New England Farmer*, Prof. Noah Cressy, of the Massachusetts Agricultural College, spoke of horn ail, a disease formerly supposed to be prevalent, but seldom heard of now. It is almost entirely ignored by all but the most ignorant cow doctors. When he first went to Amherst to lecture, Prof. Stockbridge told him he must expect to be questioned pretty closely upon horn ail, for about all the sick cows he ever heard of in that vicinity had the horn ail, if he could believe the statement of nine-tenths the farmers. So, previous to one of his public lectures, he sent one of his pupils down to a slaughter house for a sample of the horns of a cow. He brought up a bushel, all of them hollow.

During the course of the lecture, as was expected, the subject of horn ail came up, and the doctor, not being very familiar with the disease, asked the audience to describe the symptoms, which they did quite freely, all stating that the horns were hollow. The doctor then brought out a horn from his basket and held it up before the audience, and inquired if that was the kind of a horn they were talking about. All assented, saying that that was a fair sample of the horns of diseased cattle. He then showed the others, one at a time, till the basket was emptied, all being pronounced diseased by the audience of practical farmers. The doctor then told them that those horns were brought from the slaughter house in the village, where they had been recently taken from animals that were killed for beef, that the meat had been peddled over the village, and if those animals were all sick with the horn ail when slaughtered, he guessed he had better get out of Amherst as soon as possible, for he did not care to be fed upon diseased beef all his life. He thought that if all the farmers sold their sick cows to the butchers as soon as they found they had got the horn ail, the matter had better be looked into.

The Professor then explained that the horns of all cattle are hollow, and that the disease they had been talking about was an imaginary affection of the owner, and not of the animal. If he supposed the animals from which his bushel of horns had been taken were all sick with the horn ail, he should hope that his next beef might come from a polled cow or mooley, for she couldn't have the horn ail. Yearling cattle have solid horns, but as they grow older the horns become hollow and the cavity increases with age. It is true that our pastures do not afford a sufficient supply of phosphates for our cows,

and that the soft, spongy portions of the bone are sometimes absorbed and taken up to supply the draft upon the system, while the cows are giving milk. Feed bone meal, supply the animal with lime, and then she will not be obliged to consume her own bones.

He then related a case of a cow doctor who was called to look at a valuable cow which he pronounced sick with the horn ail, and to cure it he cut off the tail, but in a suit at law, brought by the owner, paid the penalty of a \$50 fine for mutilating the cow.

Farmers and cow doctors should both understand their business better. Disease increases because people do not know how to live properly, and sickness in animals increases because we have ignored nature's laws in our treatment of them.

## THE STABLE.

### The Annual Horse-Stealing Raid.

In view of the increased prevalence of horse stealing in the interior of southern California, the Anaheim Gazette advises an organization of farmers for self protection. That paper says: "The annual horse-stealing raid is being carried on with great energy, and is creating quite a sensation among stock owners throughout the country. These raids are not the acts of individual thieves, but are carried on by organized bands or companies, whose field of operations extends from Oregon to Arizona. Every gang works in harmony with its fellows, and under orders from the chiefs of the company. There is a regular fountain head from whence issue orders to the trusty gang commanders, who are located throughout the above named territory, and who again issue their orders to the gang of actual thieves, so to speak, who operate under their immediate control. Each district chief has his band of thieves well in hand, and it is composed of low desperadoes—thieves to the manner born. They are a class who will steal anything and stop at nothing short of murder; and even murder when the chance offers to take the life of an enemy, real or supposed, without much risk of detection, is indulged in by the worst element of these roughs. Every mountain pass or trail in their district is thoroughly well known to these men; their trails are so carefully arranged as to baffle detection save when most experienced hunters assume the task of following them. It is also the custom of these worthies to have a regular district rendezvous, usually situated in some unfrequented and almost inaccessible place, where the stolen horses are gathered up, and where such of the gang who are in actual fear of arrest, conceal themselves. The balance of the gang are usually scattered through the district in small numbers, awaiting orders, and we believe we have a pleasant little colony of these gentry in our town—Downey City and San Juan, San Luis Rey, etc., also being similarly blessed. When a raid is decided upon, the thieves commence operations by laying hands on every horse they can get and driving them into the mountains. Some of the gang meanwhile, remain around the scene of the thefts to watch the officers and citizens, and to be prepared to warn their confederates if necessary. The horses stolen by ones and twos and threes, are then rendezvoused at the district headquarters. (The neighborhood of San Gabriel, old mission, is said to be the head quarters of this district.) Around here the district leader, who is in communication with the State chief, keeps his hand until he gets the word to start. The horses are then driven as secretly and rapidly as possible north or south, according to order, until they meet at a given spot with a band similarly procured, coming from the opposite direction. A change takes place, and the horses stolen in the south are taken north, and there sold without much risk, and the same course adopted with horses stolen north by driving them south and there disposing of them. \* \* \* The fact is almost certain that all the horses stolen from the different sections are being corralled at some rendezvous; or to put it differently, the spoils from each district will center at one given point. Then let a few resolute men from each of these districts get together and put themselves under the guidance of the most skillful and efficient officer of the district, and make it their business to ferret the rascals out. And let the stay-at-home brigade put their hands in their pockets and make up a pool to compensate the officer, and provide supplies for the posse. Say a call be issued for volunteers and the officer agreed on and then let him select a few good men from the number. For be it known, that there are Americans interested in this thieving company, and officers know pretty well who they are, and it would be very desirable to select such ones (who would doubtless be the first to volunteer) to stay at home. We believe the plan is worthy of consideration, and would be indorsed by our county officials, who sympathize heartily with the people in the premises.

THE LARGEST CLOCK.—The clock in the Crystal Palace at Sydenham, England, is said to be the largest in the world. The dial is 40 feet in diameter. The hands, with their counterpoises, weigh nearly a quarter of a ton. The minute hand measures 19 feet in length and moves half an inch at every beat of the pendulum. The distance traveled by the point of the minute hand is nearly four miles a week.



## PATRONS OF HUSBANDRY.

### Grange Educational Meeting.

There will be a discussion on the subject of education at the meeting of Golden Gate Grange in the Grangers' building, San Francisco, on Tuesday evening, April 10th. Dr. and Mrs. E. S. Carr and Professor E. W. Hilgard are expected to be present. Patrons from all parts of the State are invited. J. D. BLANCHAS, Master Golden Gate Grange, S. F.

GOLDEN GATE GRANGE, San Francisco, will meet hereafter on the 2d and 4th Saturday evenings of each month.

### Grangers' Business Association.

The stockholders of the Grangers' Business Association held their annual meeting at their place of business in San Francisco, Wednesday, February 21st, 1877.

Daniel Inman, President of the Association, called the meeting to order at 10 A. M.

The minutes of the last annual meeting were read and approved.

The Secretary read the report of the Business Manager, giving a full and detailed statement of the business affairs of the Association for the year ending December 31st, 1876, showing the amount of business done in each department of wheat, wool, dairy, fruit and merchandise, and the commissions thereon; also giving the total amount of resources and liabilities, and an itemized statement of expenditures, the whole showing a net profit over all expenses of \$8,296.31 on last year's business.

The Manager presented a supplemental report from January 1st to February 15th, 1877, showing a net profit over all expenses for one and a half months of \$1,050, making a total of \$9,346.31 for 13½ months.

This very gratifying statement induced the Directors at their meeting held February 20th, 1877, to declare a dividend of 12½ on the first instalment.

H. W. Hills, of Santa Clara, offered a resolution that the action of the Directors in declaring a dividend be non-concurred in.

After a thorough discussion of the resolution it was defeated by a large vote, thereby sustaining the action of the Directors in declaring the dividend.

The question was then raised as to there being a quorum of stock represented, which would enable the stockholders present to elect Directors.

The Secretary then proceeded to ascertain what amount of stock was represented, pending which the meeting adjourned to meet at 1:30 P. M.

At 1:30 P. M. stockholders met pursuant to adjournment.

The Secretary reported that more than a quorum of stock was represented in person and by proxy.

Amos Adams then offered the following: Resolved, That the Secretary be and he is hereby authorized to permit the original owners of shares which were sold for non-payment of assessment and bought in by the Association, to redeem said stock on or before the 20th day of May, 1877, upon paying said assessment and costs thereon.

Wm. Vanderbilt offered an amendment requiring said delinquents to pay interest at the rate of one per cent. per month, between the day of sale and time of redemption.

A. T. Hatch offered the following as a substitute for the resolution and amendment:

Resolved, That those whose stock has been sold for assessment be allowed six months' time to redeem it, by paying interest at the rate of one per cent. per month, after the 20th of March, 1877, and that the dividend be credited at the time of payment of the assessments, costs and interest, and that the six months should commence to run from the day of sale.

A vote was taken and the substitute adopted.

The meeting then proceeded to the election of directors for the ensuing year, whereupon the following persons were placed in nomination: Daniel Inman, Amos Adams, John Lewelling, H. D. Logan, G. W. Colby, I. C. Steele, W. L. Overhiser, A. T. Hatch, O. Hubbell, W. W. Gray, Thos. Flint, H. W. Hills, Uriah Wood, R. C. Haile, Thos. Upton and G. P. Kellogg.

On motion of J. M. Costigan, the nominations were declared closed.

The stockholders then proceeded to vote, with the following result:

Daniel Inman received.....	2,704	votes
Amos Adams ".....	2,704	"
John Lewelling ".....	2,704	"
A. D. Logan ".....	2,704	"
G. W. Colby ".....	2,640	"
I. C. Steele ".....	2,611	"
W. L. Overhiser ".....	2,108	"
A. T. Hatch ".....	2,239	"
O. Hubbell ".....	2,648	"
W. W. Gray ".....	2,654	"
Thos. Flint ".....	2,661	"
H. W. Hills ".....	1,036	"
Uriah Wood ".....	87	"
R. C. Haile ".....	310	"
T. Upton ".....	209	"
G. P. Kellogg ".....	149	"

The President then announced that Daniel Inman, Amos Adams, John Lewelling, A. D. Logan, G. W. Colby, I. C. Steele, O. Hubbell, W. W. Gray, and Thos. Flint had received the requisite number of votes and he thereupon declared them duly elected Directors for the ensuing year.

There being no further business, on motion of R. C. Haile the meeting adjourned.

During the meeting the question was asked, why the manager's report made no reference to

the real estate the Association had purchased. The answer given was that no part of the capital stock was used in its purchase, that it was not a part of his duties, and the only connection he had with it was to pay the interest on the deferred payments as it accrued. The property on the corner of Davis and California streets, now occupied by the Grangers' Business Association, Farmers' Mutual Fire Insurance Company and Grangers' Bank, was originally purchased by these three incorporations for \$90,000, each owning one-third interest in it, and each paying \$10,000 down and the balance running on time at nine per cent. per annum interest. In fitting up the building suitable for the purposes for which it is used, and in the erection of the new frame building, a further expense of some \$10,000 was incurred (the larger part of which has been paid from the income on rents) making the total cost of the property about \$100,000. Real estate experts who are acquainted with the value of property in the city, estimate its value now to be at least \$30,000 more than it cost. One-third of the increased value (\$10,000) can properly be included among the assets of the Grangers' Business Association; add this to the \$9,000 profits on the business transacted by the Association and it will nearly equal the capital stock paid in on the first installment. AMOS ADAMS, Secretary.

### Union Meeting of San Jose and Santa Clara Granges.

EDITORS PRESS:—Believing it a duty as well as for the good of the Order, for the State Lecturer to communicate the result of each and all his visits, permit me briefly to call attention to the meeting at San Jose on Saturday, February 24th. As previously published it was called for 11 o'clock A. M., and upon my arrival by train at that hour I was met at the depot by Past Master Bro. Settle, and in company with Bro. Hancock, from Sacramento Grange, I was at once conveyed to the San Jose Grange hall, where awaited us the united Granges of San Jose and Santa Clara—in full force—and being at once publicly introduced the first thing in order was declared to be an address from the State Lecturer, to which I most cheerfully responded, as the hall was filled to its utmost capacity with Grangers and outside farmers and citizens who manifested their great interest in the meeting.

For one hour and forty minutes I was listened to with uninterrupted attention—not from the oratorical powers or peculiar merits of the speaker, but from the intense interest in the subjects announced. To wit: 1. Labor not antagonistic to capital, but for a State or Nation to become just and prosperous by it, labor must become the equal and co-worker with capital, and capital and labor must become one in interest to not only a part of the people, but to the whole people. 2. To accomplish this and the Order of Grangers known by the name of Patrons of Husbandry, must extend their boundaries so as to admit within their interests the entire industrial class, by whatever name known, and designate it The Labor Element of the State and Nation, and through this element so co-operate for their special interests as to secure for the producing and laboring classes an equal standing in society, both financially, politically, socially, morally and legislatively. 3. That the corrupt class legislation of the present day, both in State and national legislation, demands this co-operative element as the only means left to the people to bring back to our State and nation justice and equality in finances, taxation, retrenchment and general reform.

After the lecture all were invited to the ante-rooms to partake of the sumptuous feast prepared for all present, and which all seemed ready to discuss in a most personal manner, with that social cheer well known to the Grange harvest feast. This being done most satisfactorily, we all returned to Grange hall and, being called to order by our most worthy friend and brother, Jones, W. M. of San Jose Grange, general discussion of the topics introduced by the State Lecturer was called for, when brother Hancock, of Sacramento Grange, was called for and, for some 30 minutes or more ventilated the question of finance, to the gratification of the entire audience, followed by brothers Horner, from Alameda county, Wilcox from Santa Clara Grange, and others; and at about five P. M. one of the most interesting meetings ever attended by us, was called to a close for an opportunity for personal greetings and social introductions. Such is the character and conduct of our open meetings, showing conclusively that, so far as there being any fear of the Grange movement being in a dying condition, that it is to-day, in California at least, more active, more earnest, and more determined than ever to accomplish, not only for the agricultural community, but for the entire labor element, a better financial, social, educational and moral condition, as by co-operation, they being seven-tenths of the voting population, have the powers of change in their own hands.

Not being able to return till the next day we accepted from the many invitations given us, one from Bro. Cyrus Jones, Master of San Jose Grange, to accompany him to his Santa Clara avenue ranch home, six miles east of San Jose, where, in company with his kind family, we spent the night and partook of their kind hospitalities. B. PILKINGTON, W. L.

### The Fruit Orchards of Sacramento County.

EDITORS PRESS:—My last promised your readers some further notes on the agricultural features of one of the best districts of Sacramento county, and what may be justly classed as one of the "garden spots" of our State.

A traveler passing along the line of the Central Pacific railroad can form but little idea of the rich and almost unfailing fruit, pasture and grain region between the railroad and Sacramento river—a scope of country varying in width from 10 to 15 miles.

To indicate distinctly the part of the county visited, it may be stated that after an open Grange meeting in the neat Grange hall at Florin, Brother Rutter took us to his well improved home, and after tea went with us, according to previous arrangement, to Brother Fassett's, as the latter kindly agreed to accompany us next day to Georgetown, where Franklin Grange meets. After early breakfast Saturday morning, he and his good wife went with us to enjoy the installation harvest feast, and open meeting with Franklin Grange, as already described in the RURAL. Brother Fassett, who is Master of Florin Grange, assisted me with the installation ceremony. After the meeting Brother Wm. Johnston, Master of Franklin, took Brother Earl and myself to his beautiful home six miles away and immediately on the bank of the Sacramento river, and in the upper edge of what is unquestionably one of the richest and most abundant fruit-growing regions of California. His ranch is a mile or two above Richland, on the east bank of the river. It is the really great fruit interest of this thrifty region to which I propose especially to allude.

First, I must not omit to mention that large quantities of the finest fruits, especially what we generally distinguish as "northern fruits" are produced around Florin.

There they rely entirely upon

#### Irrigation by Wells and Windmills.

Several of which are seen on each fruit ranch. An abundant supply of water is found from 12 to 15 feet below the surface. Brother Rutter and Brother Fassett each have two wells, side by side, some seven or eight inches bore, and pumped by one set of machinery, on the one place by a windmill, on the other by horse power, which they assured me furnish water enough to irrigate 10 acres on each place. Brother Rutter showed us three good-sized orange trees well loaded with fruit, out in the open air, February 2d.

The grain crops in all this region look remarkably well, though much of their wheat and barley did not come up until after the January rains. This is a good grape region and has many fine vineyards. I very much enjoyed chatting with Brother Smith, Worthy Lecturer of Florin Grange, about the botany of our State. He is devoted to the science and well posted in it theoretically and practically. Why should not the time come when we shall have classes in botany and other sciences connected with our Granges, just as the Rochdale and other co-operative societies in England have science classes connected with their work? This point we discussed, and also the interesting questions for botanists brought out by my "Ralph Rambler" papers in the RURAL PRESS some years ago, whether our species of *Erodium* or *alfilerilla* are natives of California. Brother Smith reminded me of the statement of some botanists, that our species have been known here ever since "white men" occupied California. But does this prove our *alfilerilla* or *filere* to be a native of California? Does it preclude all possibility of its having been introduced here by the Jesuit fathers mixed with barley and other seed, 100 years ago? or by Cortez and his followers in the same manner three centuries ago in Mexico, thence spreading to California. By no means. Have all the old Spanish records been carefully searched on this point? Most likely not. Botanists generally agree in calling our species *Erodium cicutarium*, *E. bipinnatum* and *E. moschatum*. Now, all the weight of authority considered, Ralph Rambler is still fully convinced that either one of two things is true: either these species are natives of Italy, Numidia and regions of Levant, as shown by Loudon and other botanists of the old world, or our species are *not cicutarium*, *bipinnatum* and *moschatum*. If neither of these conclusions is correct, Loudon and other European authorities must be wrong in a long accepted record. But we will turn from this digression to the

#### Fruit Orchards on Sacramento River.

Imagine to yourselves some 20 miles of almost continuous orchards, broken only here and there for short intervals, and extending with an average width of some 40 rods back from the levee along the east bank of the Sacramento. Picture, also, at intervals of every half mile, or a mile, tastefully improved homes with ornamental trees and flowers, surrounded by a wilderness of well-trimmed peach, apple, pear, plum, cherry, fig and almond trees—several of these residences having cost each from \$8,000 to \$20,000. Add occasionally among these orchards a fine dairy ranch, with its rich alfalfa pastures, in which the sleek cattle are grazing peacefully, while most of the grounds are well filled with

choice poultry. You will then have a faint idea of the many happy, thrifty homes around, the little river postoffices of Richland, Courtland, Walnut Grove and Isleton.

The west bank, in Yolo and Sacramento counties, presents a similar scene, except that the orchards are not so continuous, and the improvements, though good, are not so costly. Altogether this 20 miles of river farms forms truly a garden spot of California. The places of Wm. Johnston, James and John Whitcomb, Dwight Hollister, and of Messrs. Bates, Ralston, Edmund Brown, Solomon Runyon, Talmadge and others, are among the most finely improved country homes I have found anywhere in our State. Messrs. Huber, Welsh, J. B. Greene, Bump and Kercheval have some of the best improved places on the west side of the river.

Mr. James Whitcomb keeps in a large barn about 100 stall-fed cattle; Mr. Johnston has about 100 cows, chiefly of Jersey blood, and makes some of the finest butter sold in the Sacramento market. On the ranch of the latter I examined the oldest alfalfa pasture which I have seen, and perhaps the oldest in the State. It was sown in 1862, and without any reseeded, except what nature has given it, it is to-day producing as tender and good pasture as any there. This practical example goes far to explode a current belief that in our climate alfalfa or lucerne may need reseeded once in ten years, or thereabouts. Possibly it may elsewhere; it certainly does not here.

As regards the luscious fruits produced here, they ship immense quantities of them annually to San Francisco on little stern-wheel steamboats, built and owned by their

#### California Transportation Company.

Composed chiefly of these farmers and fruit growers. They now have five such steamers plying daily in their interests and for their accommodation along the Sacramento and the chief sloughs which form some of their fertile islands. They tell me they must soon build a sixth to supply the trade. They can easily keep them employed because of the varied products of their mixed husbandry—the only true and profitable system of farming, where there is moisture enough to justify it. They are preparing now to ship fresh fruits East next summer and fall in the refrigerator cars of the new "Fruit Shipping Company," formed in the interest of the producer.

Besides fertility, the finest quality of all these lands on the river bank is absolute certainty every year. Many of these good people have been here since 1854-55, and have constantly received fair returns from the soil for their labor. Hence it is a region of abundance, of happy homes, and of lands unencumbered by mortgages. This, too, in spite of expensive clearing and levees. Most of these people rent their orchards to Chinamen. One year, some four acres of early peaches were sold by Mr. Johnston at \$500 per acre, and the fruit dealers who bought them made a handsome profit upon them. On some of these places, as I am reliably informed, the Chinamen who rent the orchards and receive 40% of the yield, have realized \$3,000 in one year. The strip of land some 40 rods wide along the river, and which is higher than the tule land adjacent and further from the river—because of the laws of nature which make a stream flowing through a level country gradually raise its bed by annual deposits—is their best orchard and alfalfa land. It is so moist as to require no irrigation. The rich flavor of their canned peaches, which I enjoyed in several of their homes, cannot be surpassed. The health record of all that region is good, very much better than I expected to find. People there look as robust as any in the State, in spite of occasional but rare chills. Is it any wonder these lands are held at values varying from \$100 to \$280 per acre? I found but one tract of 500 acres, not much improved, which can be bought now now at \$30 per acre. Those owning 100 acres of such sure land are fortunate indeed.

February 20th, 1877. J. W. A. WRIGHT.

#### Election of Officers.

CAMBRIA GRANGE, No. 25, SAN LUIS OBISPO COUNTY, CAL.—C. H. Ivins, M.; James Wood, O.; Mary E. Ivins, L.; Ernest C. Ivins, S.; Minerva Cary, A. S.; Sarah Keatze, C.; Rufus Rigdon, Sec'y; John Mullen, G. K.; Indiana Rigdon, Ceres; Elizabeth Baker, Pomona; M. Comfer, Flora; M. Leffingwell, L. A. S.; Trustee, Levi Blunt.

HEALDSBURG GRANGE, No. 18, SONOMA CO.—Election, Dec. 2d, 1876: C. M. Bosworth, M.; Alexander H. Stites, O.; A. B. Nally, L.; James L. McClish, S.; Charles Clarke, A. S.; W. T. Allen, C.; A. Hassett, T.; W. N. Gladden, Sec'y; H. T. Walsworth, G. K.; Mrs. Mary M. Barnes, Ceres; Miss Sarah A. Rice, Pomona; Miss Lizzie Allen, Flora; Mrs. Jane B. Walsworth, L. A. S.

#### In Memoriam.

HEALDSBURG GRANGE, No. 18, Healdsburg, Sonoma county. WHIRRRAN, The relentless hand of death has removed from our midst our beloved brother, SAMUEL E. MILLER, of Russian River valley, Sonoma county, therefore. Resolved, That in the death of Brother Miller this Grange has lost a worthy and efficient member, and his family has suffered an irreparable loss. Resolved, That we tender his bereaved family our heart-felt sympathy in their deep affliction. Resolved, That these resolutions be entered on the minutes of this Grange, a copy sent to his afflicted family, also published in the RURAL PRESS and California Patron. (Committee: E. H. Barnes, W. N. Gladden, A. B. Nally.



AGRICULTURAL NOTES.

California.

**ALAMEDA.**  
MORE RAIN NEEDED.—*Washington Independent*, Feb. 23: We have had fine growing weather the last two or three weeks, and the moisture in the ground suffices for the present, but only for the present. More is now desired, and will soon become indispensable. The fogs along the bay prevailing at night and until late in the day are one great help to this region, but do not extend far inland. The farmers and all others are now hoping for more rain.

**AMADOR.**  
TOBACCO.—*Ledger*, Feb. 24: It may not be known to many of our readers that tobacco of the finest quality can be grown on the foothills around Jackson. The other day we were shown a quantity of cured tobacco at Mr. Follander's near Mokelumne river, which he grew on a small patch of made soil. It is pronounced by good judges to be equal to the best Southern tobacco. Follander says he believes tobacco culture might be made a profitable occupation in some parts of this county. We believe its cultivation has never been attempted here to any considerable extent. It would be a good thing if some one acquainted with its culture would enter upon the work, and test the suitability of the foothills in soil and climate for the growth and maturity of the plant.

**BUTTE.**  
BARLEY.—*Record*, Feb. 24: Yesterday we were shown, by G. W. Dorn, several stalks of barley grown by Campbell & Spurgeon on the Bullard land, 10 miles west of St. Johns. It was nicely headed out, and looked splendid, but its height was the great matter of surprise to every one. Barley over 30 inches high in the middle of February is something seldom seen, and we must confess that in all our California experience we have never seen anything like it. The land is part of the justly celebrated Colusa plains, and before it was summer-fallowed, hardly any person would have accepted it as a gift. This is the first year's crop, and if it only holds, should "pan out" about 60 bushels to the acre.

**FRESNO.**  
THE DROUTH.—*Republican*, Feb. 24: The fact can not be disguised, the continued dry weather is becoming alarming. Up to the present time grain has continued to grow slowly, and stock has done remarkably well, but the weather is getting hot, and the ground dusty; what snow has fallen is melting fast, and the grass that has started to grow is rapidly drying up. Mr. James Collins, of Fresno Flats, informs us that he has resided in this county for the past 26 years and that he has never before seen so little snow in the mountains, or the grass on the plains so short and scant this season of the year as just now. In the foothills where grain has heretofore been sown about the first of March they have not been able to plow, and without more rain will not be able to raise a crop of any kind. Hogs are suffering as badly as sheep, and will soon be in a worse condition than sheep, unless the ground becomes wet. There is little doubt that we will have showers, but if this hot dry weather continues another week they will be too late to do much good. Sheep are coming in immense droves from the west side to the foothills, and those who have ranges rented on the plains are suffering from these passing bands. Fortunately, a great deal of land in the county will be irrigated and however severe the drouth, neither famine or a total destruction of stock can occur. The county needs more ditches, more farming with water, and fewer large bands of sheep and cattle.

IRRIGATED LANDS.—*Expositor*, Feb. 21: The present dry season has proved more conclusively than ever the value of irrigation. On lands that were irrigated last year the growth of vegetation is as forward as it usually is at this season of the year. Grass, weeds and flowers are thrifty and vigorous, and the soil looks moist and rich. On lands immediately adjacent, but which did not enjoy the benefit of irrigation last season, the vegetation is sparse and parched, and looks more like dying than living. We noticed a few days ago two pieces of land that were cultivated last season, and which lay side by side. One was irrigated in July last, but the other was not so favored. On the tract that was irrigated the wild vegetation was fully six inches in height, while volunteer grain growing on it was over 14 inches in height, and was green and growing. On the tract not irrigated the tallest spear of grass did not exceed three inches, and the vegetation looked as though it was dying for want of water. To our mind this important fact is demonstrated, viz.: That land thoroughly irrigated one season will produce a good crop next season, with a small amount of rain and no irrigation.

**LAKE.**  
UPPER LAKE.—*Editors Press*:—The grain in this end of the county is about all in and looking splendidly, especially about Bachelor valley. We are assured of a bountiful crop. In some places, however, the wire worms are destroying some. What will prevent that or kill the worm? [See Queries and Replies.—*Eds. Press*.] We have had considerable rain, and the ground is soaked, but the pleasant weather is bringing up everything. Farmers here are yet depending on the old standby—grain, corn and pork. They are first-rate in our rich soil and with good home market, but we must think a better crop

could be found. Among the range of productions are many that pay better to the acre, and a little cheap experimenting would demonstrate, I think, that many are adapted to our climate. —E. C. PARKER, Upper Lake, Lake county, February 18th.

**LOS ANGELES.**  
IRRIGATION AND CHANCE FOR GROWTH.—*Herald*, Feb. 23: The drouth which stares us in the face this year, if it comes, will not be without beneficial effects. It will lead to the development of our immense latent irrigating facilities. The lowest estimate we have heard of the quantity of land at present irrigated in Los Angeles county is 35,000 acres. The amount that can be irrigated may, in a modest estimate, be placed at 300,000 acres. Besides, there are immense quantities of moist lands which do not require irrigation, rain or no rain, detailed mention of which need not be made in an article on irrigation. It is not a strained expectation that, if all our sources of water supply, including artesian wells, are utilized, we shall have ample water to irrigate the lands in Los Angeles county which are susceptible of irrigation. Of one thing we may be assured—the infinite possibilities of Los Angeles county are not going to be allowed to remain perdu long. For a stretch of country extending from Purgatoire valley, in New Mexico, to the Pacific ocean, Los Angeles county and the little San Bernardino valley are the only fertile spots. The county is destined to fill up with a heavy mining population; and, as a result our farmers will be put to their trumps to supply it with food. Besides, the markets of the whole world are open to us.

ORANGE GROWTH.—A curiosity in the way of luxuriant orange growth, was a branch measuring about four feet in length that bore upwards of sixty fully matured oranges, all of good size, ripe and luscious. They were set so closely on the stems as to form almost a solid body of fruit and obscure the few straggling leaves that managed to creep in edgeways. From the tree which bore this remarkable fruitage Mr. Wolf-skill picked between 1,500 and 2,000 oranges, independent of the branch in question. Not the least singular feature of the altogether remarkable growth is found in the fact that an orange of last year's bearing was picked from among the new fruit.

TOMATOES AS WALL FLOWERS.—*Santa Monica Outlook*, Feb. 21: J. W. Scott now gathers ripe tomatoes from the top of a 20-foot ladder. This vine is growing on the sunny side of his house, is 25 feet high, and bears blossoms and tomatoes in every stage of growth. It has attracted no little attention from strangers, who wouldn't believe in its existence until they had seen it.

**MARIN.**  
HOWARDS.—*Journal*, Feb. 23: Howards is located on the summit of Dutch Bill canyon, in what are known as the Bodega redwoods, four miles from Green valley. There is also near Howards a fine farming and fruit and grape-growing country. Once in a while you see a dairy ranch, producing the finest of butter.

SHORT HORNS.—We had a glimpse of Mr. J. B. Redmond's famous Durham herd last week. His thoroughbred cattle have been in the fields all this winter, and have done well. They are all in splendid order, and are making an average of a pound and a quarter of butter a day. Cows of his herd that he calls good milkers give five gallons a day. Mr. Redmond's old bull, Lalla Rookh, the progenitor of his fine family of milkers, broke his leg a few weeks since, and had to be shot. He was 13 years old. His descendants to the sixth generation are on the place, and are first-class milkers all down the line. Mr. Redmond has a four-year-old bull by the old one, but the milking quality of his get has yet to be proved.

**MERCED.**  
LOOKING FOR FINE SHEEP.—*Express*, Feb. 24: A party of Japanese capitalists, accompanied by Mr. D. W. Ap Jones of San Francisco, passed through Merced on Monday last on their way to Smith & Chapman's ranch on the Chowchilla, to look at some fine blooded sheep with a view to purchase for shipment to Japan.

**MONTEREY.**  
CHOLAME VALLEY.—*Salinas Index*, Feb. 22: In the lower end of Cholame, 40 miles from Peach Tree, there was nothing green yet, and on the plains east and across the Coast range, the ground was dry and dusty. In Upper Cholame, some grain was up, but did not look well, in Peach Tree it looked much better. In the mountains about Cholame, for a number of years past, there have been a good many wild hogs, which were always regarded as common property, and were hunted and killed by scores each winter. But the hunters sometimes killed some of the marked hogs of their neighbors by mistake, and a lawsuit or two in cases of that kind are now pending in Cholame.

RECLAMATION.—*Democrat*, Feb. 17: Monday, in company with Messrs. Vanderhurst, Iverson and Lund, we traversed the tule swamp which the gentlemen in question are now reclaiming. Our route was along the line of the big reclaiming ditch, from the farthest end as completed, across the marsh to the high ground east of the lagoon, and through tules six to twelve feet in height. Each of the party was equipped with long-legged gum boots, and provided, besides, with a redwood slat about 12 feet long, to be used as a portable bridge, our course being guided by a compass, as, for most of the distance, nothing could be seen but the dense mass of tules on either side, and a thin strip of

blue sky above. The journey was a laborious one, occupying three hours to make a distance of four-fifths of a mile, though we made as straight line as we could. For most of the route, we found that the ditch had already reduced the water of the lagoon a number of inches, in some places the ground appearing, while it was seldom more than a couple of feet below the surface. Except where very shallow, our mode of travel was over the slats of redwood, laid across the tules, measuring our road after the fashion of a certain caterpillar, and making progress with more facility than one would imagine. Being from time to time compelled to diverge from the direct route by open pools which we encountered, they were sounded and appeared to be from six to fifteen feet in depth, being probably the sites of springs which will develop themselves as the drainage proceeds. Their presence will not be objectionable, as they will afford water for stock for drinking purposes, being also in the case of the larger pools, convenient places in which to breed fish. It remains only to add that the course of this expedition marks the line of a broad road which is soon to traverse the long-time marsh, bordered by ditches and planted with trees on either side. Having reached *terra firma* on the other side, we went thence to the ditch which has been dug through the willow grounds of the tract, finding that it has accomplished the object in view thoroughly, having drained the land already cleared so that it may be cultivated without difficulty the present season. To conclude, this exploration confirmed our previous belief that the reclamation of the Sausal lagoon will be a complete success, and will soon bring under the plow many hundred acres of the choicest land, which will never experience the ill effects of a dry season.

**NAPA.**  
A DEEP WELL.—*Star*, Feb. 22: A very deep well, for Napa valley, is that at Scheffler's new distillery. They had to go 84 feet and six inches to get water, and now it has filled up to within four feet of the top, making over 80 feet of water. It is six feet in diameter.

**PLACER.**  
THE ALDEN COMPANY.—*Argus*, Feb. 24: The stockholders of the Placer County Alden Company met at the American hotel, Wednesday evening, and adopted a code of by-laws for the government of the company. They also elected officers for the ensuing year. F. T. Lerner, J. W. Hulbert, B. D. Dunnam, and J. A. Filcher, were chosen Directors, but not being able to agree on the fifth member of the Board, the meeting adjourned without completing the choice. It is presumed that the four members chosen will fill the vacancy. J. A. Filcher was chosen Secretary, and Andrews & Hollenbeck Treasurer.

BLOWERS DRIER AT NEWCASTLE.—The citizens of Newcastle and vicinity held a meeting last Saturday to hear the report of Messrs. Hugin, Silva and Bogg, a committee that had been examining the various devices for curing of fruit. These gentlemen detailed the results of their investigation, and unanimously recommended the erection of the drying house invented by R. B. Blowers, of Woodland. Steps were taken to perfect the organization of a company for that purpose, and as about \$5,000 have already been pledged, there is no doubt that our Newcastle fruit-growers will soon have a fruit-curing establishment of their own.

**SACRAMENTO.**  
STATE BOARD OF AGRICULTURE.—*Record-Union*, Feb. 22: A meeting of the State Board of Agriculture was held yesterday at the office of the Secretary, in the pavilion. Present, President-Biggs and Directors Shippee, Coleman, Green, Bryte, Singleterry and Perkins. The Board immediately took up the main business of the meeting—the revision of the premium list—and after about three hours' energetic work completed it and ordered it printed. Adjourned until April 19th.

**SAN JOAQUIN.**  
IRRIGATION MATTERS.—*Stockton Independent*, Feb. 21: The San Joaquin and Kings River Canal and Irrigation Company have decided to extend their canal from its present terminus at Los Banos creek to Oristimba creek in Stanislaus county, 29 miles. The work will be begun at once and prosecuted continuously through the summer, until completed. It is expected to have the extension completed in time to irrigate the land covered in the fall. The present canal is 40 miles long, from its head at the junction of Fresno slough and the San Joaquin river to Los Banos creek, with a grade of one foot per mile. This portion of the canal has been completed nearly three years, and a tract of over 30,000 acres successfully irrigated. The extension will cover some 30,000 acres of land aside from that owned by Messrs. Miller & Lux, which cannot readily be estimated, but is probably as much more. The canal will be constructed on a grade of six inches to the mile, the former grade being found to be too heavy for the quantity of water carried. The company consists of J. Mora Moss, President, and Charles Webb Howard, Isaac Friedlander, W. S. Chapman, Nicholas Luning, John Bensley and Charles Lux, Directors, all of whom are heavy stockholders. The engineer in charge is Charles H. Barrett, assisted by Horace D. Gates.

**SAN LUIS OBISPO.**  
A DRY YEAR.—*Tribune*, Feb. 24: The limited rainfall up to the present writing, coupled with the exceedingly warm weather of the last week, creat's a great deal of anxiety in the

minds of people generally. It does not necessarily follow that because we have less than an average of rainfall up to this date that there will be either partially or wholly a failure of crops. That pasturage will be short, at best, is probable, but there is yet ample time to mature good crops. It all depends, however, upon the rainfall from this time up to the first of May. Up to this writing, February 22d, we have had no rain during the month, but it is not too late yet, and the weather-wise claim that the extreme heat is a harbinger of showers. A few inches of rain between this and the 10th of March, with a good shower or two in April, will save the country.

**SOLANO.**  
ARBORICULTURAL BOUNTIES.—*Vallejo Chronicle*, Feb. 10: The Trustees of the Napa and Solano Agricultural Society have applied to the County Supervisors for, and will undoubtedly receive, an allowance of \$120, for 120 trees planted by the Society four years ago along the highway near the race track. It is under a State law empowering Boards of Supervisors to allow a bounty of this kind that the claim is made. This is the first time since the passage of the act that the Supervisors of Solano county have been applied to for a reward.

**SONOMA.**  
CROP PROSPECTS.—*Democrat*, Feb. 23: The fall of rain Monday night and Tuesday morning was very high, but it was all that farmers in this county needed. The present prospects for abundant crops may be summed up in the words: "As good as can be."

RIPE CHERRIES IN FEBRUARY.—Mr. Fletcher Hastings, of Bennett valley, picked two ripe, well matured cherries from a tree on his place last week, that had blossomed and grown this winter. Beat this who can, and let us hear from you on the cherry question.

NOTES.—*Petaluma Argus*, Feb. 23: Oats four feet high and fully headed out are growing on Frank Emis's place near town. A pound a day at least is said to be the amount of butter to each cow at present made by the dairymen in this vicinity. L. W. Walker informs us that in all the years of his residence in Chileno valley, the farming and dairy prospects have not been better in the month of February than they are at present. J. M. Talbot, 22 years old and a native-born of Bennett valley, gave us a call on Saturday last. He says the grass and grain crops never looked better in that valley. The vine-growers of the valley have about finished pruning their grapevines.

PETALUMA COTTON.—We have received from S. B. Potter a specimen of cotton grown on the high ground, near the head of Washington street, in this city, which is pronounced to be of first-class quality by competent judges who have examined it. The fiber is fine, silky and strong. The seeds from which it was produced were planted in the latter part of May, and the cotton was gathered when the first frosts appeared.

EARLY GROWTH.—*Russian River Elder*, Feb. 22: Rev. R. McCulloch brought from Valley Ford last Monday a bunch of oats three and one-half feet long. It was an average of the growth on an acre lot on James E. Fowler's ranch. Mr. McCulloch also brought with him from the Junior Fowler's place a cabbage of average size, which was one of six growing on a last year's stalk. The season is pretty well advanced down there, we think.

**TUOLUMNE.**  
EDITORS PRESS:—Again seem the heavens to be bound up, refusing to shed tears even o'er our harvest prospects. Crops and stock feed are at a stand-off. If rain comes within a very few days, the heart of the husbandman may yet rejoice; if not, God only knows what would be the result. Trees are in blossom which ought not to be for over a month to come. If we have frosts in March the peach crop will suffer. Many of the trees are in full bloom, something never before witnessed at this season of the year since California became a State. The prospect for rain is not very encouraging, but nature knows what is best; so we must submit to the inevitable. There is an effort being made to seed the small patches of ground fit for cultivation among the foothills, where there is a supply of water for irrigation. Hay will be grown by this process, and may be some grain. After the crop is secured corn is planted, thereby securing two crops from the same ground. The great agent being water, that element which inspires so much of our real necessities of life, without which man could not exist; and how thankless we are for the great blessing, because of its universal abundance. Crops are not suffering, but if rain does not make its debut soon, the grain will make its exit, and we may have to learn to live on hope or migrate.—J. TAYLOR.

**TULARE.**  
THUNDER STORM.—*Delta*, Feb. 23: It continued for the space of half an hour, nothing but a dry thunder storm. Finally came a few pats of rain, then lightning, and the thunder broke out afresh. Then came the rain. The shakes fairly danced with joy, and when the morning broke large pools of water overlay the land. The storm was timely. It will save many of us from utter ruin. It will be worth the services of a score of doctors in point of health. We may be happy yet. As we are making up our forms for press the storm continues, and we are promised a gallacious old wetting down. A rancher who just dropped in to shake our fist had a countenance as open as the half-finished court house.





### Three Tasks.

"Spinning! What are you spinning in the dawn of the golden day?  
The bees hum over the meadows, the lark sings high in the skies.  
Spinning! What are you spinning, with face so grave and cold?  
In the fresh, glad light of the morning have you never a word to say,  
But only this stony silence, and ever the same fixed eyes?  
Spinning! What are you spinning?" "Threads more precious than gold."

"Weaving! What are you weaving in the glow of the summer noon?  
The birds have flown to the thickets, the dew is gone from the flowers.  
Weaving! What are you weaving so wearily and so long?  
The earth is faint and languid 'neath the breath of the burning June,  
And you alone are toiling through the heat of the blinding hours.  
Weaving! What are you weaving?" "A web that is firm and strong."

"Sewing! What are you sewing by the gleam of the fading light?  
The fire of the crimson sunset is waning far in the west.  
Sewing! What are you sewing, with tired head heavily bowed?  
"He will not come! I am sewing the robe I shall wear to-night.  
He will not come! I am weary; but deep in the grave is rest.  
And the heart has no room for sorrow beneath the fold of a shroud!"

### Two Lives.

"The highest, the most human, the most divine life is the one into which you can put the most of God and humanity, because that is the life which is most capable of receiving it."

In a fine rural district in the central part of New Jersey lived two boys, George Walters and William Severn. Their fathers were both farmers. They were of about the same age. In winter the boys went to school together in the little schoolhouse, which, for the sake of economizing space, was set just outside of the road. Their opportunities for self culture, so far as condition and duties were concerned, were about equal. Farm life always draws heavily on a boy's school life, yet, by diligence and perseverance, many farmer's boys, as is well known, have become fine scholars.

When George and William first went to school they sat on the same bench, studied the same lessons, and gave promise of much the same future. There was little difference in their ability to acquire knowledge, and, to outward appearances, but little difference in their dispositions. But it soon became manifest that they were different. George grew in diligence while William became careless and indolent. They were soon separated in their studies, and they grew farther and farther apart as time rolled on. Their tastes and habits grew apart as rapidly as their minds, until, long before they became men, they seemed to have but little in common. George was becoming a fine scholar. He employed his leisure in reading and study. In consequence, he was steady and thoughtful, and free from those vices and roughnesses which the boy of the period deems so manly and so dignified. William, on the other hand, had made but little progress in his studies. He could barely manage to read. His leisure time was spent in lounging in the store or tavern of the nearest village, smoking vile tobacco, listening to vile conversations, and sometimes indulging with his companions in drinking vile liquor. And yet he was not thought to be an exceptionally bad boy. He had some good qualities but he was fast dwarfing them. People rather liked him and half excused his follies. They called him "fast" but thought that he would reform as he grew older. Ah, friends! the path which he was treading is not a path to reformation.

We will here digress in order to notice the parents of the two boys, and the home influences that surrounded each. We believe that no picture of a man's life is complete unless it sketches his early surroundings—the home influences that were brought to bear in forming his character. Charles Walters, George's father, was an intelligent, liberal-minded farmer. He was thorough and exact, prompt in his dealings, and careful to have all things done in a systematic manner. His farm was kept in good repair. His work was always done in time, and done in order. Within doors everything was neat and cheerful. Mrs. Walters was a good housekeeper and a good mother, as a good housekeeper always is, if a mother at all. The house was not merely a place of shelter, it was a home—a place of pleasant associations and refining influences. The requirements of good taste were as carefully met as the demands of the body. Books, papers and magazines, such as the intelligent and pure-minded desire, graced the center-table and exerted a powerful influence over the whole family, and particularly over the growing boy. Here it was the delight of Mr. Walters to spend his evenings in reading, talking and assisting George in his studies. Thus encouraged and surrounded by such influences, it is strange that

the boy should learn to love knowledge, and to appreciate beauty and purity of character? Is it any wonder that his progress was both rapid and substantial?

But what were William Severn's surroundings? His father was one of those men whom one does not know how to classify. It would not do to call him a good and honorable man, because he had too many bad traits of character; it would not do to call him a bad man, because he possessed too many good qualities. He was a sort of half-way man, thorough in nothing, and deficient in many things that go to make up the true man. He was, however, a man in fair standing; was considered a "good fellow" by his associates, who often took advantage of his failings. His farm was kept in a slovenly manner. He did not exactly neglect his work, but he manifested no taste and employed no system in its management. His son, of course, was managed in the same way. He cared little what tastes or habits William acquired. He took no interest in the boy's studies; never tried to encourage him in anything that he deemed of so little importance. He looked upon his son as a sort of animated machine for doing the odds and ends of the farm, and took no thought for that higher nature which needs such careful training in every youth.

In the house, physical wants and physical comforts only were regarded. Mrs. Severn was a good-hearted woman, but her æsthetic tastes, never very high, had been gradually dying out in the incongenial climate of her husband's grosser tastes and associations. The house had a gloomy, barren appearance. A chill crept over you as you entered this dwelling, yet you could not tell just why. There was nothing offensive about it. Its offence lay in the absence of anything attractive. No books or papers were to be seen, no cheerful pictures hung against the wall. There were no flowers, no music, no anything to refine the inmates and make them feel that home is the dearest spot on earth. Nor did Mr. Severn so esteem it. The haunts of the village gossips and loafers suited him far better, and thither he went at every opportunity. It is not strange, then, that with nothing at home to attract him, and with the example of his father for excuse, William should early become a village loafer, and should fall into other bad habits for which his father's practices gave license. Self-culture was not held up to him as a duty; temperance was not taught him as a virtue; purity of habit was not set before him in its moral beauty. It is not strange that he became what we have already seen. Who shall say that the fault was all his own?

As story writers say, we shall now step forward a few years. George Walters and William Severn are young men now. The difference in their tastes and habits has grown with their years. The friends and classmates of other days are now widely separated, though still living in the same neighborhood. The north and south poles are not geographically farther apart than mentally and morally are these two young men. Yet William is not, even now, considered an abandoned man. He passes in the society of the neighborhood for a "fast young man;" but people will excuse "fastness" in some men, and William is one of those unfortunates whom people do not hold to a strict account. The habits of his earlier life have grown with his manhood. He still seeks questionable company; still spends much of his time, even more than formerly, at the tavern. The little village is no longer wide enough for him. Every keeper of a grog-shop for miles around knows him as a "good, free-hearted fellow," and secretly despises him while pocketing his money. His early tipping habits have developed a craving for strong drink, which very often gets the upper hand of him. It is no rare thing to see him staggering along the street with flushed face and bloodshot eyes. It is hard work for him to restrain himself sufficiently to keep up even his shabby neighborhood respectability.

How different with George Walters! He, too, has been developing the qualities which we saw early in his life. But while his early companion has been developing blots and stains, George's qualities have grown into beauty and strength, which place him among the foremost young men of his day. Unlike the other, he needs none of people's excuses and indulgences, and he desires none. He is looked upon as a useful man already, and one that is likely to be still more useful in the future. He has secured a thorough education, and is now a deep and reverent student of nature. He finds his chief enjoyment in intellectual pursuits, in gathering beauties from the boundless fields of literature and science. He is acknowledged to be a man of rare accomplishments and great intellectual power. He is an honor to himself, an honor to his parents, and an honor to the neighborhood.

Again we must pass over a number of years. The fathers of our young friends have gone to their final rest. The sons have succeeded to the farms which have known them from their boyhood. Thirty years ago these properties were about equal in value, but they are very different now. Aye, they tell of different owners. George's father left him the farm in good order, and he has been steadily making it better. Everything about the place speaks of comfort and plenty. You could recognize at once that while the farm is made to produce dollars, it is also made to yield pleasure and satisfaction to its possessor. While it supplies his wants, it also ministers to his higher nature. A stranger would feel certain that an intelligent, high-minded man lives there. The house is that

same old home-like, cheerful dwelling that we saw it of old, only it has grown richer and brighter while growing older. The kind mother is still there, rejoicing in the success of her son, and glorying, as only a mother can, in the distinction and honor which he has won; for he is now distinguished and honored for learning, piety and public spirit. There is another who also shares his triumphs now. He has a wife that well might be the pride of any man—a lady who would grace any position in life. They have a boy ten years of age and a girl eight—bright buds of promise—to claim their love and attention.

We must now turn to William Severn, who also lives in the home of his boyhood. The farm came into his possession in a very bad condition, and it has been rapidly growing worse ever since. The mortgages have increased; the buildings are out of repair; the fences are all tumbled down; the grain fields look poor and scanty; the harvest often lingers while the harvesters carouse. There are no marks of intelligence, prudent care about the place; everything seems to be going to decay. The house, grown older and more dilapidated, has a still more dreary and uninviting appearance. There is a change, but it is as black as ever. The mother is gone—driven from her home by the intemperance and consequent ill-usage of her son.

William has been married several years, and his wife, who is now mistress of this unhappy home, is a sad, disheartened woman. Like many others, she thought that he would reform, and married him only to find him constantly growing worse. They have one child, a boy, who is training for a miserable existence. God pity his future! The future, indeed, looks dark for them all. Their property is nearly gone, and even William's doubtful respectability is a thing of the past. Poverty, want and shame stare them in the face. May heaven pity them, and pity all who suffer as they do, the full fruits of evil habits—the consequences of intemperance!

In this brief story of these two lives, not yet ended but matured, we have endeavored to sketch in no unnatural colors two paths that open before our young men. Alas, how many are drawn into that path which is fatal to all usefulness and all happiness!—E. T. Bush, in *Phrenological Journal*.

### A Treatise on Man—Boiled Down.

[Written for the PRESS by JOHN TAYLOR.]

Man is one of man's puzzles; reason cannot account for man's peculiarities and eccentricities. His vain endeavor to be what nature never designed him to be, circumstances controlling events to the contrary, is a mystery. Ever aspiring and ever defeated, rising anon like a meteor, again sinking beneath the sod to be food for worms, and a theme for the moralizer. A God in power, but in embryo, and a babe in the endeavor. A tyrant and a sycophant, riding on tempestuous waves of popularity, again sinking into contempt by poisoned shafts. Man, thou art a poor man, if not rich in God's goodness and above the tempter's power to destroy. Why destroy life to save it? Rich thou mayst be if in possession of positive will power over the changes and chances of defeat; poised proudly and grandly above the turmoil of common pleasure seekers; calm in the midst of storm; strong though pain rack the timbers of the earthly tenement; placid though friends and fortune forsake; alike secure in poverty and riches, and above all casualties which may arise as the sun of life rises and sets. Man had no voice in his appearance upon the stage of time and should leave his exit to the same creative law. For man must yield to the grinding of Father Time, slow it may seem to be, but nevertheless sure. It is singular to note the action of time upon man's corporal system. Innocent and angelic in childhood, wayward in boyhood, ignorant in teens, God-like in manhood. The character of old age is determined by the use of youth and manhood. All changes indicate a stooping towards dust, the mother who bore and sustained him. But after death, what, with that which is claimed to be immortal?

DON'T FORGET THE GIRLS.—The girls, who are all too often neglected or forgotten in the busy labors of the farm. They are expected to wash and scrub, bake and broil, mend and make, run hither and thither at every one's behest and be contented and happy! Well, perhaps they are, but if they are it is because they are better than their surroundings. Now please give them a flower patch, a few plants, a cow, a pig and a few hens or other poultry. Give them the necessary facilities for converting their increase into cash. Assist them when asked, without grumbling. Commend them when they do well and sympathize with their misfortunes and mistakes. You will find that they will rapidly learn to "paddle their own canoe" without the assistance of any man, unless he happens to be the right one.—*Son of the Soil*.

THE occasions in life when we are called on to make substantial sacrifices for others, and to perform acts of heroic kindness, are rare; but the occasions when we can show little attentions and do small human charities occur every day in the week, and almost every hour in the day.

"JONES, did you ever see a snail?" "Certainly," said Jones. "Then you must have met him."

### Flowers.

[Written for the RURAL PRESS by GEORGE D. W.]

If nothing else existed to convince us of the divine origin and the pure, elevating, refining influences of flowers, the involuntary homage rendered them from the youthful heart would be the proof.

All children love flowers, from the bashful boy who gathers the fairest flowers as the most expressive emblem of the one his heart acknowledges the fairest, sweetest, purest of all, and treasures the bright-eyed forget-me-not which she returns as the symbol of her truth and constancy, down to the little babe whose eyes brighten and whose chubby hand reaches out after the sweet treasures.

How often amid the cares and vicissitudes of life we pause to bless them as we pass, although, it may be, unconscious of the act.

I never knew a true, gentle-hearted woman that did not love flowers; and I have known great, stout-hearted men who loved them too, and though claiming that the all-engrossing cares of business life afforded no time for the gratification, would say: "I could not love a woman who did not love flowers." It is second-handed, but nevertheless evidence of the dominion of flowers.

Bright ministers from the unseen, you are not voiceless. Your silent perfume, like wingless messengers, attracts the senses, and from the senses, penetrates with mute eloquence to the soul, ever pleading for your maker, God. Not by chance, not by evolution, not by any superior wisdom of man, came those bright visitants to earth; but from the hand of God, the concentrated intelligence of all power and wisdom, He who made the lily the lily, the rose the rose, the violet the violet, to be the same unto the end. Man may claim the hybrids, but God alone the original. No, he cannot change one pure white petal of the lily, one sweet property of the violet or rose. The world that called them into existence must remain forever! Even as the fig, the grape, the olive, as they were created in the beginning, in their own beneficent and original design. How sad 'twould be to think the flowers we loved to-day would not be the same flowers to-morrow, and how thankful that evolution can stop at the particular point, else where would all our pretty flowers be?

There is no fairer illustration of the individuality of God's original creations than the bright, flowery carpeted plains of spring, all mingled together in one bed. Observe how distinct the white, the red, yellow, purple and gold, each claiming its individuality, standing alone as an invincible personation of the higher and more intelligent power that governs the lower instincts of nature.

But the field of science, opened to us in the investigation of truths, is the accepting the beautiful gifts and bringing to the highest degree of perfection the product of Mother Earth.

The love of flowers in some natures is an all-requisite of happiness, peace and content, as innocence to innocence, purity to purity, love to love, each recognizing its kind. It is the silent representation of hidden yearning of the soul, after the higher, fairer, purer part of nature. Mrs. Hemans never wrote a sweeter poem than "Bring Flowers." The young mother tenderly places the pure white emblems in the little waxen hands of her beautiful dead, or in after years twines the sweet white orange blossoms in the curls of her fair young daughter-bride. The joyous-hearted children gather them, the brightest red, purple, blue and gold, to crown their floral queen of May, the bright gay colors alone expressing the buoyancy of youthful hearts.

I am very glad to see an interest in flowers being agitated in our fair "country." W. A. T. Stratton has given most valuable suggestions concerning the propagation of oleanders, and as one of our most graceful and elegant writers in agriculture, we sincerely hope he will not stop writing on flowers, but give us poor wanderers in the floral fields the benefit of his wide and varied experience.

The cultivation of flowers is not nearly so general as some may think, for Oh! I know so many desolate homes that own not one single flower. And happy I should be if it were possible for me to say one word that would be thought worthy to stimulate and encourage the love and cultivation of flowers in one family; thus rearing and cherishing those grateful, never-failing, silent friends—flowers!

"What though in churchless solitude I dwell,  
Far from the voice of teachers or divines,  
My soul can find in every flower Nature's God!  
Priest! sermon! shrine!"

GOD'S GOVERNMENT.—How magnificent is this idea of God's government! That he inspects the whole and every part of his universe every moment, and orders it according to the counsels of his infinite wisdom and goodness, by his omnipotent will; whose thought is power; and his acts 10,000 times quicker than the light; unconfused in a multiplicity exceeding number, and unwaried through eternity!—*Dr. Ogden*.

HE who says education, says government; to teach is to reign; the human brain is a sort of terrible wax that takes the stamp of good or evil according to whether an ideal touches it or a claw seizes it.—*Victor Hugo*.



## The Mother's Bedroom in the Olden Time.

What pleasant places our mothers' bedrooms used to be! In the old-time American formal and pretentious way of living, with the dining-room in the basement and on the principal floor the grave-yard parlor, in which none of the ornaments could be touched nor the chairs and sofas sat upon, it was good that there was one room in the house where domestic feeling was allowed a chance to root itself at ease; where the sun had leave to enter and stretch himself upon the carpet; where the seats were comfortable, and lolling with a book delightful, a room where the soft-blooming fragrant flowers of the homely motherwort took the place of the testy "touch-me-not" that grew so prim and profuse in the handsome room below.

Up to this room, that with its open fire and slipshod neatness seemed always sunny even on dull days, ran the children "home from school" and stormed the maternal citadel for luncheon. Then, out came the precious tin box, much dearer to the hungry children than any "safe" with its metaphorical tin, and whose crisp inscription, "cake," had been improved by a youthful adept at acrostics, into "can a kitten eat?" and the mildly delicious seed-cake it contained having been dealt out in generous hunks (oh, expressive vocabulary of childhood!), the pleasant, do-nothing, noonday hour was slipped along the rosary of time. No parlor, however free to let its luxuries or simple elegance be enjoyed; no nursery, even, made to play in and sensibly kept rid of things that might be hurt; no living-room, with its furniture and fittings meant to be used, can take the place, I think, of the "mother's bedroom" which still exists, I hope, as of old, in many and many a home. It would be a pity such an "old shoe" of a room should ever be given up, for, in our undomestic American life, unless the mother consent to make an early Christian of herself, and have, for a few hours of the day at least, "all things in common," she will find herself knowing as little of her children as their father does; and in America, it is a common experience that it is a very wise child indeed who has more than a speaking acquaintance with his own father.—*Scribner for March.*

A SENSIBLE MOTHER.—It is really pitiful to see a good, conscientious little mother resolutely shutting herself away from so much that is best and sweetest in her children's lives, for the sake of tucking their dresses and ruffling their petticoats. How surprised and grieved she will be to find that her boys and girls, at 16, regard "mother" chiefly as a most excellent person to keep shirts in order and to make new dresses, and not as one to whom they care to go for social companionship! Yet, before they are snubbed out of it by repeated rebuffs, such as "run away, I'm too busy to listen to your nonsense," children naturally go to their mothers with all their sorrows and pleasures; and if "mother" can only enter into all their little plans, how pleased they are! Such a shout of delight as I heard last summer from Mrs. Friendly's croquet-ground, where her two little girls were playing! "Oh, goody, goody, mamma is coming to play with us!" She was a busy mother, too, and I know would have much preferred to use what few moments of recreation she could snatch, for something more interesting than playing croquet with little children, not much taller than their mallets. She has often said to me, "I cannot let my children grow away from me, I must keep right along with them all the time, and whether it is croquet with the little ones, or Latin grammar and base-ball with the boys, or French dictation and sash-ribbons with the girls, I must be 'in it' as far as I can."—*Scribner for March.*

WOMAN should be counseled and confided in. It is the beauty and glory of her nature that it instinctively grasps at and brings to the truth and right. Reason, man's greatest faculty, takes time to hesitate before it decides; but woman's instinct never hesitates, and is scarcely ever wrong where it has even chances with reason. Woman feels where man thinks, acts where he deliberates, hopes where he desponds, and triumphs where he falls.

A WYOMING OFFICER'S WEDDING.—A female justice of the peace of Wyoming Territory was married last week, and previously notified her friends to be present by a printed form as follows: "I am about to marry Mr. J—D—, of this county, and he will be qualified and sworn to my office on Wednesday morning next at 10 o'clock. You are invited to attend."

A PASSENGER asked: "On which side of the station is my train?" The attendant answered: "If you take the left, you will be right. If you take the right, you will be left."

A WISCONSIN newspaper says: "The board of education has resolved to erect a building large enough to accommodate 500 students three stories high."

LADY to Waiter: "Don't put that ico into the goblet with your fingers." Waiter: "Lor, ma'am, I don't mind. My hands are very warm."

IN Africa a breed of sober-minded dogs without tails has been discovered. There isn't a wag among them.

## Young Folks' Column.

### Bobby.

Just as the clock finished striking, Bobby's papa, at the foot of the stairs, called: "Bobby!" "Bobby!"

No answer. "Bobby, it's time to get up—seven o'clock." Bobby evidently did not agree with his father, for he lay very still and said nothing until he heard him shut the door. Then he crawled out of bed and crept softly across the floor to the looking-glass. He was somewhat disappointed in the picture he saw there. The face was a little too healthy to suit him. Sick boy's faces generally looked thin and white, and a sick boy was what he had made up his mind to be, for the day at least, so he crept back to bed again.

In a few minutes he heard the door open; some one was coming up the stairs; it was his mother, he knew; so he put on as woe-begone an expression as he was able, and calmly awaited his fate.

She knocked at the door and softly said, "Bobby, are you up?" "No, ma'am," mournfully answered Bobby; and, as she opened the door, said, in a most miserable voice,

"I don't feel very well to-day." "My dear child, what's the matter?" "My throat's kind of sore and my head aches awfully," faintly answered Bobby from the pillows. (He really tried hard to think so.)

"Throat sore? Let me see," she said, bending over him.

Bobby submitted to the examination like a martyr.

"I hope you're not going to have the diphtheria, dear."

"I hope not," faintly echoed Bobby; in fact he was not quite so much afraid of the diphtheria as his mother.

"I'll go down and get you some medicines. Do you feel able to come down stairs?"

Bobby didn't think that he did, but "I think I'll have my breakfast sent up," added he in a more audible tone. "Will Bridget toast me some bread, do you think?"

His mother smiled; she did not fear the diphtheria now as much as she did, and as she went down stairs she said:

"Well, if he is sick, medicine will do him good, and if he isn't, which I think is probably the case, it certainly cannot hurt him." So in a short time, armed with a glass of medicine in one hand and a small piece of dry toast in the other, she again went to Bobby's room. He did not seem to be much worse, and bravely swallowed the medicine, but as his mother left the room, he looked rather scornfully at the toast and said, "Pretty small rations for a boy of my size, but," with a grim smile, "I won't go to school to-day if I starve." He quickly made way with the toast, and lay back on the pillows again.

He heard the first school bell ring, and he smiled faintly to himself; he heard the last school bell ring, and then with the school off from his mind, his thoughts wandered down stairs. He wondered what they were having for breakfast. It was strange that his father did not come up to see him before he went down street. He wondered if he would bring him an orange when he came to dinner. He had a faint remembrance of the time when he had the measles and oranges were not merely things of the imagination.

At last it seemed to him that it must be about noon. His mother came up stairs again. Bobby hoped she would ask him to come down stairs and lie on the sofa, but his hope was not fulfilled.

Mrs. Hammond sat down by the side of the bed and felt of Bobby's pulse, put her cool hand on his forehead, and softly smoothed his hair, and said she thought it was time for more medicine. Bobby made up a face in the pillow.

"Let me see, 10 o'clock," she said thoughtfully.

"Ten o'clock?" said Bobby, with more animation than he had as yet displayed. "Ten o'clock—is that all?"

"Isn't it 10 yet," his mother answered quickly. Bobby sighed; it wasn't so much fun after all, this being sick.

Mrs. Hammond soon got some more medicine which Bobby was forced to take, then she went away and left him all alone, after she had consoled him by the remark:

"It's too bad, Bobby, that you're sick, for we're going to have oysters for dinner."

Now, if there was anything that Bobby liked above all others it was oysters, and he wondered, as he lay there looking hard at the ceiling, if his mother meant that he couldn't eat any oysters.

And he wondered if he went down stairs to dinner he would have to go to school in the afternoon. He was a little afraid to try the experiment, so he kept still. But while his body was so quiet his mind seemed more active than ever. It wandered away down street and into the schoolhouse; he saw the arithmetic class reciting the lesson which had induced him to stay at home. He saw Mr. Sparks, the teacher, peer over his glasses and say, "Isn't Robert Hammond present?"

And he almost heard the boys say, "No, sir." He wondered if the fellows knew he was sick; then his thoughts went back to the old starting point; it must be 12 o'clock. He wondered if they were cooking the oysters, and then the old question came up again—could he eat oysters or couldn't he? After that he said the multiplica-

tion table over three times, and had just counted up to 343 when he forgot the counting, forgot the oysters, for Bobby was fast asleep.

He was awakened by his mother bringing his dinner, which consisted of toast, toast, and only toast, but a good deal of it, Bobby observed. He felt rather ashamed to eat very much, so he left one slice of toast on the plate; then he thought half a slice would be enough, and at last he gave way to his appetite, and when Bridget came up there was nothing left but the plate.

Mrs. Hammond was going out calling, Bridget said.

Bobby's spirits went down a degree or two lower.

Slowly an hour dragged itself by; he heard the clock strike two.

"Hark! What was that; was it the fire bell? Yes, it certainly was—ding-dong, ding-dong!"

Bobby was on his feet in a minute—he had his clothes on in another minute, and before the minute hand had got round to 10 minutes past he had on his fur cap, rubber boots, and overcoat—was out of the door and running down the street as if the safety of the whole town depended upon his being present at that fire.

It didn't amount to much—nothing but an old barn; but Bobby thought the exercise did him good, he said, sheepishly, after he got home.

His mother thought it gave him a good appetite for supper at any rate.—*N. Y. Tribune, Jr.*

## GOOD HEALTH.

### Importance of Good Water.

No question can be of more importance, from a sanitary point of view, than that of the supply of wholesome water. It is known that water does not in itself change in character, but it becomes noxious as it is made the vehicle for conveying injurious matter. Hippocrates appears to have been aware of the importance of pure water, and moreover of the places for its selection, or as it has been stated, "upon the aspect of its sources as well as upon its elevation." Mr. Simon, of the medical department of the Privy Council, in his last report of 1869, stated that "the doctrine in general terms, that a vast influence is exercised over the health of the communities by the quality of the water which they consume, is one which, as far back in literature as any reference to such questions could be expected to exist, may be seen to have universal medical consent in its favor; and during long ages of history the common instincts of humanity were even purer and stronger than undeveloped science. Of the many invaluable additions and improvements which medical knowledge has received within the past quarter of a century, scarcely any can, in my opinion, be compared for present practical importance to the discoveries which have given scientific exactitude to parts of the above stated doctrine, and have enabled us definitely to connect the epidemic spread of bowel infections in this country with the existence of certain faults of water supply. Not only is it now certain that faulty public water supply of a town may be the cause of the most terrible epidemic outbreaks of cholera, typhoid fever, dysentery and other allied disorders, but even doubts are widely entertained whether these diseases, or some of them, can possibly attain prevalence in a town except where the faulty water supply develops them." Such may be said to be the testimony of one of the highest medical authorities in England. Authorities in other countries have likewise drawn attention to the importance of the purity of water supplies, and moreover, Professor Pettenkofer has shown that there are in some cases certain definite relations between epidemics of enteric fever and cholera and the state of the level of the ground water.

### Diet for Consumptives.

Consumptives must see that their bodies are properly fed. They should not take food as a medicine, but as nourishment. They should have the very best things to eat they can get, and, fortunately, the best things are not always the most expensive or difficult to obtain. If it agrees, a cup of cream may very appropriately be taken every day by those who are inclined to consumption. Brown bread, and milk and cream, oatmeal and cream, eggs, with a moderate use of beef and mutton, good butter and mealy potatoes, will, of themselves, constitute a perfect diet. They should avoid nicknacks and fancy foods, and live on things substantial and nourishing. Fruits should be used in their season moderately. Consumption is a constitutional disease showing poverty of blood and poverty of healthy tissue, and this poverty must be eradicated. It can be done partially by such foods as are needed to build up a strong healthy body and carry on all its functions. Many physicians think that the disuse of fat is a cause of consumption, and they prescribe cod-liver oil, not as a medicine, but as a food, and, in many cases, it has proved useful. We think, however, that it is the sedentary and unnatural life people lead that has most to do in causing so much consumption, and that with this sedentary life comes a feeble condition of body and brain favorable to the disease. A wise physical education and abundant wholesome nourishment would dissipate half the consumption in the world, and the other half would soon be banished by some other means. Consumption is a disease to be avoided, not cured.—*M. L. Holbrook, M. D.*

## DOMESTIC ECONOMY.

### Pickle-Making.

EDITORS PRESS:—In answer to H. J. Rhodes's questions about making good pickles, I send the following: Take one gallon alcohol, three gallons water, three pounds good brown sugar; put all these articles in a keg or any vessel you choose. When the sugar is dissolved pick the articles you wish to pickle; brush off the dust, put in the liquor; this will make a pickle that will keep good as long as you want it to; one or two years if you wish.—*M. BRITTON.*

### Another Recipe.

EDITORS PRESS:—There are two or three ways to put up pickles. Last year I put up 500 gallons, and I put them up as follows: I picked the cucumbers when they were about one inch long, the smaller the better. I then put them in barrels with salt and water and they would remain there for a week. Then I soaked them in two clean waters to get all the salt out of them. Then I have a brass kettle which holds 15 gallons. To every kettle full I put in a piece of alum, about one ounce. Then I pour hot vinegar over them and by putting in cloves and other spices give them a better taste.—*T. S. JESSER, Biggs, Cal.*

### Recipe for Shirt-Starching.

EDITORS PRESS:—Will you please give a recipe for doing up shirts? What kind of starch is the best in use, and what is the best to put in the starch to make a gloss.—*T. S. J.*

Will some reader answer?

CROQUETTES.—Because of their French name, and of the high price charged at restaurants, many have the impression that they are far too expensive for ordinary families. This is a mistake, as they afford a most acceptable form in which to use up the remnants of fowl, game, meats, etc. When presentable bits can no longer be cut from a turkey, chicken or other bird, or there are on hand the remnants of veal, mutton, venison or even fish, an excellent breakfast or supper dish may be made. The material is to be chopped fine; one-half to one-fourth as much bread crumbs or mashed potato, a well-beaten egg to each cupful of the mixture, to bind it together, and if too dry make into balls, add gravy, or if none is at hand melted butter, salt, pepper and whatever seasoning may be fancied, such as parsley and other herbs; a trifle of onion, catsup, etc. Make into rolls, balls or mold in a wine-glass. Dip in egg, roll in powdered cracker, and fry, having the fat very hot, to a light brown. Properly made they will take up no fat. Some omit the egg and cracker on the outside, and simply flour them. They may be cooked in advance, and warmed through when wanted by placing in an oven. Scraps of several meats may be combined, and a little ham will greatly improve the flavor of those made of veal.—*Am. Agr.*

BUTTERMILK BREAD.—Put three or four pints of fresh buttermilk into a saucepan and boil it. Stir it pretty constantly while it is heating, to keep it from separating into whey and curd. Have a quart of flour sifted into a suitable vessel, pour the boiling buttermilk on the flour, and scald it thoroughly. Stir until all the flour is mixed, and set to cool. When sufficiently cool add a teaspoonful of good yeast, and let it rise over night; in the morning sift and mix into the sponge enough flour to make a stiff dough; knead well, and set to rise for two hours, then divide into loaves and knead slightly. At this time use as little flour as possible. Set to rise again, and bake as soon as light enough. Bake in a steady oven for three-quarters of an hour. This is a good sponge for dark or runny flour. The bread will be white and moist. Graham flour, prepared with scalded buttermilk, mixed a little stiffer than where sweet milk or water is used, is very sweet and good. Do not put soda into the milk or sponge. It will be perfectly sweet when baked if the yeast is fresh, and if the whole process is carefully attended to in the right time.

FISH CAKES.—The first and most important thing to be remembered is, have the ingredients cooked on the day you wish them to be eaten. Put your codfish to soak a day and a half, then boil until tender. Have your potatoes boiling, too. When the fish is done, chop it as fine as possible. Mash the potatoes until they are perfectly smooth; add a little cream or milk and a little butter, but not enough to color them; mix all thoroughly, proportion of one cupful of fish to three of potatoes, and roll into flat, small balls, about one-half inch thick. Be careful to make them a good shape. A little raw onion, chopped fine, is delicious mixed through them, just sufficient to flavor. Fry a good brown in plenty of hot lard. Remember, the beauty is to have them fine and white inside.

OMELET SANDWICHES.—Take four eggs, two tablespoonfuls of bread crumbs, and one-half ounce of chopped parsley. After beating the eggs well, add the bread crumbs, then the parsley, and two tablespoonfuls of water. Season, and fry it in small fritters, and when cold put them between brown bread and butter.





DEWEY &amp; CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	25	80	\$ 2.00	\$ 5.00
Half inch (1 square).....	\$1.00	\$3.00	7.50	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

Four weeks are rated a month.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, March 3, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—Movements for a Botanic Garden; The Potato Market; California Fruit Confections; The Regulator Windmills, 129. The Week; California Farm-Houses; Heavy Potato Yield, 136. Notes on Straw-Burning; River Mining; The Quantity of Water Necessary to Raise a Crop, 137. Patents and Inventions, 140.

ILLUSTRATIONS.—The Regulator Windmill, 129. Mining Scene in the Mountains, 137.

CORRESPONDENCE. San Felipe Valley—No. 2; The Peppermint Oil Experiment; Egyptian Corn; The Philadelphia Permanent Exhibition, 130.

HORTICULTURE.—Semi-Tropical Fruits in Ventura County; The Japanese Persimmon, 131.

ARBORICULTURE.—Tree Planting, 131.

THE VINEYARD.—Reply to Mr. Blowers, 131.

THE STOCK YARD.—"Horn Ail or Hollow Horn," 131.

THE STABLE.—The Annual Horse-Stealing Raid, 131.

PATRONS OF HUSBANDRY.—Grangers' Business Association; Union Meeting of San Jose and Santa Clara Granges; The Fruit Orchards of Sacramento County; Election of Officers; In Memoriam, 132.

AGRICULTURAL NOTES from various counties in California, 133.

HOME CIRCLE.—Three Tasks; Poetry; Two Lives; A Treatise on Man—Boiled Down; Flowers, 134. The Mother's Bedroom in the Olden Time; A Sensible Mother, 135.

YOUNG FOLKS' COLUMN.—Bobby, 135.

GOOD HEALTH.—Importance of Good Water; Diet for Consumptives, 135.

DOMESTIC ECONOMY.—Pickle-Making; Recipe for Shirt-Starching; Croquettes; Buttermilk Bread; Fish Cakes; Omelet Sandwiches, 135.

QUERIES AND REPLIES.—The Wire Worm; Pearl Barley; Agricultural Architecture, 136.

MISCELLANEOUS.—Lecture on Watchmaking in America and Europe; Late Theories on the Earth's State, 138.

## NEW ADVERTISEMENTS.

Live and Let Live Bull's Head Stock Yards, R. P. Saxe, S. F.; To Color Butter, Wells, Richardson & Co., Burlington, Vt.; 25 Fancy Cards, J. B. Husted, Nassau, N. Y.; Squirrel and Gopher Exterminator, H. P. Wakelee & Co., S. F.; Plants, L. B. Coss, Richmond, Ind.; Trees, Storrs, Harrison & Co., Painesville, O.; Auction Sale of Blooded Stock, Moses Wick, Butte Co., Cal.; H. H. H. Horse Medicine, Williams & Moore, Stockton, Cal.

## The Week.

There has been rain during the week, and as we write there are dark indications of more rain. The rain which came on Sunday night was bestowed upon parts which have greatly desired it, as the telegraph gave note of it at San Jose, Los Angeles and San Diego. These limits are wide apart, and between them lies a great region which waits anxiously for the water. Whether the intermediate parts were refreshed we do not know.

Our agricultural notes give as general an idea of the conditions in the different counties at the close of last week as we are able to afford from all available information. It will be seen that the spirit prevailing in the different regions varies from glacial assurance to grave apprehension. Thus the matter stands at the present time. Although in some counties the promise is that there will be crops greater than have ever been reaped and threshed, in others the outlook is beneath a cloud which has but hope to line it.

The progress of the springtime still records its movement. The first of the spring clip of wool has come. The promise is that there will be a good welcome to the clip in the Eastern markets. Although the season has been hard for the wool grower in some parts of the State there may be some recompense in price if, indeed, the season do not show its marks too sharply on the quality of the wool. There should be every effort made by the producer to select his wool with unusual care, because this year of all years there will be profit in the care. We shall have weak and tender wool from many flocks, doubtless, but do not let the "tags" strain its market strength.

## California Farm-Houses.

A correspondent in another column suggests that we direct our attention to rural architecture. It is a good idea and we shall seek for the material. With this intention expressed allow us a little introduction to this work to make a few general remarks concerning California farm-houses. We are glad to note prominently that there has been great improvement during the last few years in the planning, construction and ornamentation of rural homes in this State. Considering the youth of most, if not all of our farms, it is wonderful how soon the pioneers' cabins have given room to tasteful and beautiful houses. Contrast this progress with the house-building in the early history of other States, where the old log cabin reared its generations before the modern habitation had strength to rise. This is a strong testimonial to the advantages which have attended the uprising of agriculture in this State. There have been hardships but the advantages have been many or no such manifestations could have been made.

The conditions are more favorable to the building up of a beautiful home in this State than in any other country in the world. It is not necessary that one should attempt elaborate superstructure. We have not the Arctic blasts to guard against. In many parts of the State we have not the burning sun to exclude. All that is needed is a light covering from the moisture of the night and the chill of the morning, except during the long rains, and then the bright glow of an open fire fills the house with the warmth of comfort and hospitality. It is indeed a great advantage to the builder to be spared the necessity for fortifying his habitation against the prying winds and invading frosts. He has no need to wall in his cellar like a powder magazine and double his walls and windows until his house becomes a cau hermetically sealed and he gets about as much fresh air as an oyster.

Light and airy, full of sunlight and the perfume of a thousand flowers, should be the California rural home. The builders need do but little; nature will complete the structure and its surroundings. We have seen scores of delightful country houses in which the first cost for material and carpenter work must have been exceeding small, and yet with the wealth of vines and flowering shrubs which clothed the habitation, it had a beauty which in our eyes surpassed the most elaborate architecture.

Of course, as we come to write more carefully hereafter of rural architecture, we shall show that the comfort of even the simplest structures will depend upon the planning for convenience. At this time we shall leave the subject with a few remarks concerning the progress we are making in building healthful houses in those parts of the State which have been found subject to unhealthy conditions. The *Southern Californian* recently made some observations on this matter, which from its location in Kern county it has had a good opportunity to study. It says: In the valleys of California the demand for healthy houses increases with the growth of the intelligence of the people. The demand should be more imperative in all the wild river-bottom portions of the country. The first settlement of Tulare county led to the belief that it would be impossible to live in that section, and in 1860 families returned to the upper counties after trying it for a season, convinced that no person could remain there and retain their health. With the general advancement of the country a different class sought settlement in the valley, and for the sake of the rich soil and favorable climate were willing to labor to overcome the objections which had been reputed insurmountable. The first improvement was the clearing away of the undergrowth and exposing the land to the sun and air. It seemed to work like magic. In this valley the same steps were taken and the change was radical. The entire absence of swamp made it clear that all that was necessary to avoid the trouble of malaria was to take away the only cause, the decay of the vegetation in the damp shade of the underbrush, which was dense enough to entirely exclude the air. But with this great improvement something was yet needed, in the newness of the county, to do away entirely with the effects of malaria. Nearly all the houses in the original settlement on Kern island had ground floors. There was no lumber in the county. The floors were kept damp that they might be swept clean, and the family of children generally slept on the floor with nothing between them and the ground in summer but a little thin blanket. Lumber floors afterwards made great change, but the evil, however moderate in form, required an improvement in the construction of the dwellings to entirely eradicate it.

In the houses constructed on marsh lands on elevations, and about four feet above the ground, the uniform good health of the occupants shows that the waiting for an entire clearing and cultivation of the country is not necessarily an objection. Houses should be plastered, too, and never be allowed to be enveloped in shade. The sun should be admitted to every part and in winter, if possible, sleeping apartments on the sunny side of the house should only be occupied. With the plastered house there is none of the great difference between

the night and the day apparent. Adobe houses are not fit to live in, except in the dry air of the mountains. On the river lands they do not admit of high floors, without elevating the walls beyond reasonable safety, and the dampness of the ground penetrates the wall for a considerable height. They are cool in summer, but with that cellar-like coolness which endangers life in all latitudes. According to the testimony of the most enlightened pioneers of the great West, who have made a study of locations for buildings in malarial districts, all high lands adjacent to the river bottom, especially to the leeward of the prevailing winds, should be avoided. Houses in such localities should be built upon the low lands, but at such a height as places them in the current of air passing over the dry plains to the north. In requires but a partial adherence to these vital rules to overcome the mild type of ague known in this valley, and that of the Tulare and San Joaquin, but they cannot be entirely neglected without creating a reputation for prevailing sickness, which it is the duty of all to overcome.

## Heavy Potato Yields.

The annual competition for the prizes offered by B. K. Bliss & Sons of New York shows another astonishing yield of tubers from a small amount of seed. The largest yield was 1,982 lbs. from one pound of seed—nearly a ton of potatoes from one pound of seed. The report of the Committee of Judges gives several interesting points as to the way in which this result was reached, and makes mention of a novel way of irrigating potatoes which may be useful to some of our readers who may want to grow a few potatoes with a small amount of water.

The large quantities of fertilizers used by most competitors is something astonishing, and may well serve to disprove the general belief that heavy manuring is injurious to potatoes. Mr. Pearson added to an already rich soil about 60 two-horse loads of manure, nearly 200 bushels of wood ashes and 24 bushels of lime per acre, together with bone-dust and other fertilizers in small quantities. Mr. A. Rose, after covering his land three inches thick with rotten barn-yard manure and three bushels of wood ashes per square rod, applied in addition a large shovelful of rotten hen manure and two handsful of ashes to each hill, besides several surface dressings with other fertilizers. But all this must appear but a small attempt at enriching the land to Mr. Robinson, who would not intrust his seed to a black sandy loam, four feet deep, underdrained and trenched to probably the entire depth, before spading under a coat of well-rotted cowdung, and applying afterwards to the hills three cartloads of wood ashes, two of sheep-droppings, and several of other fertilizers.

The dissection of eyes has been still more increased. In one case a pound of potatoes was divided into 290 sets. These practical tests of the feasibility of raising large crops from small sets become of much importance in seasons of scarcity of seed potatoes. For it is shown here that, even without carrying the division of the eyes to extremes, nine-tenths of the seed may be saved.

The fact that the largest yields were produced in the Eastern States, in regions which suffered from one of the severest drouths known, where the general crops failed almost entirely, induced Messrs. Bliss & Son, who gave the premiums, to investigate more closely the manner in which these premium potatoes were grown. As the result they find that all these competitors attribute their success to the judicious application of water during the dry season. One of the competitors had arranged an ingenious system of irrigation, by inserting, six inches from each hill, two-inch drain tiles, six inches deep, and filling these with water twice a week during the dry weather. In reply to a letter he writes: "I attribute my success the past season to the fertilizers applied, but more especially to the mode of applying water. I find that, even without manure, this plan gives great results. Give me drouth and this means of applying water, and I can grow a much larger crop than with the most favorable weather and no watering. This I have proved by two years' experience." Many may not be so situated that they can apply as complete a system of irrigation, but thousands of farmers have running through their lands brooks and streams which might, without much cost, be made to furnish nutriment to their parching crops. One acre of potatoes would in many cases pay for more than the entire expense of a permanent system of irrigation.

MECHANICAL POWER OF WATER.—Water is a purifier, a cleanser, a dissolver and a mechanical power, and will run along down an incline the solid ingredients of town sewage, with road detritus—such as grit and silt—the moving power of water being in proportion to the volume, the vertical depth and the gradient down which the flow is directed. Flushing by volume and head, artificially formed, will remove detritus from sewers of low gradients, where accumulation may have taken place. A velocity in the sewage of two feet six inches per second will remove any solids likely to be passed into drains and sewers.

The printers of San Francisco are making arrangements for a picnic to be given at Damon's Grove, Sausalito, on April 15th, in aid of the cemetery fund.

## QUERIES AND REPLIES.

## The Wire Worm.

EDITORS PRESS:—We are assured a bountiful crop of grain; in some places, however, the wire worms are destroying some. What will prevent that or kill the worms?—E. C. P., Upper Lake, Lake county, Cal.

There are two classes of insect larvae which destroy the young grain. One is known as "cut worms," the other as "wire worms." Agriculturists have often confounded the two. Their habits are, however, dissimilar. The wire worms are said by Harris to feed upon the seed and are generally known to attack the roots of grasses and grains. The cut worms rise from the ground and nip off the young plant. The result is ruin in either case, and no adequate remedy so far as we know is yet found for their evil work.

The wire worms are the larvae of the class of insects known as "click beetles" or "snapping bugs," as the boys call them, because of the "snap" and flop-over which they give when laid upon a hard surface. Their inroads upon the young grain has been known for years, both in this country and Europe. They are generally most abundant in ground which has lately been broken up from sod; lacking their customary food in the grass roots, they turn upon the grain instead.

Various remedies have been proposed at different times, but none is wholly efficient. Soaking the seed in blue-stone or in copperas solutions, or rolling it in ashes or lime before sowing, is mentioned by Harris. A leading English farmer, Mr. Mechi, announced some time ago that a protection of grain crops against wire worms might be had by sowing six bushels of salt per acre, just as the plants were coming through the ground. This has been tried in the Eastern States and pronounced inefficient, it being found that the application of salt enough to kill the worms did the same service for the grain. Soot has also been named as a remedy, but as we said above, nothing, so far as we know, has altogether proved successful. This is a matter in which much experimenting has been done by farmers, and if any of our readers have met success in any remedy they have tried we should be glad to know it.

## Pearl Barley.

EDITORS PRESS:—I send you by mail a few sample stalks of my pearl barley. Of course these are not the smallest I could find. The whole lot of about three acres will average fully three-fourths of the light of this. It was sowed on summer-fallowed ground, in the foothills on the north side of Cache creek, about five miles west of Cacheville. Fully one-fourth the lot is in full bloom like the sample. The balance is about the same height, though not yet headed out. As it is only an experiment in this section, we, of course, cannot tell what it will amount to in the end. Prospects now are very good for a large yield. It stood the drouth very well, though some spots looked badly for a while; they are now fully recovered, and those spots are hardly discernable.—C. V. BURKE, Yolo, Cal.

The stalks are fine and strong, and measure under our rule three feet and nine inches in length. The kernel is nearly in the milk. What this "pearl" barley is we do not know, and should like to be informed. The pearl barley which all know, is the manufactured article made by hulling the chevalier or some other large berry barley. Is it the "bald" barley? the berry shows some signs of neglecting a covering. Will Mr. Burke tell us?

## Agricultural Architecture.

EDITORS PRESS:—In your valuable paper you have almost every department pertaining to the farm—agricultural, horticultural, horse, cow, hog, henery, apiary, etc., and why should you not add still another of vast importance to the farmer, that of architecture? Many farmers, and even mechanics, are very deficient in drawing plans for dwellings, barns, granaries, etc. Good plans presented in your paper might enable many to build in a more economical manner as regards both room and price.

Volunteer and early sown grain look well. Much ground has been seeded in this valley. It looks very much like rain to-night. Farmers and stockmen feel much encouraged.—J. M. McELHANEY, Santa Maria, Santa Barbara county.

The hint is an excellent one. We shall make every effort to do something for our readers in this line as soon as possible, and we should be pleased to receive plans from them for all good agricultural architectural improvements.

CALIFORNIA COUNTRY PAPERS.—From such intimate acquaintance with the interior papers of this and other States as only an editor has the opportunity to form, we endorse the following from the *Oakland Transcript* as eminently true and well deserved by our California exchanges: The country newspapers in California are vastly better than the interior papers of the older States. The Eastern papers are often published in one of the large cities, and sent ready-made to the localities where they are to be distributed. They have nothing fit to be called local intelligence, the space being mainly filled up with the kind of reading common in "patent outsiders." Here, even the papers that patronize the "patent" establishments, have live matter in them, while the most of the journals are edited with care and intelligence. A man can tell what is going on in a town by reading one of our interior papers, but that is out of the question in most other States.

PETITIONS are being circulated throughout this city calling upon the Board of Supervisors to raise the license fee of liquor saloons, in the belief that the low dens and dives which abound in certain districts will thereby be compelled to give up business.

THE first strawberries of the season were brought to the market last week, and were sold at \$2.50 a pound.



### Notes on Straw-burning.

We gave a few months ago some notes concerning the comparative heating power of straw and other fuels. Our data was taken chiefly from results gained by experiment at the Vienna exposition. We have now an interesting review of the same subject in a pamphlet on portable steam engines, written by John Head, an English engineer. He shows what will be interesting to all our users of straw-burning engines, and that is the comparative cost of straw and coal in several different countries. We quote as follows:

"There is some difficulty in ascertaining the exact amount of straw or other vegetable substances consumed per horse power by a high pressure engine, from the fact that vegetable substances, like straw, vary much in their calorific properties; but a number of experiments have demonstrated that from 3.25 pounds to 3.75 pounds of average dry wheat straw will evaporate the same amount of water in the same time as one pound of good coal in the most modern boiler. The amount of straw grown per acre varies very much, but in England the average may be taken at about 30 cwt. per acre for wheat straw, or say 3,300 pounds per acre, and is worth to the farmer, on an average, about 30s per ton on the estate. Consequently the value of produce per acre would be about 44s. Then, if we take the value of one ton of coal, at the farm in England at about 20s, and admit the proportion of 3.50 pounds of straw to one pound of coal, we shall arrive at the following conclusion: 3,300 pounds of straw, costing about 44s, equals 943 pounds of coal, costing about 8s 6d.

"From this comparison we find that the commercial value of straw in proportion to coal is about as one is to five; that is to say, it will cost in England five times more money to use straw in our steam boilers than coal. It will thus be evident that it is quite impossible to use straw to advantage as fuel for agricultural operations in England, and generally in the western and northern countries of Europe.

"But the above calculation shows an entirely different aspect when applied to the cost of fuel in all the large corn-growing districts of Russia and the East, India, South America and some of the colonies where the minimum cost of coal delivered at the farm is at least from £3 to £4 per ton, and where straw may be said to be worthless, or of merely nominal value.

This arises from the fact that the large farmers in these districts cultivate such enormous areas of cereal crops that they have always an immense quantity of straw which remains, after harvesting the crops, over and above what they require for manure and their farm-yard. If we turn to the comparative calculations of the cost of fuel in Russia, Hungary and the Danubian Principalities, and we take coal at the minimum price of 60 shillings per ton and straw at five shillings per ton (which is generally much above its real value), and admit the same proportion as in the previous calculation, viz., that 3.50 pounds of straw are equal in their calorific effect to one pound of coal, and also that the product of an acre in these countries is the same as it is in England (although in reality it is somewhat less), we arrive at the following comparison between the produce of an acre of straw and its equivalent weight in coal: 3,300 pounds of straw, costing about seven shillings, are equal to 943 pounds of coal, costing 23s. 6d.

"These figures therefore show that the commercial value of straw in proportion to coal, when used as fuel in Russia and the East, India, South America, etc., is as one is to 3.6; or that it costs more than three and a half times as much to use coal in steam boilers as straw."

The figures for California, which we wish we had accurately, would doubtless show a result a little less than that given for Russia, Hungary, etc. Although our straw is only of nominal value, and therefore might enter at the same rate as Russian into the calculation, we can put coal into the field a little cheaper than \$15 to \$20 a ton, which is the rate in those countries. But the point remains that our straw is better and our coal poorer than that sold to the Russians. This would do something to place our straw at the same high rate of value as a fuel as that in Russia and Hungary. Have any of our manufacturers or users of straw-burning engines made any experiments which will throw light on these points? If so, we should be glad to have a report of them.

SOUTHERN CALIFORNIA sent 2,700,000 oranges into market in 1876. The lemons numbered 350,000 and limes 128,000.

WM. J. LAWRIE, formerly our agent, will please address this office.

### River Mining.

The scene shown on this page is one which will appear familiar to many of our readers. It represents a view in the mining regions of the State, with the little camp of the miners nestled in a nook of the mountains near the river side. A flume has been built to carry the water of the river during its low state, so that the miners may be able to work the bed. The water wheel seen in the flume is for the purpose of affording power to pump, in order to keep the river-bed as dry as possible.

This system of mining was the principal one carried on for many years in California. But now it is confined to comparatively few localities. During the progress of ages the elements wore away the hills and carried them piecemeal into the rivers. The action of the water carried away the dirt but left the precious gold scattered over the bed of the river. Although the obstacles in the way of recovering it under these circumstances would seem almost insurmountable, yet the hardy miners found a way to get at the gold. As will be seen by the sketch, they built flumes large enough to carry the whole, or a large part of, the water of the river. Then they got down into the river-bed and worked it. When one part of the bed was worked out they shifted the flume and worked under the place where it was before. It must not be supposed that this was accomplished without great labor, trouble and expense. Sometimes the toil and trouble of months was lost in a single night. A sudden rise in the river would carry away the flume, the dam and all the costly works. Still in very many cases the miners who once succeeded in getting at the bed of the river made their fortunes in a very short time. Therefore this system has always been a favorite one where practicable.



MINING SCENE IN THE MOUNTAINS.

The miners knew that nature had done for them what it would take a great deal of trouble and time to accomplish. She had separated in a great measure the gold from the debris and left them the comparatively easy task of gathering the precious dust. Many such scenes as that depicted in our engraving may be seen in mountain counties of California, although most of the practicable river-beds have been worked out. Now the miners have to wash away the hills themselves, and leave the rivers to carry away the debris only.

**AUCTION SALE OF CATTLE.**—We print an advertisement in another column of an auction sale in Butte county, which we doubt not many of our readers will make it a point to attend. Moses Wick, the well known Short Horn breeder, announces that he will put up nine head of young thoroughbred bulls, four head of heifers and cows and some good graded stock and horses. Henry Preston will sell a herd of young grade bulls, and D. S. Berner announces the sale of a complete dairy herd and outfit for dairy and ranch work, together with a ranch which is represented to us as very desirable. The advertisement will furnish further information on the subject.

**CAN'T LIVE WITHOUT THE RURAL IN OHIO.**—Many of our readers tell us they cannot live without the RURAL PRESS in so pleasant a State as California, and we do not wonder that a man needs its cheer to make life endurable elsewhere. E. Reynolds, of Cuyahoga county, Ohio, writes as follows: "I want to subscribe for the RURAL PRESS. I have just come home from California, after living there two years, and I cannot live without the PRESS." We shall PRESS him to live.

**SOUTH CAROLINA WANTS THE CHINESE.**—We read in a South Carolina paper that the negroes are not proving valuable as free laborers, and the writer thinks, sooner or later, they will be obliged to import the Chinese to fill their places. It says: "The Chinaman labors better and more cheaply than the negro, and the Southern cotton planter, with acres innumerable, wants nothing but a cheap and industrious laborer." If such be true, and it is sad to part, but—good-bye, John.

### The Quantity of Water Necessary to Raise a Crop.

Prof. Davidson, of the U. S. Coast Survey and one of our State Commissioners of Irrigation, delivered a lecture recently in Sacramento, in which he reviewed the subject of irrigation from many standpoints, showing his thorough study of the subject in its many features. We expect to present points from this lecture from time to time, as they will be of interest to our readers as matters to be considered in connection with the enterprises they are conducting. At this time we take from the report made by the *Record-Union* his showing of the amount of water needed to raise a crop and the amounts which may be wasted in getting the required quantity on the fields:

Practice and the authorities differ very much on the quantity of water necessary to raise a crop, doubtless because of local and ever-varying circumstances of rainfall, evaporation, percolation, absorption, crops, soil, wastefulness, etc., which enter largely as disturbing elements.

There are plenty of statistics to show the actual duty of water, but all exhibit results far short of the theoretical duty. The two should and would agree if proper factors be assigned to the different elements governing the problem.

Best authorities advise a depth from 10 to 12 inches of water to the production of a crop of wheat, barley and maize, when applied in waterings of four times two and a half inches (Logan), or of three times four inches (Beresford). The smaller of these results is almost identical with the amount deduced from observation in the great valley of California, where a rainfall of 10½ inches fairly distributed has insured a large crop of wheat, etc. (Report of United States

vision) in 1873-4 was only 155 acres, and of the distributing canals 189 acres, each the sum of the crops.

We can, therefore, readily understand the warning of one of their latest investigators when he says:

"If the question of increasing the duty of water is not solved in some form a great many of our new canals must be financial failures! Their future profits have been calculated on duties that are not obtainable on our oldest canals. Waste is inseparable from works like our great canals, but there are no such physical or practical difficulties in the way as will oblige us to be content with the present state of things."

These warnings have double weight in California, because we are commencing without profiting by the dearly bought experience of others.

Beresford has endeavored to formulate the efficiency of the water of irrigation by introducing functions determined by experiment; and in doing so he has taken the subject away from the rule of thumb. He says:

"Each cubic foot of water entering the head works of a canal is expended as follows:

"1. In waste by absorption and evaporation in passing from the canal head to the distributing head.

"2. In waste from the same causes in passing from the distributing channels to the secondaries or ditches.

"3. In waste from the same causes in passing from the secondaries or ditches to the fields.

"4. In waste by cultivators through carelessness.

"5. In useful irrigation."

But among the sources of waste from evaporation should have been included the very considerable one of the water when spread as a thin film over the ground in flooding. Yet another function has not been considered, namely, that depending upon the special demands of each class of soil and crop.

In his investigation he has shown that the chief part of the loss is due to absorption and percolation; that old canals exhibit less loss than new ones, and that more waste occurs in excavated than in embanked canals.

The loss by evaporation up to the point where the irrigating water reaches the field is only 5% of the probable discharge of the canal, but when the water is spread over the fields the loss may amount to 20% or more. This would entail a total loss of 25% by evaporation.

Again, he says that loss by absorption along the canal and distributing channels and ditches is greater than the loss by evaporation; he even places it as high as 33% of the whole volume of the

great Ganges canal.

These sources of loss amount to no less than 53%, and we can readily understand how the wastefulness of the cultivator may increase that loss to fully 67%. This at once reduces the actual duty of the water, measured at the source of supply, to one-third of the so-called theoretical duty.

The lesson to be learned therefrom is, that loss by absorption should be prevented; and loss by wastefulness of the cultivator reduced by stringent oversight, and by rigid measurement.

But it may be asked how all these apparently conflicting results may be applied to the driest parts of California. I should state them broadly, thus: One cubic foot of water per second for 150 days would furnish 12,960,000 cubic feet; or a quantity affording a total depth of 10 inches over 357 acres of land; 1,000 cubic feet of water per second, for the same period, would supply 357,000 acres. And if the canals, channels and ditches are constructed no better than they are in India, and if the farmer was just as wasteful of the water, this area of land would be reduced fully one-half, or say to 180 acres for each cubic foot of water per second for 150 days. On the other hand, the rainfall would, even in a season of only six or eight inches supply, doubtless supplement the loss by evaporation, absorption and waste, and bring the duty up to 357 acres.

But with low grades to the canals and channels, unpuddled bottoms and sides, and inferior plans and work, it would be next to impossible to make a close approximation to the actual duty of water. Anything less than the above duty suggests the necessity for improvement in all the sources of waste.

In estimating the total acres that can be irrigated from a given supply, allowance must be made for the amount lying fallow, wood land, marsh, roads, streams, towns, etc. In India the average under cultivation each season is only one-third of any given area. In this country we may safely estimate it at two-thirds of any irrigation district.

**REMOVAL.**—The Averill Mixed Paint Company have removed their establishment to 27 Stevenson street, where they have more room and excellent facilities for the preparation of this useful article.



## Lecture on Watchmaking in America and Europe.

### A Centennial Lesson to Foreign Manufacturers.

At a meeting held at Chaux-de-Fonds, canton of Neuchâtel, Switzerland, last November, Mr. Arnold Grosjean, President of the Board of Commerce, announced that M. Edouard Favre-Perret, member of the International Jury on Watches of the exhibition at Philadelphia, had kindly consented to repeat, at la Chaux-de-Fonds, the speech already delivered by him at Locle and Neuchâtel, on the situation of the industry of watchmaking in the United States.

#### The Address.

Gentlemen:—I must, to start with, announce to you that you have not an orator before you, but a manufacturer, and as such I ask your indulgence. I shall give you information, which, unluckily, is not cheerful, on the condition of Swiss watchmaking, compared with the American competition. I shall tell you of facts simply, such as I have seen them, such as I have understood them. Frankness is here more necessary than anything else, for it is not by palliating the bad sides of a difficult situation that we can succeed in improving it.

It is evident, gentlemen, that I do not present you with an entire report of my observations at the exhibition at Philadelphia. These will find space in my report which I shall address to the Federal Council. I shall confine myself to speaking about American watchmaking, and in comparing it with our own and that of our neighbors. I shall speak to you more about figures than about anything else. Figures, you know, have their own eloquence. For a long time we have heard here of an American competition, without believing it. The skeptics—and there were many of them—denied the possibility of a competition at once so rapid and so important. To-day we are forced to believe the proofs of it and to acknowledge the existence of a formidable manufacture. We have had the proofs of it under our own eyes; we have seen the American factories, and we have been able to satisfy ourselves exactly as to their power. We have treated the American manufacture as we have treated the neighboring manufactures, in the future of which we did not wish to believe at first, and which form to-day a most serious competition. I refer to Besançon, Bienne, St. Imier, Morat and Schaffhausen. We must take these examples into consideration and spare no efforts to keep and maintain ourselves on the level of our competitors, and we must not allow ourselves to be overtaken by them, as has been the case in past years. Before passing to the watchmaking of the United States, let us examine some of the figures of the manufacture of Besançon, which everybody knows dates back to the end of the last century. It was founded by a colony of Neuchâtelois:

In 1845 Besançon turned out.....	54,000 watches
In 1855 " " " " " " " " " " " "	122,000 " "
In 1865 " " " " " " " " " " " "	236,000 " "
In 1875 " " " " " " " " " " " "	420,000 " "

To-day Besançon supplies the great market of France, and she prepares to contest with us the other European markets.

Well, gentlemen, we are on the same road as regards the United States. For a long time America has been the principal market for our watches, our milk-cow, so to speak. To-day we must earnestly prepare to struggle with the Americans on the fields where hitherto we have been the masters. Some of you have known Mr. Demisson, who was, we may say, the father of American watchmaking. Mr. Demisson traveled through the canton of Neuchâtel, studying our mode of manufacturing, seeking to inform himself of everything, and carefully noting the weak parts in our industry. After his return to the United States, he founded a factory at Boston, "The Boston Watch Company." This was in 1854. The capital—scarcely \$100,000—was subscribed by capitalists more than by practical business men. In the beginning the company turned out only the rough skeleton movement and attended to the finishing; all other parts, such as trains, balances, jewels, etc., were imported from Switzerland. Little by little, however, the factory extended its operations, and produced other parts. Notwithstanding all this progress, this mode of doing things not suiting the American character, so little inclined to let capital remain almost unproductive, the capitalists abandoned the factory, and it failed in 1856.

Another American, Mr. Robbins, whom you have also known, gentlemen, when he had business relations with us, scented a good speculation, and bought in the entire factory, tools included, for \$75,000. A new company, the "American Watch Company," was afterward formed, with a capital of \$200,000. Soon this capital became insufficient, and it was increased to \$300,000, before the War of Secession. This war, which seemed calculated to destroy such an enterprise, was, on the contrary, the cause of its prosperity. America put on foot a million of soldiers, and as every one wanted his watch, there was great animation in the watch business. At this juncture, which might have been a lucky one for our industry, we failed to comprehend our real interests. Instead of sending good watches to the Americans, the worst trash was sent. Had more skeleton movements been sent in cases they would have been thought good enough. The Americans, however, went to work on an entirely different plan. The company increased their plant, and turned out a better ordinary watch than the Swiss watch. At the end of several years, and

with the aid of patriotism, the American watch enjoyed a good reputation, while our own was discredited everywhere. In 1865 the capital was increased to \$750,000, and the operations of the new company grew to immense proportions. During the following years business went on so well that everywhere new watch factories sprung up. Every one wanted to make watches. To-day you can count about 11 factories. The most important after the Waltham company is the one at Elgin, which turns out about 300 movements a day. The Waltham company give employment to 900 workmen, and make about 425 movements per day. The company again increased their capital in 1872; it amounts to-day to \$1,500,000, besides \$300,000 as reserve fund, or a capital of 9,000,000 francs. This watch factory is a real power; there is none like it in Europe. We have seen it in all its details, and we have admired its splendid organization. Last May, on the eve of the exhibition, we still seemed masters of the situation. One event, however, dealt us a mortal blow. Be it through the effect of the crisis, or from any other motive, the Elgin company made, all of a sudden, a reduction on the price of their movements of 40% to 50%, so that all stocks of Swiss watches were seriously affected.

Lever movements, with visible pallets, were sold at 19 francs. How can we meet this? Under such circumstances how can we maintain competition? It will be necessary to turn out our movements at 13 or 14 francs to pay the custom duties and to leave a little margin for profit. The Waltham Company, however, would not be outdone by the Elgin Company; they even proposed to do better. They announced a reduction of price from 40% to 50% on prices already lower than their rivals, but at the same time they made known that this reduction would go back as far as January 1st, 1876. So that a dealer in watches had simply to indicate the stock of his Waltham goods on hand to secure the rebate of 40 or 50 per cent. This *coup de commerce* has cost the company \$40,000.

It is unnecessary, gentlemen, to tell you how very detrimental this was to the Swiss watch. Still another and more important reason explains the growing prosperity of the American Company. Their tools work so regularly that all parts of the watch may be interchanged, by a simple order on a postal card, without necessitating the forwarding of the adjoining piece. The question has often been asked whether the Americans can sufficiently supply the demands of their markets. Yes, they can; we are driven out of the American market! I herein exclude, however, complicated watches, in which we are now, and I hope we shall always remain, masters.

In 1860 the American Company produced only 15,000 watches; in 1863, 100,000. To-day they produce 250,000, and this figure can be easily doubled in case the crisis, which so severely prevails there as well as here, should come to an end. For we must not forget that, if several factories have been closed during the crisis, the tools as well as the workmen are still there, all ready to resume work again. Nor must we leave out of sight the exorbitant custom duties and freight, which amount to about 25 or 30%, which take away from us every possibility of being able to stand the fight. And now that we know the figures of production in the United States, we can easily, with the aid of official reports, give an account of what is that country's consumption of watches. We have sent to the United States:

Year.	Watches.	Year.	Watches.
1864.....	169,000	1870.....	330,000
1865.....	224,000	1871.....	342,000
1866.....	262,000	1872.....	360,000
1867.....	297,000	1873.....	394,000
1868.....	200,000	1874.....	357,000
1869.....	206,000	1875.....	334,000

In 1876 we shall barely send there 75,000 watches, or, since 1872, a deficit of 300,000 watches. What a loss for Switzerland, and particularly for Neuchâtel! For this deficit concerns principally our canton, and it is very easy to convince oneself of the fact. In 1875 Chaux-de-Fonds turned out 106,000 watches or movements. In preceding years she turned out double that amount. The deficit therefore amounts, for la Chaux-de-Fonds alone, to 4,000,000 francs; for Locle, Neuchâtel, etc., it reaches the same figure in proportion.

We have stated that the shipment of our goods has largely decreased. Shall we attribute its cause to the crisis? Certainly in many respects we may do so; it cannot be denied. But the American competition contributes still more largely to it.

The Americans have already commenced to send their manufacture to Europe. In England they sell annually from 20,000 to 30,000 watches. The American watch commences to drive from the English market the Swiss, and even the English watch. The Americans commenced by creating a demand for their goods in the Indies and Australia; and then—thanks to some powerful exporting houses—they invaded England. At Moscow and St. Petersburg they have already established important branch offices. They do not keep it secret, but loudly advertise it; for their aim is to drive us first out of their own country, and then to compete with us on our own soil, if our sluggishness and our blind confidence leave the field free to them. I sincerely confess that I personally have doubted that competition. But now I have seen—I have felt it—and I am terrified by the danger to which our industry is exposed. Besides I am not the only one who thinks so; the "Société Intercantonale" have sent a delegate to make inquiries, and his report perfectly agrees

with mine. Up to this very day we have believed America to be dependent upon Europe. We have been mistaken. The Americans will send us their products since we cannot send them our own. Their importation is not confined to watches alone. Other European trades are threatened like ours. Already America has commenced to send cotton goods to England, which hitherto monopolized that article in all the markets of the world. In 1840 the American Government compiled the statistics of the products of their manufactures. They amounted to \$198,000,000; in 1850 to 1 milliard; in 1860 to \$1,885,000,000, and in 1870 to \$4,200,000,000. Not all of these products are being sold in the interior of the United States; a good share of them are exported. Nevertheless, from June 30th, 1874 to June 30th, 1875, the imports were larger than the exports. We ask ourselves whether the Americans can maintain their prices? I answer, yes they can, for if they obtain a good profit on their superior quality goods they can afford to be satisfied with a smaller profit on the lower grades of watches. In America everything is made by machinery; here we make everything by hand. We count in Switzerland about 40,000 workmen making an average each per annum of 40 watches. In the United States the average is 150 watches. Therefore the machine produces three and a half to four times more than the workman. It remains for us to solve the situation. But how can we get out of the corner into which we have been driven? To-day, even without machines, we cannot dispose of the 1,600,000 watches which our people can manufacture. How will it be if we establish machines which will three increase our production? We must either diminish the number of hands and make machines, or else cling to our system and be resigned to see our industry decline.

Gentlemen, I do not pretend to point out the remedy. I simply call your attention to the evil—that is all. It remains for you to find the cure. However, I believe that it will be good to do for our mechanicians what we have done for our watchmakers; that is, to create schools. You must not despair; you must not desert the field. We must, on the contrary, organize for resistance and to reconquer the lost ground. If America closes her gates to us by custom duties and exorbitant freights, we are at least left the resource of energetically fighting against her in European markets.

Had the Philadelphia exhibition taken place five years later, we should have been totally annihilated without knowing whence or how we received the terrible blow. We have believed ourselves masters of the situation, when we really have been on a volcano. And to-day we must actually struggle if we do not want to encounter in all the markets that rival manufacture. Did we not sneer at Besançon at the outset? And now Besançon suffices for all France and besides she exports her surplus of manufacture. We ask ourselves if, in reducing the prices of watches, we can increase their sale in the same proportion? And if the sales do not increase what will become of us? We shall have an enormous stock of goods and a permanent stagnation. The custom duties, you know, amount to 25%. For a long time hopes have been entertained that they might be reduced. We cannot count on it. America needs all her resources, especially in the present situation, and whether Democrats or Republicans be in power, we cannot hope for a reduction in import duties. We must therefore make up our minds to lose the American market.

It has been said, and it has been complacently repeated, that the Americans do not make the entire watch, and that they are dependent upon Switzerland for several parts of the watch. This is a mistake. The Waltham Company make the entire watch—from the first screw to the case and dial. It would even be difficult for them to use our products, so great is the regularity, so minute the precision with which their machines work. They arrive at the regulation of the watch—so to say—without having seen it. When the watch is given to the adjuster, the foreman delivers to him the corresponding hairspring and the watch is regulated. [Sensation among the audience.] Here is what I have seen, gentlemen. I asked from the director of the Waltham Company a watch of the fifth grade. A large safe was opened before me. At random I took a watch out of it and fastened it to my chain. The director having asked me to let him have the watch for two or three days, so as to observe its motion, I answered, "On the contrary, I persist in wearing it just as it is, to obtain an exact idea of your manufacture." At Paris I set my watch by a regulator on the Boulevard, and on the sixth day I observed that it had varied 32 seconds. And this watch is of the fifth American grade. It costs 75 francs (movement without case). At my arrival at Locle I showed the watch to one of our first adjusters, who asked permission to "take it down"—in other words, to take it to pieces. I, however, wished first to observe it; and here is the result which I noted: Hanging, daily variation one and one-half seconds; variation in different positions, from four to eight seconds; in the "heated room" the variation was but very slight. Having thus observed it, I handed it to the adjuster, who took it down. After a lapse of a few days he came to me and said, word for word: "I am completely overwhelmed; the result is incredible; one would not find one such watch among 50,000 of our manufacture."

This watch, gentlemen, I repeat to you, I took at hazard—out of a heap, as we say. You understand from this example that the American

watch may be preferred to the Swiss. I have finished, gentlemen, and I have told you of things such as I have seen them. It remains for us to profit from this sad experience and to improve our manufacture. Competent men are not wanting among us; they must go to work at once.

A round of applause followed the speaker as he descended the tribune.

The above is only one of many lessons learned by foreigners "on the state of the arts" in America. We were told at the Centennial by Mr. Chas. Burleigh (inventor of the Burleigh rock drill,) that to his certain knowledge numbers of the best looms used in the old world remained holed outside of the exposition buildings, because their owners had witnessed the operation of superior American looms before unboxing their own.

Forcible as are the remarks in the foregoing lecture, we must say that but a fraction of the American watch business has been mentioned. There are various newer factories doing a large business, some of which by the use of new and improved machinery, turn out watches positively superior to the old companies cited and at still lower rates. We are confident in this assertion, from facts we have learned concerning the New York Watch Company, whose entirely new works are located near our old home, Springfield, Mass.

## Late Theories on the Earth's State.

Is the inside of the earth fluid or solid? Even in a such an apparently simply question as this we are still in some degree of doubt. You may think this is strange, because we find volcanoes throwing out lava, which is liquid rock, and because we find much other geological evidence to show that solid rocks, such as basalt and trap, have been protruded as molten masses within recent geological epochs; but it has recently been shown by Mr. Mallet that the fact of volcanoes throwing out liquid rock may not be inconsistent with the view that the earth as a whole is solid. Mr. Mallet's investigations go to prove that this liquefaction of the rocks which we observe may be produced at no very great depth from the earth's surface by the shifting and rubbing together of the rocks, owing to cracking due to the alteration of the temperature, just as boys at school rub a button on the bench until it is hot, when they often place it on their neighbor's cheek. Applying the laws of the mechanical theory of heat to this problem, Mr. Mallet believes that the friction of the rocks, caused by the cooling of the earth and the consequent shrinkage, is a sufficient and satisfactory explanation of the occurrence of the high temperature of volcanic action.

Sir Wm. Thomson, also, than whom no one is more capable of expressing an opinion, decides in favor of the earth's solidity. He tells us in his address to the Physical Section at Glasgow, that the conclusion concerning the solidity of the earth originally arrived at by Hopkins is borne out by a more rigorous mathematical treatment than that physicist was able to apply; so that the idea of geologists, who were in the habit of explaining underground heat, ancient upheavals, or modern volcanoes by the existence of a comparatively thin, solid shell resting on an interior liquid mass, must now be given up as untenable.—*Professor Roscoe.*

A BEAUTIFUL COMPLIMENT TO THE PHYSICIAN. —I dare not place any gift, however beautiful, or any success, however brilliant, above the talent or the skill which can relieve a single pang, and the self-devotion which lays them at the feet of the humblest fellow creature.—*Oliver Wendell Holmes.*

## CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS! Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA. Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California. Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

WANTED. Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager. 303 Pine Street, San Francisco.



BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.


SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

Poultry.



**WHITE LEGHORNS**  
Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.  
Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,  
C. P. STONE,  
Healdsburg, Cal.



**LOOK!**  
ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.  
ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

**B. B. RED GAMES**  
A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.  
J. G. ANNEAR,  
Ceres, Stanislaus County, Cal

SANBORN & BYRNES,



**BUILDERS,**  
Mechanics' Mills, Mission Street,  
Bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Newels and Balusters.



**RUPTURE CURED**  
Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.  
Send for Illustrated Circular and Price List.  
MAGNETIC ELASTIC TRUSS CO.,  
609 Sacramento Street, San Francisco

Agricultural Articles.

The Famous "Enterprise"

(PERKINS' PATENT)  
Self Regulating Farm Pumping, Railroad and Power

WINDMILLS,  
Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity. We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),  
FOR GRINDING BARLEY, ETC.,  
Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

**CHEAP AND RELIABLE.**  
All Goods Warranted.  
Send for Illustrated Circulars and information to

**HORTON & KENNEDY,**  
Managers for California and Pacific Coast,  
General office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

MATTESON & WILLIAMSON'S



**AMERICAN CHIEF**  
**GANG PLOW.**  
Took the Premium over all at the great plowing Match in Stockton, in 1870.  
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to  
MATTESON & WILLIAMSON,  
STOCKTON, CAL.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO'S**  
**CAST, CAST STEEL PLOWS.**  
FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:  
**COLLINS & CO. HARTFORD.**  
Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.  
**COLLINS & CO.,**  
212 Water Street, New York.

**Fraud! Fraud!!**  
**COLLINS & CO'S**  
**CAST, CAST STEEL PLOWS.**  
FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:  
**COLLINS & CO. HARTFORD.**  
Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.  
**COLLINS & CO.,**  
212 Water Street, New York.

**COLLINS & CO. HARTFORD.**  
Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

TYPE FOR SALE.

A LARGE QUANTITY OF BREVIER AND NONPAREIL TYPE, FORMERLY USED ON THIS PAPER FOR SALE AT A BARGAIN. ADDRESS

DEWEY & CO.,  
224 Sansome Street, San Francisco.

**HEALD'S**  
**BUSINESS COLLEGE**  
No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.  
LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.  
TELEROGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.  
For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

CALIFORNIA FARMERS' MUTUAL

Fire Insurance Association,

No. 38 California Street,  
(GRANGERS' BUILDING,)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

MUTUAL PLAN.		
	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.	\$6,202,435.00	\$136,622.18
Less Amount Canceled.	435,419.00	9,568.38
Amount in force, Dec. 31, '76.	\$5,767,016.00	\$127,053.80
Losses paid.	\$16,330.00	

CASH PLAN.		
	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.	\$3,905,935.00	\$71,865.16
Less Canceled and Expired.	1,587,246.00	28,585.16
Amount in force, Dec. 31, '76.	\$2,018,689.00	\$43,280.00
Losses paid.	\$12,718.71	

**OFFICERS.**  
J. D. BLANCHARD.....PRESIDENT  
I. G. GARDNER.....VICE-PRESIDENT  
G. P. KELLOGG.....TREASURER  
A. W. THOMPSON.....ATTORNEY  
FERD. K. RULE.....SECRETARY

**TRUSTEES.**  
J. D. Blanchard.....San Francisco  
G. P. Kellogg.....Salinas  
I. G. Gardner.....San Francisco  
Chas. Laird.....San Francisco  
Uriah Wood.....San Benito  
A. B. Nally.....Santa Rosa  
A. W. Thompson.....San Francisco  
A. D. Logan.....Colusa  
I. C. Steele.....San Mateo  
G. W. Colby.....Butte County  
A. Wolf.....Stockton  
C. J. Cressey.....Oakland  
J. C. Merryfield.....Dixon  
E. W. Steele.....San Luis Obispo  
C. S. Abbott.....Monterey  
Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

Grangers' Bank of California,

42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

**OFFICERS:**  
PRESIDENT.....GILBERT W. COLBY.  
MANAGING DIRECTOR.....C. J. CRESSEY.  
CASHIER.....ALBERT MONTELLIER.  
SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

**An Indispensable Requisite**  
—FOR EVERY—  
Teacher, Advanced Student, Intelligent Family, Library, and Professional Person, is



**THE BEST ENGLISH DICTIONARY,**  
**Webster's Unabridged.**  
"THE BEST PRACTICAL ENGLISH DICTIONARY EXTANT."—London Quarterly Review, October, 1873.  
"Every farmer should give his sons two or three square rods of ground, well prepared, with the avails of which they may buy it. Every mechanic should put a receiving box in some conspicuous place in the house, to catch the stray pennies for the like purpose."  
"Lay it upon your table by the side of the Bible—it is a better expounder than many which claim to be ex-pou-nders."  
"It is a great labor-saver—it has saved us time enough in one year's use to pay for itself; and that must be deemed good property which will clear itself once a year. If you have any doubt about the precise meaning of the word clear, in the last sentence, look at Webster's nine definitions of the v. t."—Mass. Life Boat.  
Recently added, four pages of  
**COLORED ILLUSTRATIONS,**  
Engraved expressly for the work at large expense.  
Sold by all Booksellers.

**DAVIS & SUTTON,**  
75 Warren St., New York,  
Commission Merchants in Cal'a. Produce  
REFERENCE.—Traders' National Bank, N. Y.; Ell-wanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

PUBLIC SALE

SHORT HORN CATTLE,

TO BE SOLD  
On Thursday, April 5th, 1877,

AT THE  
Fair Grounds, near San Jose,  
CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US TO CLOSE UP OUR PARTNERSHIP AFFAIRS;  
WE SHALL THEREFORE SELL, AT PUBLIC SALE, THE ENTIRE AVENUE RANCH HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to Breeders, and all parties wishing to purchase high bred Short Horns.

23 Sale Catalogues furnished on application.  
CYRUS JONES & CO.

MUSIC BOOKS

—FOR—  
Schools, Academies & Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.  
Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE THOS. (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.  
**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.  
**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.  
**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.  
As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents), SHINING RIVER, (35 cents), GOOD NEWS, (35 cents).  
Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

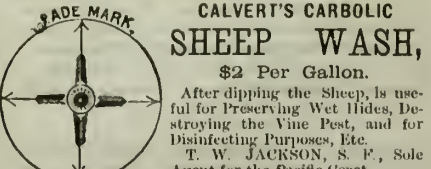
C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker, Philadelphia.

NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.  
One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal.  
JAMES W. WEBB, President.  
CHARLES MALTEY, Secretary.



**FOR FINE HATS**  
GO TO  
**C. HERRMANN**  
NO 402  
KEARNY ST. NEAR PINE  
SAN FRANCISCO.



**CALVERT'S CARBOLIC SHEEP WASH,**  
\$2 Per Gallon.  
After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.  
Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.



## Frauds in Life Insurance.

If there is anything on earth which should be held sacred it is life. If there is to be anything pure, upright and straightforward in business, it should be life insurance. In no other enterprise do trusting men enter with such unguarded assurance and with such unselfish hopes, because life insurance is either a wise provision for the needs of old age or for the welfare of beloved ones who may be left without a protector. There is more heart in a life insurance policy than in any other business contract in the world. If people find they cannot trust this, the impulse to provide for the helpless will be arrested, and the great possibilities for good which there are in upright insurance will be lost to the people. The occurrence which suggests these remarks is described by the Sacramento Record-Union as follows:

## The Latest Life Insurance Swindle.

A case is being examined in a New York court which possesses some special interest for Californians, many of whom have been victimized in connection with it. The most important testimony has been given by S. U. Hammond, who states that he was employed by the Continental Life Insurance Company, of New York, to go West and "freeze out" as many holders of policies in the company as he could. He was instructed to buy up all the outstanding risks of the Continental; and when asked what inducements to sell he held out to the policy holders, he made the following reply: "I told them the company was insolvent—these were my instructions from Mr. Frost. Mr. Frost told me that the company was in great need of money; that many of the policies on the Pacific coast would be due in about two years, and they would be unable to pay them; as an illustration, permit me to cite a case: A party holds an endowment policy of the Continental Life Insurance Company; that policy, from the time it was drawn out, has increased in value, so that now it is worth about \$3,000; in two years more it will be worth \$5,000; well, if I represent to the person holding the policy that the Continental is insolvent he will, in all probability, accept my offer for a trifle—\$100 or \$200; the Continental thus saves nearly the entire amount that they would have to pay when the policy would become due—\$4,800 for instance, out of \$5,000; if they would not sell I exchanged 'time' policies for 'endowments'; a 'time' policy is one that is drawn out for 20 years; during the first 10 years it steadily increases in value, while in the last 10 it as steadily decreases; my instructions were, if I could do no better than to secure a consent to an exchange, to give the policy holder a 'time' policy, without telling him what the transaction amounted to."

This witness testified further that he had saved the company \$200,000 to \$300,000 in the Pacific States, and probably \$2,500,000 in the West altogether. The monstrous swindle thus developed appears to have been systematically worked by the Continental Company, all of whose officers and directors are represented to be wealthy men. This confederation of thieves has robbed and plundered the South as well as the West, and the same witness, whose testimony we have quoted, coolly stated that "it was the intention of the officers of the Continental to send him through the Eastern States in January of the present year." It thus appears that here is an insurance company which subsists by a deliberate system of the most villainous fraud, and that its victims are its own policy-holders. By sending agents through the country to lie about its financial standing, it depreciates its own policies and then buys them up for a song. Nor is the "freezing" process described above the only swindling method employed by these scoundrels. It seems that they have also schemes which they call "sweating" and "bulldozing," though whether the latter term owes its origin to life insurance swindling we do not know. If Hammond is to be believed, there are many companies besides the Continental that resort to these infamous dodges, but the Continental is perhaps the only one that has made a specialty of this kind of business, and at least it is the only one whose abominable practice has been brought to the attention of the public. Hammond stated that when he announced the insolvent condition of the Continental in the South, it created a panic, and the agents were driven out of the States, while in San Francisco he himself came near being mobbed. It is to be regretted that the officers and directors could not be placed at the disposal of the policy-holders they have robbed, for about half an hour, but, in default of such rude and summary vengeance, it would seem that there ought to be some way of reaching these scoundrels by the law, and conveying them to the penitentiary they so richly merit. Nor should honorably conducted insurance corporations be backward in assisting the prosecution and conviction of such rogues, since the infamies of the swindlers are shaking all public confidence in life insurance.

A BELGRADE dispatch says: All day Saturday and Sunday wagon trains have been transporting a large quantity of small and large ammunition from the fortress of Belgrade to the quay, to be taken down the Danube this morning. This movement contrasts with the peaceful news from Constantinople.

DR. TEMPLE, pioneer of homeopathy, and founder of the Homeopathic College, Missouri, died last week, aged 70.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING FEBRUARY 20TH, 1877.  
TIP-CUTS FOR UMBRELLAS.—Lewis Cutting, S. F.  
METAL WHEELBARROWS.—Calvin Nutting and Calvin Nutting, Jr., S. F.  
REFLECTORS.—Emil Boesch, S. F.  
CHIFFERS.—Rebecca Sara Bruse, Sonoma, Cal.  
UMBRELLA RUNNERS.—Adam Good, S. F.  
SLOP-HOPERS.—Miles M. Harvey, S. F.  
SPEED AND DISTANCE INDICATORS.—Gustavus M. Jensen, Portland, Oreg.  
MANUFACTURE OF TEA-KETTLES, ETC.—Azadan J. Lowell, Alvarado, Cal.  
SPRING MATTRESSES.—Alexander C. McManis, S. F.  
QUARTZ MILLS.—Allen Oliver, Forest Hill, Cal.  
METHOD OF CONNECTING LUMBER FOR TRANSPORTATION IN FLUMES, ETC.—William H. Thutman, Borden, Cal.  
The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.  
NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

PORTABLE CARPET BEATER.—Chas. Elsasser, S. F. This invention relates to a machine which is adapted for beating and cleansing carpets upon the floor without taking them up. It consists of a box which is divided horizontally with two compartments. The bottom of the lower compartment is open and a spring beater is placed in it so as to be operated by a friction wheel, which is rotated by pressure against the floor as the box is moved along. A suction fan is arranged to draw the dust which is raised by the beater into the upper compartment or dust chamber. This machine can be moved over a carpet in the same manner as the ordinary carpet sweepers and will beat and sweep it clean without removing it from the floor. By using this machine every two or three days upon a carpet it can be kept clean and free from dust without the disagreeable necessity of occasionally taking it up and sending it away to be beaten.

SOFA AND BED.—August Hansen, S. F. This patent covers an invention which relates to a novel construction of that class of household furniture known as sofa-beds, and it consists in the formation of a double sofa bottom so hinged as to open outward to secure a proper width for a bed, and in combination with this, a sofa back so hinged as to swing across the head of the converted bed where it is inclined, and held in position by a locking device. A mid-leg may support the front of the bed, and the upholstered arms of the sofa are hinged so as to be turned back before opening out the hinged bottoms, thus protecting them from wear upon the floor or carpet. In combination with this sofa is employed a double detachable head-piece, composed of two parts, which, when not in use, may be shut up together, but are separable for use. The hinges by which the parts of the bed are connected, are so made as to brace and resist the separation of the parts.

ELECTRO-MAGNETIC SOLES.—E. H. Craw, Vallejo. This is a novel sole for boots and shoes, which is intended to create a feeble magneto-electric current through the lower limbs of the wearer, thereby relieving or curing rheumatic attacks. These soles are made of a positive and the other of a negative metal, suitably covered to prevent wear and breakage, the covering being also perforated if desired. For neatness and convenience the soles are covered with any suitable fabric. The plates are made preferably in three parts, and are loosely connected together by the covering fabric, so that as the foot and shoe bend at the ball in the movement of walking, the plates will give easily without breaking. The effect of these plates, the inventor says, has been to completely cure rheumatic affections of the lower limbs in all cases where the soles have been worn; and they require no special attention or adjustment from the wearer.

BARREL TAP.—Henry Saunders, S. F. This invention relates to certain improvements in that class of barrel taps which are fixed in the barrel and provided with a valve which is opened upon the introduction of the faucet so that by use of the faucet the contained liquid may be drawn at will. The invention consists in the employment of a double tap consisting of an outer gland, which is screwed permanently into the cask; and an inner one, which contains the valve and receives the faucet, said inner gland being removable from the outer one so as to allow free access to the cask for cleaning, without interfering with the valve or removing the gland which screws into the cask, which would in a short time cause it to leak. It also consists in a novel construction and arrangement of the valve.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## General News Items.

A MADRID special announces that the Spanish Minister of Foreign Affairs is engaged upon a draft of a treaty of commerce with the United States.

HESTER, Tully and McHugh, the Molly Maguires on trial at Bloomsburg for the murder of Alexander Rac, near Centralia, Penn., have been found guilty.

SECRETARY ROBESON says if the proposed reduction is made in the appropriation for the pay of officers and men of the Navy serving abroad, the ships and crews will have to be brought home at once.

THE probability is that Rear-Admiral John Rodgers, now in command of Mare Island Navy Yard, will be ordered to the command of the Naval Observatory at Washington, in place of Rear-Admiral Davis, deceased.

SALINAS CITY, Monterey county, has a sensation; a defalcation of \$20,000 having been discovered in a county official's office. The court house was burned a short time since, and it is believed that the records were burned to destroy proof of the defalcation.

WAKELEE'S SQUIRREL AND GOPHER EXTERMINATOR.—We advertise this compound with great confidence that it is worthy of the patronage of our readers. It has been tried for years, and we often in our correspondence find notes of success with it. We find in Mr. Wakelee's circular many testimonials from our readers and correspondents, and therefore have especial trust in them. For example M. F. Honan, who wrote us excellent letters from Yuba City, and was largely engaged in levee work there, writes as follows: "In the last six months I have used over 20 cans of your exterminator, and find it the best that can be used for poisoning squirrels and gophers. Your directions for poisoning squirrels are correct. I have tried many ways to get at gophers and have succeeded best as follows: I find where the gopher has thrown up fresh dirt, and dig down till I find the main runway, usually about six inches. I then clean out with my hand any dirt that may have fallen in, and place about one-quarter teaspoonful of the exterminator therein. I then seal the hole up tight with a hard lump of dirt or sod, being careful not to let any dirt drop on to the wheat. The air being thus excluded, the gopher in passing through will find the exterminator. People in this neighborhood are trying this plan with great success."

[Advertisement.]

## Perfected Butter Color.

Occasionally, during the past two years, we have received for trial samples of butter coloring preparations from Messrs. Wells, Richardson & Co., of Burlington, Vt., with the request that they should be thoroughly tested and criticised as to their merits and demerits. Knowing the firm were striving to make the best preparation possible, and that they intended to stop at nothing short of perfection, we have been free to find all the fault that could possibly be detected.

The first sample received, however, was quite superior to any other preparation of annatto we had ever used. It was perfectly clear of sediment, free from odor, and gave a bright, clean color to the butter, while it was sold cheaper, according to its strength, than anything we had previously bought. But it was not warranted to keep through the whole year, without being injured by freezing in winter or molding in summer. A later sample proved equal to these tests, and showed greatly increased strength of the coloring principle. Having tested it for several weeks, we informed the proprietors that we could find no fault with it whatever. As now made, it is the strongest, cleanest, purest and cheapest butter and cheese coloring substance we have ever found, and for all that we can see, it is absolutely perfect. It will bear heat or cold, and does not fade when exposed to the light. It should entirely supersede carrots for coloring butter, and also all the crude preparations of annatto, as formerly put up by druggists.

Since Wells, Richardson & Co. commenced the manufacture of their 'Perfected Butter Color,' the prejudice against the use of artificial coloring in butter has been swept away at a rapid rate, not only among butter makers, but also among the dealers and their consumers. Being perfectly harmless, simple, cheap and easily used, it has become one of the staple articles of the dairy room, as much as salt or rennet. For ten cents the proprietors will send any one a sample. Let all butter makers try it.—A. W. Cheever, Editor New England Farmer.

SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

THROUGH the length and breadth of the land the celebrated SILVER TIPPED Boots and Shoes are sold by the million, for parents know they last twice as long as those without Tips.

Also try Wire Quilted Soles.

## A JOINT AUCTION SALE

—OF—

## Blooded and Graded Stock.

—ALSO—

## A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville.

Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

PACIFIC,

By Red Cloud, out of Beta, two years old. (Herd book No. 24,249.)

PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of imported Cows.

Also, four head of Thoroughbred Cows and Heifers. Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows.

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers. Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums over \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

## THE BENNER RANCH

Will also be sold at Public Auction, consisting of 560 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

## SALE POSITIVE, IN GOLD COIN.

## Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,

HENRY PRESTON,

DAVID S. BENNER

Feb. 24th, 1877.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callosities, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

## PACIFIC RURAL PRESS,

A first-class 16-page Agricultural Home Journal, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Subscription, \$4 a year.

DEWEY & CO., Publishers.  
No. 224 Sansome Street, SAN FRANCISCO.

## Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, Harper's Weekly and Scientific American, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, Dewey & Co., Publishers, San Francisco.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Feb. 28, 1877.

Business has ruled dull during the week in many lines of trade. The season is just in the midst of uncertainties and purchasers are buying only for immediate necessities. It will need the surerets of crops, which will soon be demonstrated one way or the other, to determine what will be the amount of the city's business.

In Wheat there has been a very firm feeling, and quotations have been retained at last week's prices. The foreign advices have, however, shown a slight backward movement and close a point below the opening prices, as may be seen in the following.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	Holiday.	Holiday.
Friday.....	10s 8d@10s 10d	10s 10d@11s 3d
Saturday.....	10s 8d@10s 10d	10s 10d@11s 3d
Monday.....	10s 8d@10s 10d	10s 10d@11s 3d
Tuesday.....	10s 8d@10s 10d	10s 10d@11s 3d
Wednesday.....	10s 7d@10s 9d	10s 9d@11s 2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	8s 11d@9s 3d	9s 3d@9s 10d
1876.....	9s 10d@10s —	10s 2d@10s 8d
1877.....	10s 7d@10s 9d	10s 9d@11s 2d

## The Foreign Review.

LONDON, February 27th.—The *Mark Lane Express* says: The weather has been stormy and unsettled, with only a slightly diminished rainfall. Field work, therefore, progressed slowly on heavy lands. Farming operations on light lands, however, have been fairly rapid. Autumn-sown crops continue sufficiently healthy, but their future prosperity depends upon whether the winter has spent itself. Should the March weather be frosty, the consequences may be disastrous. Farmers continue to thresh Wheat slowly, there having been little incentive, as the damp weather has affected the condition of the bulk of offerings, and the advance of one shilling per quarter which has taken place, has applied only to dry samples. Despite the somewhat increased imports of foreign Wheat, firmness has continued, and the reaction was very marked last Monday, when a healthy and fairly brisk demand began for all varieties at an advance of one shilling per quarter. The improvement is not due to politics, the weather or the Continental and the prospective shortness of supplies from all sources except California. Some of the earlier shipments from San Francisco and Oregon have made their appearance in London and freely found buyers at about 53s to 55s per quarter. Although we are likely to become receivers of a large quantity of this class of Wheat as the season advances, it is probable that the shortness of stocks and the deficient harvest in 1876 in most parts of the world will bring Continental buyers, and, diverting a considerable portion of the quantity afloat to other destinations, prevent our market from being glutted with those useful varieties of Wheat. Our trade seems to be based on sound foundations, and the present moderate level of values appears likely to continue, being neither unduly depressed by the prospect of increased supplies from California, nor temporarily enhanced by political anxiety. There has been a slight improvement in feeding Corn. The firmness of holders caused an advance of 6d per quarter on Oats, while Maize, especially old Corn, is higher. Barley remains without quotable alterations, but trade is rather better. Malting and grinding qualities have maintained previous prices. Business in floating cargoes ruled firm, with a slight enhancement in values.

## New York Grain Market.

NEW YORK, Feb. 25th.—The decline in Spring Wheat is due to the weakening of the crops by which it has so long been held above the foreign markets. The California crop, it is now seen, is not going to be a disastrous failure, which it is becoming more and more apparent that there is not going to be a great war in Europe after all; and beyond this, the season of increased supplies is rapidly approaching, all of which causes a nervous feeling to the speculators in Wheat. Prices of Spring growths have given way about five cents during the week, No. 2 closing at \$1.40@1.45, and No. 3, \$1.32@1.37. Winter Wheat is inactive and nominally steady.

## Freights and Charters.

The San Francisco freight market has been very quiet during the week. The *Commercial News* says: Freighters are now weaker and lower than a week ago, and, as far as can be judged, without prospect of any immediate improvement. Wooden ships are worth \$2.48 to Cork, U. K. Iron vessels are generally held above the market, and it is extremely difficult to give rates which would be accepted. The amount of disengaged tonnage in port is not large, but it is evident that Wheat is scarcer than ships. Outside business has remained stagnant, the little business offering being at rates which do not tempt ships to accept them. At the close we have 24,474 tons in port under engagement to load Wheat, 21,760 tons disengaged, and 5,943 tons miscellaneous. The latest charters reported are: ship Rembrandt, 1,414 tons, Wheat to Cork, U. K., \$2.48; Br ship Benmore, 1,530 tons, Wheat to Liverpool, private.

## Eastern Wool Markets.

NEW YORK, February 25th.—Wool has ruled downward, but the fine grades remain firm, the stock of this description being light. Inferior grades are plenty and depressed. The cable thus announces the result of the public sale of Colonial: "Very numerous attendance; spirited competition. Five per cent. under highest November prices; Superior Port Phillip, 15d; average, 13d." These are better prices than had been expected, owing to the disturbed state of European affairs. In our market the sales for the week include 150,000 pounds fall California at 15@18c; 50,000 do spring do, 24@26c; 45,000 do Oregon, part at 35c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Feb. 7.	WEEK Feb. 14.	WEEK Feb. 21.	WEEK. Feb. 28.
Flour, quarter sacks..	55,377	84,135	15,772	61,242
Wheat, cents.....	133,553	356,523	87,537	111,835
Barley, cents.....	4,873	8,101	8,537	6,487
Beans, sacks.....	919	656	1,465	1,049
Corn, cents.....	2,536	4,249	1,024	2,324
Oats, cents.....	5,854	3,894	3,308	7,848
Potatoes, sacks.....	9,567	19,144	11,081	16,026
Onions, sacks.....	1,586	1,730	680	1,149
Wool, bales.....	36	86	148	98
Hops, bales.....	87	144	45	45
Hay, bales.....	920	931	760	686

**Bags**—There is no change in prices. During the week there has been a disposition among holders of Gunnie

Bags to corner the supply on the plea that the famine in India has cut off the crop and will raise the price in Calcutta. Gunnies are held at 12c. An advance is reported from Dundee in standard Wheat Bags. These foreign fevers in values are really of little moment in our markets. Everything now depends upon the season. It is estimated that the stock now on hand and on the way is ample for the crop as it now promises, but this estimate is liable to be wholly upset if we should have a succession of showers during the next month in the parts which now need the water. These are the latest items of the trade gossip in Bags.

**Barley**—Barley has been selling within the former range. We note sales: 200 sds good Feed, \$1.20, gold; 450 sds Feed, \$1.17, gold; 300 do Coast do, \$1.25, silver; 400 do fair Bay Brewing, \$1.22, gold; 550 sds good Bay Brewing, \$1.25 per ctl, gold.

**Beans**—Bayo Beans have advanced to \$3 per ctl. Pea Beans show a slight improvement for best selections. Lower grades are sold even below quotations. We note a sale of 165 sds at \$1.75 per ctl, silver.

**Buckwheat**—Buckwheat shows some disposition to fluctuate. The ruling price is \$1.80 per ctl. There are sales reported as high as \$1.90 per ctl.

**Corn**—Corn has been in light receipt and the movement to advance prices has succeeded in putting up the best selections to \$1.50 per ctl.

**Dairy Produce**—Packing Butter has begun in the city, dealers claiming that they cannot dispose of the surplus now in their hands. The drought in some of the southern supply counties seems counterbalanced by the increased production in the northern counties, where the season and yield from the cows is reported unusually good. Dealers claim that it is hard to sell Butter at the present quotations and some lots are sold below them. The *Bulletin* makes the following note on the situation:

Dairymen are not very well satisfied with the account sales now being returned for Fresh Roll Butter. Some of the consignments do not bring over 20c@22c, though the general range is 24c@26c, and a few choice lots bring as high as 28c. Present prices of Fresh Roll Butter in this market, in unbroken packages, compare as follows with this date in previous years:

	Per Pound.
1871.....	37c@45c
1872.....	30c@35c
1873.....	30c@40c
1874.....	30c@37c
1875.....	27c@30c
1876.....	25c@27c
1877.....	24c@28c

In former years there was some New York trade in the spring for two or three successive seasons. There was never much profit in the trade, and this year shipments in that direction are utterly impracticable, as the best State Farm Butter is quoted in New York at 22c@23c. Our dairymen must content themselves to a lower range of prices than they have hitherto been receiving, though the present rates are probably as low as they will be this year.

**Eggs**—Eggs are lower. Fresh Hen's Eggs now range from 26 to 27c per dozen.

**Feed**—There has been a drop in Bran and Middlings and an advance in Corn Meal, in sympathy with the advance in Corn. The Hay market is dull and nothing is quotable above \$15; a decline from last week. We note sales of Hay as follows: 18 tons fair Oat, \$12; 127 bales Alfalfa, \$10; 52 tons good Wheat, \$15.

**Fruit**—Oranges sell well at quotations, there being, however, a wide range as to quality. There is no change in Fruit prices. A small lot of Strawberries from Santa Clara county is reported sold at \$2.50 per lb.

**Hops**—The trade is still lifeless and though shippers are looking around their bids are very low. A shipment of Hops has been made during the month of 2,000 bales for Peru. Emmet Wells reports the New York market, for the week ending February 17th, as follows:

The market is still quite unsettled. Prices have ranged between the extremes of 10 and 20 cents, most of the transactions having been on a basis of 12 to 17 cents. The late tumble in prices has not as yet led to any increased demand either from exporters or consumers, though it is firmly believed that a further slight concession in the price will tempt foreigners and result in an increased export demand. Our Hops would be taken more freely now for export were the quality as good as last year.

**Oats**—There have been considerable receipts of Oregon Oats, and the market is rather weak, with a lower limit for inside prices. Good heavy samples are still saleable at full rates. We note sales: 1,400 sds Oregon Feed at \$12.12, silver; 300 sds Feed, \$1.85, half silver; 200 sds Oregon, \$2.10 per ctl, silver.

**Onions**—Onions still hold their own at former prices and some firmness is noted for the best classes.

**Potatoes**—Prices for Potatoes are the same as last week. The market is still heavy. There has been a shipment to New York by rail, but the matter is rather hazardous because of the extreme weather which prevails along the line of the railroad. Sweet Potatoes are lower, selling at 75c per ctl.

**Provisions**—The market for Cured Meats, Lard, etc., is dull and prices unchanged, except that Eastern Hams are weak under large arrivals and limited demand. Fresh Meat is without change.

**Poultry and Game**—There has been an advance all along the Poultry line, the improvement being about \$1 per dozen on all kinds. Turkeys and Geese are doing a little better. Wild Geese are cheaper and over-abundant.

**Rye**—There has been a sale of 200 cts good Rye at \$1.92 per ctl.

**Seeds**—Prices are unchanged. Chile Alfalfa is now reported out of market.

**Vegetables**—Asparagus has sold as low as 8c, but the cold weather to-day gives the price a lift to 10c@12c per lb. Green Peas are a little higher. Sweet Peas have arrived and sell at 10c@12c per lb. Mushrooms and New Potatoes are also selling at an advance. Marrowfat Squash is in light supply, and is worth to-day, \$20 per ton. Rhubarb drops to 8c@12c per lb. Tomatoes are out of supply. A small lot was received from the south and unless more come from that quarter there will probably be no more of this Vegetable until the early ones come from Vacaville.

**Wheat**—Sales have been made during the week as follows: 200 sds good Milling, \$2.10; 1,000 do choice do, \$2.12. We quote Shipping at \$2.05@2.10, and Milling at \$2.10@2.15. 700 sds choice Milling at \$2.15; 1,000 do, \$2.17; 1,200 do good do, \$2.12; and a round lot of

Shipping at \$2.10. 800 cts Shipping at \$2.14; 5,000 cts choice Milling at \$2.12; 1,000 cts do at \$2.15; 500 cts good Milling at \$2.10; 2,000 cts choice at \$2.15.

**Wool**—Messrs. Christy & Wise received on Saturday the first clip of spring Wool this season. The consignment came from San Luis Obispo, and was of good staple and fair condition, considering the dry season and early shearing. The first lot of spring last year was received by Messrs. Moody & Farish on February 24th, being 48 bales shipped from the port of San Pedro. There have been sales of 39,000 lbs at 12c; 45,000 do at 10c@12c. The spring Wool is not sold.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., February 28, 1877.

**BEANS.**  
Bayo, cts.....3 00 @ 4  
Butter.....50 @ 60  
Pea.....2 12 @ 2 35  
Red.....2 75 @ 3  
Pink.....2 75 @ 3 00  
Small White.....2 00 @ 2  
Lima.....2 75 @ 3

**BROOM CORN.**  
Common, lb.....2 24  
Choice.....3 @ 4

**CHEESE.**  
California.....4 @ 4  
German.....6 1/2 @ 7

**COTTON.**  
Cotton, lb.....15 @ 18  
**DAIRY PRODUCE, ETC.**  
Butter.....22 @ 26

**CAL. FRESH ROLL, LB.**  
Point Reyes.....27 1/2 @ 28  
Pickle Roll.....25 @ 27  
Pirkiu.....22 1/2 @ 23  
Western Reserve.....16 @ 25  
New York.....— @ —

**CHEESE, CAL., LB.**  
Old.....— @ —  
Eastern.....12 1/2 @ 15  
N. Y. State.....15 @ 18

**EGGS.**  
Cal. fresh, doz.....26 @ 27  
Ducks.....28 @ 30  
Oregon.....25 @ 26  
Eastern.....— @ —

**FEED.**  
Bran, ton.....16 00 @ 18  
Corn Meal.....34 00 @ 35 00  
Hay.....10 00 @ 15 00  
Oat Meal.....32 50 @ 35  
Straw, bale.....75 @ 80

**FLOUR.**  
Extra, bbl.....6 50 @ 7 00  
Superfine.....4 75 @ 5 50  
Graham.....5 50 @ 6 00

**FRESH MEAT.**  
Beef, 1st quality, lb.....6 @ 6 1/2  
Second.....4 @ 5  
Third.....3 1/2 @ 4  
Mutton.....3 @ 4  
Spring Lamb.....10 @ 12  
Pork, dressed.....6 1/2 @ 7  
Dressed.....8 1/2 @ 9  
Veal.....5 @ 6  
Milk Cakes.....7 @ 8

**GRAIN, ETC.**  
Barley, feed, cts.....1 20 @ 1 25  
Brewing.....1 25 @ 1 27 1/2  
Chevalier.....1 25 @ 1 40  
Buckwheat.....1 80 @ 1 85  
Corn, white.....1 45 @ 1 50  
Yellow.....1 45 @ 1 50  
Oats.....1 80 @ 2 20  
Milling.....2 30 @ 2 40  
Rye.....1 85 @ 2 00  
Wheat, shipping.....2 05 @ 2 10  
Milling.....2 10 @ 2 15

**HIDES.**  
Hides, dry.....16 @ 16 1/2  
Wet, salted.....7 1/2 @ 7  
Beeswax, lb.....25 @ 27 1/2  
Honey in comb.....10 @ 15  
Strained.....6 @ 8  
New Crop.....16 @ 20

**HOPS.**  
New Crop.....16 @ 20

**WOOL, ETC.**  
Crude, lb.....6 1/2 @ 6 3/4  
Refined.....8 @ 8 1/2

**WOOL, ETC.**  
Free.....12 @ 14  
Choice.....14 @ 16  
Northern.....17 @ 21  
Burr.....10 @ 16  
Oregon, Eastern.....20 @ 26  
Valley.....25 @ —

## LUMBER.

WEDNESDAY M., February 28, 1877.

**CARGO PRICES OF PIGET SOUND PINE.**

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Refuse.....18 00 @ 20 00  
Beaded Flooring.....30 00 @ 35 00  
Refuse.....20 00 @ 22 50  
Half-inch Siding.....20 00 @ 22 50  
Refuse.....15 00 @ 18 00  
Half-inch Surfaced.....25 00 @ 28 00  
Refuse.....20 00 @ 22 50  
Half-inch Battens.....20 00 @ 22 50  
Pickets, Rough.....1 00 @ 1 10  
Rough, Pointed.....13 00 @ 15 00  
Fancy, Pointed.....25 00 @ 30 00  
Shingles.....35 00 @ 40 00

**REDWOOD.**  
Rough, M.....18 00 @ 22 50  
Refuse.....14 00 @ 18 00  
Clear.....30 00 @ 35 00  
Clear Refuse.....20 00 @ 25 00  
Rustic.....32 50 @ 35 00  
Surfaced.....22 50 @ 25 00  
Refuse.....20 00 @ 22 50  
Flooring.....25 00 @ 28 00  
Ref



## Nurserymen.

**FRUIT AND ORNAMENTAL TREES,**  
Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Avacados, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
516 Battery Street,  
P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

## FRUIT, EVERGREEN, NEW AND RARE TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Pritchardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

**TREES, TREES AND PLANTS,**

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG &amp; CO.,

Nos. 8, 9 and 10 J Street, Sacramento.

200,000

Australian Gum Trees For Sale,

-AT-

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,

East Oakland, Alameda County, Cal.

## HANNAY BROS.' NURSERY,

SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, ALMOND, QUINCE, OLIVE, FIG, GRAPEVINES, AND SMALL FRUITS.

EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER, ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

P. O. Box 32.

HANNAY BROTHERS.



SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

## LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, - - - San Jose, Cal.  
A large and general assortment of

Fruit and Ornamental Trees, Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stinky fruit trees a specialty. Address,  
S. NEWHALL, - - - San Jose, Cal.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

## Four Grand Prize Medals

AWARDED OUR EXHIBIT

AT THE CENTENNIAL.



Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—128 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, B. K. BLISS & SONS,  
34 Barclay street (P. O. box 5,712), New York.

**SEEDS**  
Our Combined CATALOGUE for 1877  
**OF EVERYTHING FOR THE GARDEN**  
Numbering 175 pages, with Colored Plate, SENT FREE  
To our customers of past years, and to all purchasers of our books, either Gardening for Profit, Practical Floriculture, or Gardening for Pleasure, (Price \$1.50 each, prepaid, by mail.)  
To others, on receipt of 25c.  
Plain Plant or Seed Catalogues, without plate, free to all.  
*Peter Henderson & Co.*  
Seedsmen, Market Gardeners and Florists,  
35 Cortlandt St., New York.  
**PLANTS**

## THE DINGEE &amp; CONARD CO'S BEAUTIFUL EVER-BLOOMING

**ROSES**

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Reorder to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

## One Million Pear Seedlings,

From two to three-sixteenths of an inch in diameter; well branched roots, just the thing for grafting. Sent by mail, securely packed, postage paid, for five dollars per thousand, or delivered at the express office here, boxing free, at two dollars per thousand. Pear root-grafts made to order, five dollars per thousand. Terms, cash.

HUNTER &amp; BREWER, Springwater, Livingston Co., New York.

## PETALUMA NURSERIES.

Established - - - - - 1860.  
We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address,  
WM. SEXTON, Petaluma, Cal.

## PEACH SEEDLINGS

FOR SALE,

For Grafting and Transplanting,  
IN LOTS TO SUIT.

Address, W. A. T. STRATTON, Petaluma, Cal.

Trees. Plants. Spring Lists free. F. K. PHOENIX, Bloomington Nursery, Illinois.

John Saul's Catalogue of New, Rare and Beautiful Plants, will be ready in February, with a colored plate of the New Striped Rose, BEAUTY OF GLAZENWOOD.

"A rose of golden-yellow, striped and flaked with scarlet vermillion. Sounds like a dream or a fairy tale; it is nevertheless a reality." *H. Curtis, in the Gardener.* Catalogues free to all my customers; to others, price 10 cents, or a plain copy free. JOHN SAUL, Washington, D. C.

Strong Plants delivered free of cost safely per mail at your door. Satisfaction guaranteed. Splendid assortment of ROSES  
**FLOWERS**  
6 for \$1;  
13 for \$2. Send for New Catalogue of Plants.  
HOOPES, BRO. & THOMAS,  
Cherry Hill Nurseries, West Chester, Pa.

Trees, Plants, Bulbs. Fall Price List and Bulb Catalogue GRATIS. Address, F. K. PHOENIX, Bloomington Nursery, Ill.

## Seedsmen.

## JAPANESE PERSIMMON.

Just received and For Sale, a choice selection of Trees, 3 and 4 years old, of this new, rare, and Valuable Fruit.

SOME OF THIS STOCK HAS BEEN GROWN BY SHINN & CO., NURSERYMEN, NILES, ALAMEDA CO., CALIFORNIA, FROM SELECTIONS OF THE CHOICEST VARIETIES KNOWN IN JAPAN.

Other portions of the stock now offered is from an importation made by that enterprising firm this season, of the variety known as the SEEDLESS PERSIMMON. Both (the California grown and the imported) are in every respect reliable.

The former will have the preference with experienced fruit growers, as being already naturalized and surer to bear transplanting. Price, for the California grown, \$1 each; for the seedless, \$2 each. Samples can be seen and orders given at 317 Washington St.

GEO. F. SILVESTER, Seedsman, S. F.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. *Trade price list on application.*

"We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,  
607 Sansome street, S. F.

P. O. Box 10231.

**MAILED FREE**  
**FLORAL GUIDE**

Contains over 1,200 varieties Vegetable and Flower Seeds. COLORED PLATES. Elegant wood-cuts of vegetables and flowers. Handsomest Guide Published! *Trade price list on application.*  
DETROIT SEED CO., Detroit, Mich.

## SPANISH CHUFA

SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles County, Cal.

R. J. TRUMBULL,  
Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

*Trade Price List on application.*  
"My 'Guide to the Vegetable and Flower Garden' will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

A New and Delicious Fruit.

## THE DIOSPYROS KAKI,

-OR-

## JAPAN PERSIMMON.

BEAUTIFUL IN COLOR,  
DELICIOUS IN FLAVOR,  
MAGNIFICENT IN SIZE.

Average Weight, One-half to One Pound Each.

Four Varieties, Warranted Genuine, and will Bear in from One to Three Years.

Only all Grafted and Reliable Stock.

PERFECTLY ADAPTED TO CALIFORNIA, AND NOW GROWING IN SANTA BARBARA, SAN FRANCISCO AND SONOMA COUNTIES.

"Its introduction will be a boon to our country."  
J. M. RODGERS, Admiral U. S. N.

"A magnificent fruit."  
J. D. WATSON,  
Commander U. S. Navy.

"Worthy to be ranked with the peach and pear of California."  
P. V. VEEDER, D. D.,  
Tokio, Japan.

Fruit on exhibition, and Trees, Clums and Seeds for sale by REV. H. LOOMIS, at R. J. TRUMBULL'S Seed Store, 421 Sansome street, San Francisco. Send for circular.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



## The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

NURSERYMEN, FLORISTS, SEEDSMEN,

TREE DEALERS, HORTICULTURAL

IMPLEMENT MAKERS, ETC.,

of the United States.

Volume II Now Ready.

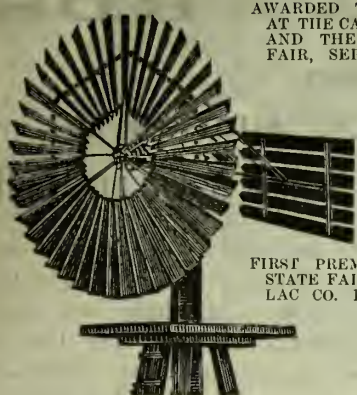
The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT &amp; CO.,

Publishers, Galena, Illinois.



# ALTHOUSE AND RAYMOND WINDMILLS.

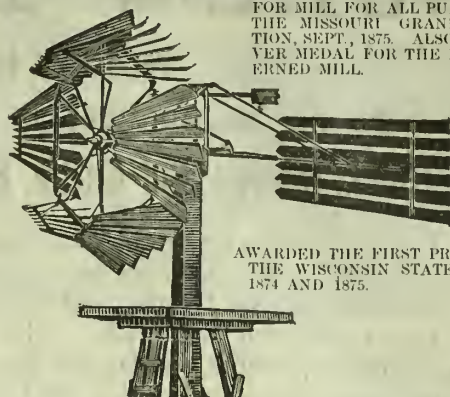


AWARDED THE FIRST PREMIUM AT THE CALIFORNIA STATE FAIR, AND THE STOCKTON DISTRICT FAIR, SEPT., 1875.

FIRST PREMIUM AT THE IOWA STATE FAIR, 1875, AND FOND DU LAC CO. FAIR, WIS., 1874.



RAYMOND'S PAT. WINDMILL



AWARDED THE FIRST PREMIUM FOR MILL FOR ALL PURPOSES AT THE MISSOURI GRAND EXPOSITION, SEPT., 1875. ALSO, THE SILVER MEDAL FOR THE BEST GOVERNED MILL.

AWARDED THE FIRST PREMIUM AT THE WISCONSIN STATE FAIR IN 1874 AND 1875.

The Althouse Windmill in a Light Wind.

The Althouse Windmill in a Heavy Wind.

## THESE MILLS SPEAK FOR THEMSELVES.

Run with Uniform Speed in Light or Heavy Winds, and take care of themselves in any Gale.

Perfectly Self-Regulating and Self-Protecting, Reliable, Durable and Ornamental, Cheapest and Best,

For the Reason that they Run in Very Light Wind, work Quietly and Steadily in a Gale, and, unlike Solid Wheel Mills, when properly set up

THEY NEVER BLOW DOWN.

L. H. WOODIN, Esq., San Francisco.

The Althouse Windmill is the best I have seen in use. It gives satisfaction in every respect. Eureka, Nevada, Jan. 16th, 1877. EVERETT, Gen. Supt. Eureka & Palisade R. R.

I believe the Althouse Windmill cannot be excelled in any particular. Colusa, Sept. 5th, 1876.

J. A. WINSHIP.

We are satisfied, after a fair trial, that the Althouse is the best Windmill in use. Galt, Sac. Co., Aug. 23d, 1876.

WHITAKER & RAY.

ORDERS PROMPTLY ATTENDED TO.

L. H. WOODIN, San Francisco, Cal., Proprietor.

My Althouse Windmill has been in use since the 1st of May, and has not failed one day to furnish plenty of water for all my stock and ranch use. Plainsburg, Merced Co., Oct. 27th, 1876.

R. M. BURCHELL.

I know of no Windmill which I believe to be as perfect a self-regulator, or that will run in lighter wind. No gale can injure it whether running or standing still. Martinez, Contra Costa Co., Dec. 15th, 1876.

JOHN ROGERS.

Mine, though of smallest size, raises water 85 feet, enough for seven families and their stock, and as much more for irrigation. San Buenaventura, Aug. 20th, 1876.

S. BRISTOL.

SEND FOR PRICE LIST TO

BAKER & HAMILTON, Sacramento or San Francisco, Gen'l Agents

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).  
THOS. UPTON.  
I. C. STEELE.

THOS. FLINT  
G. P. KELLOGG  
W. L. OVERHISER.

O. HUBBELL. D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## PACIFIC OIL AND LEAD WORKS, SAN FRANCISCO,

Manufacturers of Linseed and Castor Oils, Oilcake and Meal.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Contracts made and Seed furnished for Flax Seed and Castor Bean Crop of 1877. For particulars, inquire at the office.

BEWARE OF ADULTERATED LINSEED OIL.

Purchasers of our Oil, boiled or raw, in barrels, should be particular to notice that our trade mark, pasted over the bungs, has not been tampered with. The trade mark is just put on to secure its purity, and prevent adulterations with fish oils or other cheap oils. Barrels having our brand have been purchased and filled with adulterated oil, and sold as our own make. This we cannot entirely prevent, but we fully guarantee the purity of all oils taken directly from our works.

The attention of the trade is particularly called to our New and very Superior brand, Diamond Castor Oil, which for its Purity and Brilliance cannot be surpassed by any Castor Oil ever offered in this market, as our testimonials from all the principal dealers will show. Purchasers and consumers of the Diamond Castor Oil are requested to purchase in original packages, and see that our trade mark and brand is on each package.

For sale in lots to suit at

PACIFIC OIL AND LEAD WORKS; Office, Corner California and Front Streets.

KITTLE & CO., Agents.

## LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

## INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

## The Patron's Almanac for 1877.

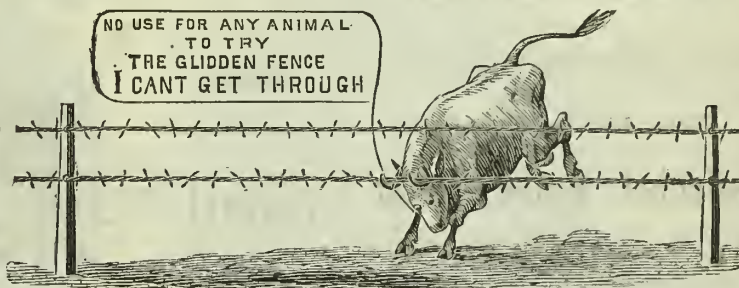
Second year of issue. Greatly enlarged and improved. Contains 72 pages of useful matter; The Constitution and By-laws of the Order; Rules for Subordinate Granges; Decisions of the National Body; Declaration of Purposes; Rules of Order in the Grange; Origin and Object of the Grange, etc. Also, many useful and correct rules, tables, etc., for weighing, measuring and calculating the contents of timber, lumber, land, boxes, cribs, etc., besides accurate calendar pages for all parts of the Union. In short, it is an indispensable companion for every Patron or farmer in the Pacific as well as in the Atlantic States. Price, by mail, postpaid: Single copies, 10 cents; 12 copies, 75 cents; 18 copies for \$1.00; 24 copies, \$1.25; 100 copies, \$5.00. Address,

S. HOWARD WILSON,

Mechanicsville, Bucks Co., Pa.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

## CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO., - - - SACRAMENTO, CAL.

Ask Your Grocer for Them.



TRADE-MARK.

B. B. SCOTT, General Agent, - - - Sacramento, Cal

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco, Taber, Harker & Co., San Francisco, Newton Bros. & Co., San Francisco, J. A. Folger & Co., San Francisco,

A. P. Whitney, Petaluma, Luther & Schroeder, San Jose, Chas. Jones, Oakland, J. H. Seymour, Los Angeles,

Adams, McNeil & Co., Sacramento. T. M. Lindley & Co., Sacramento. Booth & Co., Sacramento, H. S. Sargent, Stockton.

Dewey & Co. { 224 Sansome St } Patent Agt's. | YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

Use None Other.









Volume XIII.

SAN FRANCISCO, SATURDAY, MARCH 10, 1877.

[Number 10.]

### The Japan Persimmon.

Rev. Henry Loomis furnishes us with the material for making an excellent engraving of the Japan persimmon, tree and fruit, and as the subject has been brought so prominently before the fruit growers during the last few weeks, we doubt not many readers will be pleased to have a representation in picture as well as words.

The Japanese persimmon has a particularly rich and glossy foliage, and among all the fruit-bearing trees is one of the most ornamental. With its bright golden and vermilion fruit it forms a pleasing and very striking object in a landscape. It grows to a large size and is said to attain the age of a hundred years. A gravelly or light soil is preferable, and the Japanese say it is not best to use manure, as it thrives sufficiently well without it.

The illustration on this page was made from a tree that grew and fruited in the vicinity of New York, and was first described and illustrated in the *Rural New Yorker*. The success of the fruit in New York shows that it is very hardy, can be grown in most parts of California and as far north as British Possessions, besides all parts of the country east between the latitude of New York and the Gulf of Mexico.

The fruit represented in the engraving is of the oblong variety, and is in some respects the best. It attains the size of a pound in weight, has a pulp like the plum when ripe, and with cream and sugar forms one of the best delicacies for the table that is known. It contains a few (from two to six) small seeds. It is the variety adapted to drying, and does not keep so long in the fresh state as the flat kind. Its color is a dark vermilion, almost crimson, and some varieties are speckled with black spots, others with white.

The trees are propagated by grafting on inferior varieties of the same. When grafted they fruit in four years; seedlings in ten years.

Mr. D. W. Ap Jones, connected with the Department of Agriculture in Japan, makes the following statement: "The Japanese persimmon is one of the finest fruits I have ever met. It ripens like the apple, without the aid of frost, and for table use has no superior. As its season is from October to March it will form a most important addition to the fruits of this country, and it is destined to become one of the most common and popular fruits that we have. Its immense size, delicious flavor, and rich color, commend it at once to general favor. This fruit is a great favorite among all classes, both in Japan and China. It is served to guests in the fresh and dried state, and is more nutritious than the apple or peach. When dried it resembles the date, but is superior to either that or the fig. We can recommend it most cordially to all lovers of good fruit, and shall look with interest upon its general introduction."

### "Potato Bugs in Arizona."

EDITORS PRESS:—The insects mentioned by Mr. Mooney in your issue of February 17th, as being so injurious to the potato in Arizona, are, in all probability, some of the old-fashioned blister beetles (genus *Lytta*) which abound in that country. I scarcely think they are the *Doryphora decemlineata*, but should very much like to have the matter decided, and would beg of Mr. Mooney to either send me specimens or give us a more exact description. If the Colorado potato beetle is injurious there, it is an interesting fact not yet known to the farmers or entomologists of this section.—Yours truly, C. V. RILEY, St. Louis, Mo., Feb. 22d, 1877.

P. S.—Allow me to congratulate you on publishing one of the very best and most interesting rural journals in the country.

We hope Mr. Mooney will oblige the professor by sending him specimens so soon as the insects appear. On the subject of sending insects we quote as follows from Prof. Riley's instructions to correspondents, as they apply not only to specimens sent to him, but will serve as a good guide to those who wish to send insects for our examination. Prof. Riley writes: "All letters desiring information respecting noxious and other insects, should be accompanied by speci-

### Measuring Cattle.

EDITORS PRESS:—In reading your comments on the Avenue Ranch Short Horn herd of cattle, "Mason Duke's" measurements, heart, flank and tip to tip, are almost equal, you say. Would you be kind enough to inform me through your valuable paper how to measure an animal, and oblige a subscriber?—T. G. HERMAN, Wadsworth, Nevada.

The measurement of animals is a matter governed very much by the fancy of him who holds the tape line, and yet there are certain measurements which have the authority of precedent and go to show the proportions of the animal, providing they be taken in connection with the general symmetry which the skilled eye can discern. The measurements to which our querist refers on "Mason Duke" were taken as follows: Circumference of breast; circumference of barrel at the navel; length from horn to tail. There was, if we remember correctly, but the breadth of the hand difference in these dimensions.

To show the precedent for applying the tape line to cattle in this country, we refer to a measurement of one of the early Short Horn

### Salt Marsh in Lower California.

EDITORS PRESS:—I have a piece of land that was once a salt marsh. It is now dry because nature has built up a wall in front so that the sea cannot enter. It fills up every year with sweet water and dries up in a few weeks. I want to make a garden of it and I would be very much obliged to the *Pacific Rural Press* if it could give me some information how to treat such lands and if there is a way of cultivating them.—CHAS. KRAFT, La Paz, Lower California, Jan. 17th.

We presume our correspondent has some of the land which the sea has reclaimed by throwing up sand dunes, as this is characteristic of much of the coast in his locality. It is difficult for us to tell him how to make a garden out of his property without knowing more about the conditions which prevail. If the conditions in soil and salt are like those which have been shown to exist in this State, there would seem but little to do but to put in his plows when the soil is in proper working condition and proceed with his garden making. It has been proved by experience on the shores of our bay that, when the salt water was shut off, the soil would

of its own accord throw off the wild salt vegetation, and the tame sweet grasses would take the place of the marsh grass, and then all kinds of garden and field crops have been put in with success. When the tame grasses appear it is evidence that the soil will grow useful crops.

We must conclude that although the sea has been shut off from our querist's land, this freshening process has not been effectual or he would see signs of growth which would assure him that all he has to do is to put in seed. If this is so, all that remains is to cut a channel and put in flood-gates, so that he can draw off the fresh water at low tide, instead of leaving it to dry up on

the land. In this way he can soon get out whatever salt remains, if such there be. To facilitate this drawing off of the water, he should lay out a system of ditches, unless these water-ways exist naturally.

Unless the piece of land contains something in the soil, or is affected by exterior conditions of which we have no information, it would seem a very simple matter to turn it to productivity. The secret lies in getting the salt out, and then, if there is any virtue in the soil, it will be free to show it in crops. The experience in this State is that these lands are exceedingly productive, and thousands of acres, in this State and Oregon, have been turned to profitable account. The practice has been to flood with fresh water or expose to the sun until the fresh grasses appear. Then the land is plowed and seeded to barley for hay. The next year the grain will generally fill out well and return a good crop, after large growths of beets, corn, vegetables and pasture grasses have been obtained. If our querist discovers anything in his conditions which precludes the application of this practice, we should be pleased to hear from him again and we may be able to fit his case more accurately.



THE JAPANESE PERSIMMON FRUIT AND TREE.



mens, the more in number the better. Such specimens should always be packed along with a little cotton, wool or some such substance, in a little pasteboard box that is of convenient size, and never enclosed loose in the letter. Botanists like their specimens pressed as flat as a pancake, but entomologists do not. Whenever possible, larvae (i. e., grubs, caterpillars, maggots, etc.) should be packed alive, in some tight tin box—the tighter the better, as air-holes are not needed—along with a supply of their appropriate food sufficient to last them on their journey; otherwise they generally die on the road and shrivel up to nothing. Along with the specimens send us as full an account as possible of the habits of the insect respecting which you desire information; for example, what plant or plants it infests; whether it destroys the leaves, the buds, the twigs or the stem; how long it has been known to you; what amount of damage it has done, etc. Such particulars are often not only of high scientific interest, but of great practical importance."

We thank Prof. Riley for his approving words of the *RURAL PRESS*. His approbation is high praise, for few know better than he the character of the agricultural journals of the country.

oxen which we find in the *New York Morning Chronicle* of April 23d, 1804: One of the largest and fattest oxen ever killed, perhaps, in this country, was exhibited at the stall of John Fink in the Fly market about two weeks since. It was bred and fattened by Mr. Robert Heaton, of Hog's Neck, Westchester, the superiority of whose cattle, both for size, form and beauty, is universally known and acknowledged throughout the United States.

The following is a correct measurement of this superior animal, whose age was only seven years:

From horn to tail.....	9 ft. 8 in.
Point of shoulders to hip bone.....	5 " 11 "
Hip bone to rump.....	2 " 9 "
Circumference of breast.....	8 " 9 "
Circumference of barrel by navel.....	9 " 0 "
Breadth of shoulders.....	2 " 0 "
Breadth of hip.....	2 " 9 "

Weight of four quarters, in neat beef, 1,530 pounds. A steer of three years old, raised and fattened on the same farm, was killed at the same time, and weighed neat beef, 1,088 pounds.

THE Direct United States Cable Company gives notice of a reduction of rates to 25 cents (gold) per word.



## CORRESPONDENCE.

### A Chapter of California Experience.

EDITORS PRESS:—Few persons like to be classed with chronic croakers. Those who are successful in an enterprise publish their achievement, exchanges copy, and the fact is heralded from east to west. But as a general rule those who fail say very little about it. In the interest of truth we need to hear both sides. My impression after four years' residence in the State is, that those who brought high hopes and enthusiasm to California and have failed to realize them, constitute too large and respectable a body to be looked upon with contempt as having themselves to blame for their disappointment by their indolence and want of energy. True, the emigrant comes here with far too great expectations, but it is not strange when we consider the many stories of monstrous vegetables, rapid growth and enormous yield, so freely circulated among Eastern readers. These statements may all be strictly true, still they give a wrong impression. It is impossible for those who live where soil, water and climate are almost exactly alike for hundreds of miles, to realize the many conditions of success in this State, where every locality has its distinct climate, and adjoining farms may be, the one valuable and the other almost worthless.

In looking for information before coming to this State, we were gratuitously supplied with copies of a pamphlet called "All About California," also a periodical entitled *Resources of California*, in which every locality seemed to vie with each other in offering inducements to the emigrant. We also laughed at Charles Nordhoff's racy description of San Joaquin farmers, sowing wheat up to their very doors and buying all their vegetables at the nearest town. We all inferred that it was a thriftless way of farming, for which there was no excuse. Tourists traveling through for pleasure often give the impression that Californians generally are a careless, thriftless people, because they do not see things done as they were down East.

We read statements in California papers almost every day that would deceive any but those who have learned better. For instance, this from "Advice to Farmers" in the *Evening Post*: "In this State, where vegetables may be grown to perfection all the year round, it is only necessary to prepare and enrich the soil and plant the selected varieties for home use and sale in the neighboring city or town."

No Eastern reader understands that this can only be done in a few favored localities, unless there be a stream of water or an artesian well to irrigate. In fact, I think we farmers get much gratuitous advice from men who sit in their city offices and know nothing of practical farming except perchance, what they learned hoeing their father's half-acre patch of corn among the hills of Vermont or New Hampshire before setting out for college. We were not of those who came hoping to reap a harvest without labor. Having passed through pre-emption shanty experiences and many privations incident to frontier life, we supposed ourselves possessed of the requirements for success in the Golden State. Our modest capital we hoped would make a nice opening upon some of the Government land we had been assured was still to be found. Coming from the region of snow to California, bright with flowers in the early spring, the emigrant feels that he has almost found the garden of Eden, and sends back glowing accounts. But when all the vacant land he finds, after weeks of painful search, is up precipitous mountain sides, or in almost inaccessible glens, so remote from market that after his slender means were exhausted, he could do nothing but eke out an existence; when expenses are running up and he feels that something must be done at once, his enthusiasm begins to wane. In our case, that something was the purchase of a San Joaquin farm. True, the neighborhood did not look very thriving, but the selling party attributed it to their ignorance of farming; farming was not their business.

Oh, the egotism with which we set out to show what could be done by industry and intelligent enterprise. If I could add large capital we might have succeeded, but our capital was exhausted. That we might be well informed we subscribed for the *RURAL PRESS*. Every week its contents were eagerly devoured; indeed, its visits are the brightest spots in the memory of those first quiet months, and although many comforts have been foregone, we cannot relinquish the *PRESS*. Our first season opened well. With every shower people were predicting a glorious harvest. Newspapers spoke of an assured crop, and reporters were estimating the immense probable surplus for export. Every one exerted himself to put in as much land as possible, and any one who hinted at possible failure was dubbed an "old croaker." Under this system of watering the harvest the price of sacks went up, and the price of grain came down; and when drying winds came instead of the hoped-for spring rains, our very light crop did not pay expenses.

The same hopes, predictions and disappointments were gone through with the next year, and even the crop of 1876 fell much short of the great estimates, until we find it no kindness to make premature estimates at our evident cost.

Three years we contended against many obstacles. I need not, for time would fail me, to tell of the garden, the fruit trees and the flowers that did not ripen, fruit or bloom, but came to various untimely ends. Suffice it to say we weekly buy our vegetables and fruit of a peddler at the door, as do our neighbors, convinced at last that they were right when they told us that we could buy cheaper than we could raise.

More than once, when contemplating our languishing fields, have we been lured by glowing accounts of unfailing crops, abundant water, and cheap land, to look for a home elsewhere, tempted to believe San Joaquin one of the hardest places in the State. But in every case have new drawbacks appeared not mentioned by the correspondent. Neighbors have looked from north to south and returned with the information that equally good land, near to market, was held at very high rates, and, upon the whole, a man could do no better than to stay here. We have one of the best markets in the world, and bask in almost eternal sunshine, while so many shiver amid the fogs of the coast. We are done with costly experiments. With our hogs and our chickens we are learning to head off the monopolists who strive to get all the profits of our light crops, and when united capital shall bring a broad canal flowing along our foothills we will rouse up with new courage and the fences, lawns and shade trees, around our country villas, prove us not behind in enterprise and taste. A correspondent from Los Angeles speaks of those who lay supinely on their backs expecting the ripe fruit to fall into their mouths. That class of people do not live in the San Joaquin unless, disappointed in their expectations, they have become the California tramp, who wanders about, eating up the farmer's hard-earned substance.

No, the farmers here are possessed of wonderful patience, and continue to hope almost against hope. May monopolists not succeed in freezing them out, and may a kind providence remove every obstacle to the building of the contemplated canal, that they may at last reap the reward they deserve. SAN JOAQUINER.

March 1st, 1877.

[We thank our correspondent for her frank statements. We do not believe in the rose without the thorns. We believe in printing truth, and if we fail in doing so, it is because we do not know the truth. We trust the spirit which has brought our correspondent and her family hitherto on the journey of life may not fail them until the anticipated prosperity is attained.—ED. PRESS.]

### Siskiyou County.—A Correction.

EDITORS PRESS:—The *PRESS* of the 17th inst. makes me say "several quartz claims that have been prospected for years are not making a good showing," when I intended to say are *now* making a good showing. Mr. Cory informs me that after three years labor and an expenditure of over \$1,000, he has struck the ledge and is well pleased with present appearance of his claim. One tunnel is in the mountain over 300 feet. Mr. Hartstrand is running an arastra, crushing rock and saving a part of the gold. I'm of the opinion that if an arastra will pay a mill would much better; and, by-the-way, I hear it whispered there is to be a mill erected this coming summer—hope so, if it will pay. It is said Mr. Root has the best prospects. Mr. Welsh informs me he has a claim on the same ledge that pans out well, and he thinks it a No. 1. I hope they'll all prove good. The miners are at work now, the rains having raised the creeks and made water flush for a while.

### Weather.

The last rain was an unusually warm one; my thermometer marked from 48 to 60 degrees all the time of the rain. On account of the warm winter and small amount of snow on the mountains, old inhabitants shake their heads and predict a scarcity of water the coming season. At 12 minutes before six o'clock yesterday afternoon, we felt a strong shock of an earthquake that made the dishes rattle in some places. Last Monday and Tuesday we had rain; also, Thursday. How many inches of rain we've had this winter, I know not; there may be a rain gauge in the county, but as yet I've not seen one.

### The Rural for Information.

Before me lies a letter from old Missouri. It "came all the way from Pike," and among other questions asks: How far is it to a railroad? What kind of society have you? How far to the county seat? and asks me to give them a description of California. Although I've been nearly all over the State, in almost every county, I do not feel competent to give a description of the whole State, but will send them a copy of the *RURAL PRESS*, with the remark that if they will take it for a year, file and preserve all the numbers, they will not only have a good description of California, but also an inexhaustible library of general news, particularly upon agri-

cultural subjects, to which they can refer years hence and obtain valuable information sometimes to be found nowhere else.

How far is it to a railroad? From where I write it is about 90 miles to Redding, the present terminus, but we expect the road to be extended on to Oregon. The survey runs within 20 miles of us.

As to society, about like California generally, somewhat mixed. In Scott valley we have Methodists, Baptists and Catholics. The Catholic church outnumbers the others I believe. People generally are good, kind, social and neighborly; sometimes, of course, "old Mother Longtongue" makes a disturbance in the neighborhood, but you know she is to be found everywhere. People enjoy life here as a rule, live well and pretty easy, too. It is about 38 miles to Yreka, our county seat. The principal business is dairying. A fine article of butter and cheese is made here at 30 to 35 cents for butter, and 18 cents for cheese. Some of these days I will be able to furnish the yield per acre of different articles produced here. One thing the people do claim, two doctors live in the valley, and have not enough practice to keep them out of debt, and the graves are few.

R. D. NUNNALLY.

French Creek, Feb. 28th.

## THE DAIRY.

### Holsteins as Dairy Cows.

During our residence in central New York we witnessed the successful result of introducing Holstein cattle for the production of milk for cheese. We are not aware of the standing the breed has upon this coast, but are sure that the following points concerning the cattle, made by George E. Brown, of Elgin, Illinois, at the last meeting of the Northwestern Dairymen's Association, will be useful as a matter of information if not otherwise. Mr. Brown spoke as follows:

In presenting the claims of the Holsteins to this convention and to the dairymen of the Northwest, I wish to disclaim any desire to detract from the good qualities of other breeds. Each has its proper sphere and points of excellence, while other breeds are noted for some particular excellence. The Holsteins may be said to combine all, to a remarkable degree. Having a world-wide reputation for a large flow of milk, well adapted to butter and unequalled for cheese, they are not deficient in beef and feeding qualities.

While we do not claim for them the same per cent. of butter as is claimed for Jerseys, their excessive flow of milk makes up this deficiency; and as to quality, I will say I never ate nicer butter than in Holland.

The Holstein may not possess all the fine and fashionable points of the fancy Short Horn, yet for rapid growth, hardy constitution and quality of beef they are not excelled by any other breed in existence.

Englishmen boast of the quality of their beef without telling us that a very large portion of it is supplied by the Holstein, fed and fattened on grass alone, in the rich polders of north Holland and Friesland.

The simple manner in which this breed has been treated in their own country, especially adapted to the use of our practical breeders and dairymen here. Although they have been brought to a high state of perfection, it has not been by pampering or forcing.

The grass in Holland is abundant, and the hay fine and nutritious, and this forms the feed for the two seasons, summer and winter. Feeding grain is the exception, not the rule.

Although the Dutch farmer's cow may be said to be one of the family, and the utmost care taken in her breeding, as well as general welfare and comfort, she is never pampered. Superfluous flesh is entirely discarded in awarding prizes to milk cows and breeding stock in Holland.

In size they compare favorably with other large breeds, mature cows weighing from 1,500 to 1,700 pounds, and bulls from 2,000 to 2,500 pounds. Holstein steers make a rapid growth, mature early and are profitable feeders.

In Holland a good cow is expected to give from 25 to 30 quarts per day, with some giving as high as 35 and 40 quarts; but it is the *yearly average* that makes the Holstein especially valuable; her holding out propensity is remarkable. As my business is confined to importing, rarely keeping a cow for more than a few months, I can only give records of my importations, made after passing from my possession.

The cow Astica is reported as having given as high as 75 pounds per day the past season. Of those imported for W. A. Russell he reports several as having given from 60 to 72 pounds per day. Maid Marion, with her first calf, 11,112 pounds in one year, and Lady Clifden at six years as giving in 362 days, 16,274 pounds; this last is the highest record ever reported so far as I have heard.

Dr. Joseph Tefft's cow, Zwaan, imported in April, 1875, arrived in very poor condition, met with an accident which she did not overcome till very late in the season, yet she milked up to her calving, last May, and yielded an average of over four gallons per day for the year; and from May 12th, 1876, to January 1st, 1877, seven months and 18 days, she gave 9,850 pounds, an average of over 43 1-5 per day, and is still giving over three gallons per day.

I have several cows now in my stables recently imported that have made a record of from 28 to 33 quarts per day in Holland on grass alone. Of other importations, G. S. Miller, of Madison county, New York, has made a careful record of his herd through six years, and has obtained an annual yield of from 8,738 pounds to 14,027 pounds. His "Crown Princess" milked during this time 1,821 days, and yielded 61,112 pounds, a daily average of 38.56 pounds.

Many skeptics on the "blood-will-tell" theory, and many others from selfish motives will say these are only a few exceptional cases, but would time and space permit, I would produce overwhelming evidence from all parts of this country testifying to the general satisfaction they are giving.

We have several reports of records kept in the old country; one is of a herd of 190 Holsteins, showing a yearly average of 4,076 quarts. A comparative test of different breeds under the same treatment was made, lasting 365 days, showing an advantage of 18% in favor of the Holsteins over the highest yield of other breeds. Cattle of the same breeds, but of different sizes, were experimented upon with the result in favor of the larger animals.

We do not wish to convey the idea that every Holstein cow is an extraordinary milker, but we do claim that they are a milking breed, and that, being a pure and very strong blooded race, they transmit their qualities with greater certainty, and that the per cent. of superior milkers is higher in this than in any other breed.

Considerable interest is being manifested in them, but many dairymen are holding back, "waiting to see them tested," thinking they are a new and untried breed; this is a most egregious mistake. Their reputation is centuries old. They were brought by the early settlers on the Hudson, more than 200 years ago, and importations have been made from time to time since; but it is to the efforts of the Holstein Breeders' Association, and the importation of the past 20 years, that they owe their present standing in the United States. During this time they have been tested from Maine to California with marked success.

It has been claimed by some that we can produce good milkers by breeding from judicious selections from our natives. Most assuredly we can, if we follow it long enough. This is the manner in which the Holsteins have been brought to their present standing, during a period of more than 300 years.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Pate de Foie Gras.

The great and peculiar poultry enterprise of Strasburg, the product of which is sold even in the California groceries and rests upon the palates of our epicures, is described by a writer for the *Pall Mall Gazette* as follows:

We enter one of the most famous factories in Strasburg. A cool yard greets us, and a bland Frenchman who has become Germanized, like his geese, by the force of circumstances, points to some hundreds of feathered bipeds huddled together in a corner. Their proprietor explains that they are all nine months old, and have cost him, lean as they are, about two francs 50 centimes apiece; he then makes a sign to half a dozen bare-armed girls, and six geese are collared and borne away to a cellar, half underground, where the wide and sloping stone tables are arranged in tiers. In the murky light it becomes apparent that hundreds of geese are already lying strapped on their backs and gasping on the upper tiers. Our business being for the moment at the lower tables, the six girls each takes her goose, lays him gently but firmly on the stone, and then ties down his wings, body and legs with platted whiplard, the legs and wings being well spread out. The bird's neck is left free, and it seems that during the first three days he makes a violent use of it; but afterward he may be trusted to lie still for the next seven weeks; that is, till the hour of release and killing. On the upper tiers are birds who have been lying for three, five or six weeks respectively, waiting to be fed by half a dozen other girls laden with wooden bowls. Each of these bowls is filled with a thick white paste, made of parboiled maize, chestnuts and buckwheat; and the mode of administering the dinner is for the girl to catch the goose by the neck, open his bill with a little squeeze, and then put three or four balls of the paste down his throat with her middle finger. This is done six times per day. But now we have done with the women, for a man climbs upon the topmost tier of all, and proceeds to examine the birds who may be "ripe." He has an eye as judicious as that of a gardener inspecting melons; and his is the responsible task of pronouncing what birds would die of a natural death within 24 hours if not dispatched beforehand.

If a goose dies of a natural death it is good for nothing. He must be unstrapped and excited at the precise psychological moment when nature is growing tired of supporting him, and the knack of detecting that moment can only come of long practice. The inspector has not been a minute on the table before he certifies four geese ready for the slaughter. All four of them have stomachs of the size of pumpkins, and it is a sin-



cere relief to these when a couple of men climb up, loose their bonds and bear them out of the cellar to a pent-house across the yard, full of knives and chopping blocks. A click with the chopper on the neck of each, a rip with the knife, and in less than five minutes after their transfer the carcasses of the four victims are lying in a heap, while their livers are being conveyed with all respect and care to the truffling-house. The carcasses, shriveled out of all knowledge, are sold for about eightpence apiece to peasants, who make soup of them; the livers are first cleaned, then put to scale, and our four geese are declared fine birds, for their livers weigh from two and a half to three pounds each.

The next step is to take each liver and lard it with truffles in the proportion of one-half pound of truffles to one pound of liver, and then to convey it to an ice-house, where it remains on a marble slab for a week, that the truffle perfume may thoroughly permeate it. At the end of a week each liver, being removed, is cut into the size required for the pot which it is to fill, and introduced into that pot between two thin layers of mince-meat made of the finest veal and bacon fat, both truffled like the liver itself; and one inch depth of the whitish lard is then spread over the whole, that none of the savor may escape in baking. When the cooking is over, it is packed and shipped to the four points of the compass.

## HORTICULTURE.

### Wood Ashes for Scale and Other Insects.

EDITORS PRESS:—The subject of the *Coccus hesperidum*, or scale insect, on orange trees has been repeatedly mentioned in the *RURAL*, with varied advice as to the means of destruction, which are more or less serviceable, but often too costly in material or otherwise objectionable for ordinary use. One of your correspondents recently suggested wood ashes; which I also recommend as being found serviceable so far as experimented with by myself. They are within reach of every householder, facile in application and efficient in the removal of this most annoying nuisance in orange culture.

The rainy season is the most convenient time to operate by literally dusting the whole tree, and particularly the infested branches and leaves, while wet, with dry wood ashes. Subsequent rains or artificial showering will wash off the ashes, by which process the liquefied alkali spreads over every part of the tree, dissolving the black deposit and killing the insects, leaving the leaves fresh and glossy. Should a portion of a tree, owing to dense foliage, be left untouched, the dusty leaves can be easily cleaned during a shower with a long-haired brush or mop. The application of ashes should be repeated until all the parasites are destroyed, when the trees can be kept free by one yearly application at the beginning of the rainy season.

This use of wood ashes during the winter is recommended also in the culture of other fruit trees, for removing mosses, fungi and many insects, especially as the constituent element, potash, on which their efficacy depends, does not incrust the foliage and form insoluble compounds, as many substances offered for the purpose do, but is easily dissolved, and returning to the soil furnishes one of the prime constituents of plants.

It may be also interesting to new comers engaged in horticulture to be reminded that the pear slug, often abundant here during mid-summer on pear and cherry trees, is also easily disposed of by sprinkling fine road dust or sand over the trees—the fine particles adhering to the shiny coat of the slug dries it up to its destruction.

J. STRENTZEL.

Alhambra, February, 1877.

## THE VINEYARD.

### The Vineyards of Santa Cruz County.

The *Courier* says: Sixteen years ago not a single vineyard was in existence in Santa Cruz county. Our hills were valued only for the quantity of good grass and water they could produce for the nomadic herds, or for the amount of fire wood, shakes and lumber that could be easily taken from them. The favorable climate and rich soil finally led to the cultivation of vineyards and orchards.

We took a trip to the region of vineyards near Vine hill, last Monday, and from Mr. A. G. Lay, at Bay View vineyard, we obtained the following items in regard to the wine-making and grape-growing in this county: There are, in all, some 10 vineyards in the vicinity of Vine hill, that cultivate the vine for the market, viz: Place's, West's, J. W. Jarvis's, Albert Riley's, J. S. Barker's, Lay & Jarvis's, John C. Morgan's, Fitch Brothers' and Magnetic Spring vineyard. Of course there are numbers of ranchers raising grapes, some of whom will, in a few years, have good-sized vineyards; but, with the exception of one vineyard in the hills near Corralitos, the ones we have enumerated will cover the whole list of the county.

Of these, that of G. M. Jarvis, known as Vine hill, is the pioneer, having been un-

der cultivation 15 years. Mr. Jarvis has 60 acres growing grapes, and about 10 acres of fruits, nuts, etc. He makes 30,000 gallons of wine annually, and finds his market in the coast counties of the State principally. Bay View vineyard has been owned heretofore by Lay Brothers, but Walter Lay has sold out his interest to J. W. Jarvis, who will henceforth be a partner in this desirable and beautiful property. This vineyard has 25 acres cultivated to grapes, and manufactures 11,000 gallons of wine annually. It is located from 1,000 to 1,200 feet above the level of the sea, is subject to no frost sufficient to injure vegetation in the least, and will also produce the finest variety of all kinds of choice fruits. Ripe tomatoes have been picked all winter from vines growing in the open air, and new potatoes will soon be ready for use. The climate at all of the vineyards would admit of the culture of these vegetables at any season of the year.

Mr. Lay has put out, recently, a lot of almond, orange and fruit trees. He informed us that it takes six years for vines to get to bearing full, and after that they will produce good fruit for a century, getting better for wine-making purposes as they grow older. Age makes them lose their "earthy" taste. Every year a second crop of grapes ripens in Bay View vineyard about December, but are so small that they are only fit for table purposes. Six hundred and eighty vines are planted to the acre, being eight feet apart, some vines raising as high as 100 pounds each. Sometimes \$1 worth of fruit can be sold from a single vine. Only 12 or 15 pounds to the vine is the average yield, however, and 14 pounds of the ripe clusters, including the stem, will make a gallon of wine, which weighs eight pounds. Water weighs 10 pounds to the gallon, and is only heavier than wine because it contains no alcohol.

J. W. Jarvis owns the Sugar Loaf vineyard, so named from the sugar-loaf shape of the mountain on which it is located. This has been in operation 14 years, and now makes 30,000 gallons of wine each year. It adjoins the Vine hill premises on the north.

The Fitch brothers are located east of all the others we have named, on the divide between Soquel and Blackburn gulches, and make about 10,000 gallons of the sparkling nectar annually. We were informed that the other vineyards we have mentioned send their grapes to market principally in their primitive condition, and not in a liquid state. Our informant also stated that wine could be made and sold here as cheaply as in any other part of the world, and that such is being done now. At any of the cellars all kinds of wine will be found, as well as brandy. The total manufacture of wine at the vineyards we have mentioned is 81,000 gallons; but in all probability the whole amount made in the county will sum up 100,000 gallons. From several of the premises the view of the surrounding country is grand in the extreme, some of the dwellings occupying dizzy heights that might well be the resting places of lordly castles. But the wine-growing interest in this county is only in its incipency.

## SHEEP AND WOOL.

### Sheep in Colorado.

The *Colorado Farmer* has been printing a few articles of the practice of sheep husbandry in that State. We have extracted a few points which show the conditions of the industry: The season of the year that the majority of shepherds have adopted for breeding, is from the 10th to the 20th of December, allowing the rams to be with the flocks for six weeks. Various are the methods adopted at the time of coupling, but the one most generally adopted by good shepherds is to divide the rams, putting half in each alternate night, thus resting the rams half the time. Instead of relying entirely on this plan, our own opinion is that the better way is to see that the rams are intermixed with the ewes in the afternoon as the flock is being driven homeward, thus giving a better chance for the rams to scatter through the flock, which is quite difficult in very cold nights.

Great care should be taken of the rams; they must be in good flesh before the season commences and well fed through the season. Many objections are raised against rams that have not been here long enough to become acclimated. In our opinion, this is mere nonsense and unwarrantable prejudice. Our own experience and that of some of the best flock-masters in the State contradicts this opinion. Rams in good flesh and healthy are as serviceable and as sure if only here one week previous to being used, as those that have been bred in this State. The difficulty that has occurred is that late brought in rams are often out of condition, in fact poor, but the long fleece prevents the inexperienced flock-master from detecting the true condition; and many times rams are brought here that have the foot rot, a most distressing and debilitating disease, or they have very lately been cured of the malady, and no time being given them to recuperate, their lack of vigor is accredited to want of acclimation.

### Shearing, Lambing.

Owing to the want of facilities to house large numbers of sheep, and the almost absolute certainty of a severe and cold storm the latter part of May, the shearing season is generally delayed

until the early part of June, and lambing and shearing is going on at the same time. If possible this should be avoided, the sheep should be sheared before lambing commences, but probably it cannot be altogether avoided until our flockmasters are able to provide better sheds for their sheep. The lambing season is the shepherd's harvest, and on his strict attention to business at this time depends his success. Two good hands extra to the thousand sheep are needed, and they will have a month's hard work to do; the master's eye is then needed. We do not intend in this article to attempt to enter into details, only to give the general outlines of the business.

### Weaning.

About 90 days is a proper time for the lambs to run with their mothers, and when a flock is large enough to justify a driver of the flock the lambs that are dropped the first three weeks can be put in one flock and the weaning can be done at two times without any injury to the younger lambs. Some flock-masters have adopted the erroneous and injurious practice of not weaning, or rather depending upon the mother to wean the lamb. This practice will not hurt the lamb, but will keep the mother poor, and she will be likely to fail to have a lamb the coming season, or if she does will be so weak that great risk will be run in wintering her. The better plan is to wean the lamb at about three months of age and if any are small and then give them extra attention in the fall and early winter, and but little risk will be run in wintering them. We have always found it best to wean our lambs on the range they have been in the habit of grazing over with their mothers. They will be more contented, and by putting in with them a few dry ewes will soon learn to herd and can be managed with ease. But be sure to give them the advantage of good fresh feed, so soon as they have forgotten their mother, don't let them lose their lamb's flesh, and there will no difficulty in wintering them. Lambs should be kept separate from the old sheep, and in winter, especially in cold nights, should not be kept in too large bunches; temporary division should be made in their corrals to prevent crowding and piling, the chief cause of the loss of lambs in cold weather, and can be prevented by the means we have suggested.

Another question and an important one presents itself for the consideration of sheep men who contemplate entering this business extensively. Unless the General Government shall legislate so that large tracts of our waste and barren lands can be purchased at a very low price per acre, or that large areas can be leased as in Australia, it is useless in Colorado to expect to own and control, in one place, great bands of sheep, as are held in New Mexico on the land grants of that Territory. Five thousand sheep are about as many as can be conveniently and profitably held on one range, and smaller numbers are better. But in our opinion this is much better for our State, the smaller the flocks the more people we will have, and with people come the other advantages of civilization over the frontier.

### Suggestions for the Season.

In the *Price Current*, a circular issued for the wool dealers of the city, we find the following paragraph concerning the coming spring clip of wool, which may be suggestive: All will agree with us that, owing to scarcity of grass and poverty of sheep in many sections, a large quantity of very short, tender and dirty wool must find its way here. This class of wool will, as it has in past seasons, find but an indifferent market, no matter what improvement may obtain in the East. While a good percentage of this class of wool must reach us, at the same time there are many sections of the State where sufficient rain has fallen and good feed is assured. To the wool growers of these localities we particularly appeal, and we would urge upon them the importance of giving (wherever possible,) their personal supervision to the shearing and packing of their wool. Last spring wool purchasers and graders of wool made constant complaint, and in many cases a considerable percentage of certain parcels of wool would be repacked, simply because a little extra care was not given to the separation of tags from the main body of the fleece and to the separate packing of corral sweepings, etc. This year, when good clips will, from causes referred to above, be rather scarcer than usual and necessarily more in demand, we hope all who have healthy and fair-stapled wool will see to it that the handling and packing is carefully attended to and that, in shearing, double cutting is avoided. By doing this we will see that you get well compensated for the evident pains bestowed. In sending forward your wool, remember to take off all tags, dirt, balls, etc. Pack such tags in sack or sacks by themselves, plainly marked. Where it can be done, each sack should be numbered and the weight and number carefully noted down and forwarded to us. By doing this, mistakes in weight would be rare, as each bale weighed by us could be checked off with owner's weight. Finally, the Eastern wool market, while it is glutted with poor stock, is bare of good spring wool, and we confidently promise good results for all our friends, and especially for those who give careful attention to the packing of their fleeces. Mark your wool plainly, and underneath be sure to mark your initials.

## THE SWINE YARD.

### Hog Diseases.

EDITORS PRESS:—"Constant Reader" wants information as to rising of the lights, or inflammation of the lungs. I had some experience a year or two back with this fatal, contagious disease. Having purchased a little band of shotes, and finding some of them ailing, I supposed they were suffering from that common California complaint, scarcity of food. I went to work accordingly to feed them "high." I soon found the "higher" I fed the more sick they became. Symptoms were heaving of the flanks and loss of appetite as disease advanced, a distressing cough, and a disposition to scratch at the chest (thorax) with the hind feet.

The shotes I previously had of my own breeding were fat and thrifty, but the disease spread to them, and I lost 11 head out of a total of some 50.

I found the best way of checking the disease was to turn the shotes out on green grass and deprive them of any heating food. If they are sleeping in sheds, shut up the sheds and let them make a bed under a live-oak tree or even in the open field.

Youatt recommends purging and bleeding from the palate. The dose is four to eight drachms each of a mixture of equal parts of Epsom salts and sulphur, to be followed after a while by a sedative, as: Digitalis, two grains; pulv. antimonialis, six grains; niter, one-half drachm.

I have not much faith in drugging sick hogs. I think green grass and freedom from dust will check the spread of the disease and save the lives of most of those already affected. The hogs of mine which recovered never seemed to make really thrifty stock.

I had some hogs affected with a somewhat similar malady, but not equally violent, last fall. It was caused by driving them twice daily along a stretch of 250 yards of dusty road, to a field in which I was fattening Xmas cattle, and where they consumed the refuse pumpkin and waste grain. Thank you for apple root louse information.

EDWARD BERWICK.

Monterey, Cal.

### Points of Economy in Pig Feeding.

A writer for the *Country Gentleman* shows the need of having a hog which makes good use of its feed, and the profit of selling just at the right time. Every week throughout the winter we have accounts of heavy swine, showing the capacity of some breed to manufacture so much pork in so long a time, or perhaps showing how much some big specimen of a favorite breed can be made to weigh regardless of cost. In purchasing any implement of farm machinery, the farmers consider three things necessary to any good machine, viz., lightness of draft, amount of work done, and durability. But when we test our swine, we as a rule consider only one quality essential to a good hog, and that is a great amount of work done in a given time without regard to what it costs to do it. I know of a farmer who is testing the merits of various breeds of swine. In one pen he has one pig each of the Chester White, Poland China, Jersey Red, Yorkshire, Berkshire and Essex breeds. The very closest observation in this experiment will only enable the operator to approximate to the actual profit of each breed. The best hog is the one that enables us to realize the most money (through the medium of pork) for the food he consumes. We pay too little attention to the economy of feeding. I once knew a monster hog to eat 15 quarts of meal a day, and every bushel he ate only made four pounds of pork when it should have made ten pounds.

To make profitable pork swine should be fed nearly as much as they will eat every day until they are slaughtered, and the time of killing, if weight is no consideration, should be when the digestive powers cease to assimilate the food properly. It is not safe to be governed by the appetite, for some hogs are gourmands, and scarcely hold their own weight. I have yet to see any economy in feeding to over 500 pounds dressed weight when the forcing system has been pursued. Old breeding stock may be fed profitably to extreme weights of their class, providing they have only been kept in good stock condition, because their digestion is better and appetite stronger, but when they cease to gain three pounds per day, I should kill them if they are fit, because it takes a heavy percentage of the feed to run the machine alone. It has been said that the breed having the least oil is the most profitable. This may be carried to excess. The most desirable qualities in a hog are growth and tendency to fat, the proper balance of which is the very hardest thing to maintain. I consider too great a tendency to fat in pigs a greater evil than the impossibility to fatten at any age. My neighbor had a pen of shotes last winter that at 200 pounds gross were finished so fat that they had to rest their heads on the trough or on blocks of wood to prevent smothering. This year he has more growth and just sufficient fattening qualities in his hogs to enable him to feed them economically until they arrive at the desirable weight, or, if he wants to sell them, keep them until the market suits. Another neighbor cannot fatten his shotes, although he cooks their food and gives them extra care; he has to wait until next year.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will hereafter be held on the second and fourth Tuesdays of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHARD,  
Master Golden Gate Grange, S. F.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Nevada Grange Work.

EDITORS PRESS:—Our fellow Patrons of the State of Nevada, though united with us under the jurisdiction of California, are so separated from us by the Sierra Nevada mountains and a long line of railroad track, that few of their co-workers in California have been able to visit them. Yet most of them have been working on patiently in their isolated position, doing the best they can to sustain our principles. Having been invited to attend a meeting of Reno Grange, on February 24th, which was called in the interest of the "Farmers' Co-operative Association of Nevada and Northwestern California," I gladly availed myself of the opportunity to meet for the first time with a Nevada Grange. As many stock raisers of Nevada are interested in the success of the enterprise now organizing in the interest of our producers, for shipping East and to San Francisco fresh fruits and meats in refrigerator cars, Bro. Earl accompanied us. I say us, for Bro. A. J. Hatch, Past Master of Reno Grange, who has so long been the General Deputy for Nevada, made the long trip with us from San Francisco. At the appointed hour for the open meeting, the Court House, which was courteously tendered for the day by the officers in charge, was well filled. There were visiting members present from Lassen and Sierra counties, California. "Nowhere have I witnessed more interest and zeal in the welfare of our Order and its business enterprises."

They have determined to put their Business Association in operation at once. The by-laws adopted by them last December formed, not a co-operative but a joint stock company. But the National Grange having most emphatically recommended at its last session, "That those Patrons' joint stock associations, where all profits are now divided among the shareholders, be changed into co-operative associations as soon as they can make it convenient to do so," the Trustees of this new company decided upon certain changes in their by-laws, to be recommended at their proposed meeting of shareholders in June. These changes provide: 1, That two Auditors, as well as the Trustees and all officers, shall be elected by the shareholders at their annual meeting; 2, The division of certain profits among customers after allowing a proper interest on share capital and the necessary expenses; 3, Complaints to be made in writing, entered in a book and properly considered by the Trustees; 4, A printing and educational fund; 5, A regular order of business at meetings.

These and several minor changes, if accepted, will make their company more truly

### A Co-Operative Association.

And I sincerely hope they will be made. By a few such changes, easily made by consent of the shareholders, in the By-Laws, any joint stock company can be turned into a true co-operative association. And surely we should call none of our companies "co-operative," unless we really make them so. Now, what in brief are the features which peculiarly mark a real "co-operative association?" The authoritative words of the National Grange are as follows:

"We understand the following to be leading and essential points that ought to be strictly adhered to and therefore recommended: 1, Cash system of business; 2, Sell for a fair marginal profit; 3, A fixed interest on share capital; 4, Quarterly settlements; 5, Division of profits among purchasers; 6, Full dividends to shareholders or purchasers; 7, Half dividends to non-shareholders and non-Patron customers."

They also recommend "That as far as practicable, under the laws of the State, each member have but one vote, without regard to the number of shares he may own."

Though this is the rule in regard to voting in the thousand successful and now wealthy co-operative societies of England—a principle opposed to the spirit or growth of monopoly, and unquestionably the safest, when our people and laws will allow it—the National Grange does not insist upon this as an absolutely essential feature. In most of our States the law will have to be changed, as it had to be in England, to legalize this mode of voting.

Division of profits among purchasers, according to the amount of their trade, is the great distinguishing feature between a co-operative and a joint stock company. Without doubt, a large majority of our members everywhere will prefer the true principles of co-operation, as recommended by the National Grange, when they come to understand it fully.

The Grange members in Nevada and neighboring counties in California have a rare combination of circumstances in favor of the success of their co-operative society. With proper precautions and management, Reno has a good chance to become the

### Rochdale of the Pacific Coast.

The trade center of Truckee valley, it is sustained by one of the best farming regions of Nevada and valuable mining interests adjacent, which furnish a fine home market for many thrifty farmers. The never failing water of Truckee river furnishes ample means for thorough irrigation. Hence, their products of fields, orchards and gardens are certain throughout spring, summer and fall, although their elevation of 4,500 feet above sea-level and their position east of the Sierras make their winters somewhat icy. Space permits me but to allude to the general prosperity of Reno, with its 2,000 inhabitants, their comfortable homes, their good business houses, their neat churches and their thriving female seminary, with 40 boarders and 23 day scholars—the Mills seminary of Nevada. The Truckee abounds with the finest silver and speckled trout, on which their people are now feasting. I shall ever recall with pleasure the kindness of fellow-Patrons, editorial friends and others there. Bro. Hatch has one of those many comfortable, happy homes upon our Pacific coast, the memory of which the future will always keep bright with J. W. A. WRIGHT.

Sacramento County, March 5th, 1877.

### A Grange Victory.

The telegraph during the week has brought tidings that our brothers of the central West have won their cases at the highest tribunal in this country, the United States Supreme Court. The decisions in brief are that the legislature of a State has the right to regulate the charge of railway corporations acting under its charters, and that in an inter-State railway each State has the authority over that portion of the line which lies within its boundaries. Another decision is that the State of Illinois has the right to limit warehouse charges in the city of Chicago. Of course, as the Supreme Court decides upon general principles, the decision will be applicable everywhere throughout the country when the issues are raised.

The *Chronicle* makes the following comments upon the above news: "Several years ago the legislatures of Illinois, Iowa and Wisconsin enacted laws asserting their power to fix the rates that might be charged by railway and other transportation companies and fixing the same by elaborate schedule of classification. The railway corporations resisted these laws in the courts. They were defeated and appealed to the Supreme Court of the United States. The act known as 'The Potter Law' of Wisconsin furnished the text for the discussion of the rights of corporations and the powers of State legislatures over them, that agitated the country from the Atlantic to the Pacific for two years or more, and had, perhaps, as much influence in starting and extending the Independent political party as all other causes combined. The controversy was ended in the Supreme Court on the 1st inst., by a decision against the corporations and sustaining the power claimed by the State legislatures. The Court says that State legislatures have this right as to railways wholly within the State, and that Congress has it not. As to roads partly in one State and partly in another, or in several others, the right to regulate its rates on fare and freight belongs to the States through which the road runs and to no others. They lay down the doctrine that railways are not private property, but property for public use as well as for private gain, and subject to the same laws in the regulation of their charges and management as ferries, hacks, bridges, etc. The opinion of the Court was read by the Chief Justice, all the Justices but Field concurring, and he will file a dissenting opinion in a short time. The argument of Senator Carpenter on this point, two years ago, in defense of the Potter bill was never overthrown, though often sought to be by many of the greatest lawyers of the country, including Kverts and Stoughton at the East, and the eminent gentlemen who have charge of the law department of the Central Pacific in this city. This decision affirms it, and happily removes an objection of long standing and serious import, invariably urged with great force and effect in our State Legislature whenever an attempt was made to regulate fares and freights by law. Hereafter the corporations will have to rely upon other methods and arguments."

THE *Oregon Cultivator*, a zealous advocate for the Grange interests, published at Albany during the past three years, has been discontinued, the proprietors of the *Willamette Farmer* having purchased the office.

### A New England Winter Grange Meeting.

The snow was about two feet deep in January last, at Westfield, Mass., when the Master of the Grange sent word along the line that a social meeting would be held at the residence of Thomas Dewey, Treasurer, and that certain California Patrons were expected to be present. Like the "minute-men" of old, the Westfield Grange has a "double-quick" way of notifying its members of such special meetings—a certain Patron in each district summoning all living in his street or neighborhood. Before seven in the evening the swift-flying cutters, filled with happy-faced, neat and substantially dressed people, came pouring in from miles around, until the parlor and sitting-room of the ample farmhouse were fully alive with chatty, jolly Grangers, all in good humor with themselves and the rest of mankind. The deep snow and cold without, instead of keeping them away, seemed to intensify the warmth of hearts and hands within. The Master, Mr. John Taylor, had farmed it out West until we had lost all reckoning of him. He was one of the foremost scholars in our old district school, and as we reviewed old times with him (and a host of other town-mates among the good and true), "snow-ball" and "spelling-school" battles came fast and fresh in memory. The "very-much-at-home" way prevailing showed that the Grange cultivates social reform in the staid East, as it does in the more free-and-easy West. It seemed surely one of the best of improvements in our old town.

At an early hour there came a loud signal from the dining-room. Here, with the long tables loaded and seated to their utmost capacity, we were reminded of the Grange similarity the Union over. From secret recesses of those sleighs had come unnumbered "substantial delicacies," such as kings and princes might sigh for. Knowing they could beat the Union on winter apples, they just eclipsed the Centennial shine with their best and handsomest samples. Scalloped oysters and farmers' real ice cream appeared to us as rareties for a harvest-feast bill of fare.

The sisters over-do things in Westfield, "all the same" as in California, and "remaining fragments" on the table were far from meager. Returning to the sitting-rooms, the Worthy Overseer gave some satisfactory information of the season's doings of the Grange and Sovereigns co-operative store. Inquiries were made about California farming and Grange business, which we were glad to answer frankly. The social improvement the Grange has brought to the farming circle attending it in Westfield is one which, like the great river of progress, will, we trust, "flow on forever."

### Taxation.

The following resolutions were adopted by the Vallejo Grange, January 13th, 1877, and are commended to the attention of the Granges generally:

Recognizing the necessity of a united and immediate action on the part of all desirous of correcting the evils which are affecting us so seriously, and believing that individual prosperity is dependent upon that which promotes the welfare of the body politic, we earnestly invite the co-operation, not only of the Patrons of Husbandry, but every true citizen and lover of justice.

Our purpose is to secure a proper representation which will bring about legislative action and reformation, covering the entire field that has been and is so productive of injury as to render this action for self-preservation imperative. Among the prominent grievances we seek to correct and relieve are:

First: That of unequal and excessive taxation.

Second: Congressional and legislative donations of immense tracts of land and millions of the public money to corporations and individuals, granting in addition special rights and privileges, creating thereby classes and social conditions at variance with the spirit of our institutions and a republican form of government.

Third: Compelling the manufacturing and agricultural interests and capital employed in developing the resources of the country to bear the burdens of government by exempting from taxation foreign banking capital and money invested in bonds and mortgages.

Fourth: The want of economy and consideration of the public welfare in every department of State and Federal service, in creating sinecures, continuing excessive salaries and exorbitant fees to officials of every grade.

Fifth: The unjust and iniquitous use of the ballot-box, which is prostituted for partisan purposes.

We are therefore resolved that henceforth our individual and united efforts shall tend towards correcting the evils complained of, by nominating and supporting for office such men only as are competent and honest, non-partisan, yet loyal to their constituents, men who are pleased in serving rather than deceiving the people—those who recognize the necessity of guarding safely the elective franchise, surrounding it with safeguards in the way of qualifications which will render its exercise impossible by those not directly interested in the results they are called upon to decide.

Reported to and adopted by the Vallejo Grange, January 13th, 1877.

G. C. PEARSON, Chairman of Committee.

### The New York State Grange.

The New York State Grange closed its session on the 25th of January, and is conceded to have been one of the most useful and interesting sessions which it has ever held. There was a noticeable indication through all the debates and business of an earnestness of interest and a realization of the importance of work before the Grange. Mr. Smedley, Lecturer of the National Grange, says in his report of the session, that the subject of co-operative insurance was discussed at considerable length; but much difficulty was found in the way of farmers availing themselves of the co-operative policy by reason of State laws, which seemed to have been enacted with the special view of benefiting the old line insurance companies. Several efforts have been made to bring about an enactment by which co-operative insurance might be made practical. These efforts, though successful in the lower house, have every time been defeated in the upper by an influence evidently emanating from interested parties. Mr. Smedley says much indignation is felt among the farmers of the State of New York at this failure on the part of the people to rid themselves of the unfavorable management and policy inseparable from the old companies. Immense buildings and thirty and fifty thousand dollar salaries to officers have too long operated as an oppressive tax upon labor.

### Agricultural Education.

Was also another subject which elicited much interest and discussion. A committee was appointed to investigate the whole matter as to the facilities for the education of farmers' sons and daughters, and to see whether the munificent grant of land by Congress, which the State has turned over to Cornell University, was really being employed to carry out the intention of the act. This committee is said to consist of able and competent men, who will doubtless present a report at the next meeting of the State Grange which will contain much valuable information.

The education of intelligent young men and women who choose husbandry as a vocation is justly claiming the attention of Patrons everywhere. If there is any one calling requiring a well trained mind and skilled judgment to make it successful, it is that of agriculture. So far, the agricultural colleges of the United States have failed to meet the expectations of their friends. There must be a reason for this, for no such failure is noticed in Europe. In the duchy of Saxony, with a population of only about 1,500,000, there are eighteen agricultural schools, some of which have a reputation which attracts students from nearly every civilized country on the globe. Probably one reason of this success is the faith which the people, the students and the professors there have in the work. This earnestness makes them popular. Students graduate with respect and love for their profession, which in itself is a guarantee of success both to the graduate and his *alma mater*. Why cannot these conditions be met in this country? It appears to be the mission of the Patrons to solve this question.

### Disfavor for Delinquents.

EDITORS PRESS:—At the last meeting of Washington Grange, No. 228, a resolution was offered and adopted directing the Secretary of this Grange to express our disapprobation through your columns at the action of a great number of the stockholders of the Grangers' Business Association in withholding that support which alone can bring our institution on the highway of prosperity, and a benefit and a credit to us as an organization. The members of this Grange are not inclined to interfere with their neighbors' business, but we would exhort our brothers and sisters to come forward and redeem that pledge which all of us adopted when we became stockholders: to stand by and support each other in our interests and rights to save us from the grasp of middlemen.

W. B. STAMPER, Sec'y.  
Comanche, San Joaquin Co., Cal.

### Election of Officers.

ADAMS GRANGE No. 143, FRESNO CO., CAL.—Maj. T. P. Nelson, M.; J. D. Collins, O.; J. T. Wyatt, S.; S. H. Cole, A. S.; Jno. Doak, L.; R. B. Freeman, T.; Thos. H. Wyatt, Sec'y; Jno. A. Jack, G. K.; Mrs. Marie Jack, Ceres; Mrs. M. H. Nelson, Pomona; Miss M. A. Ward, Flora; Mrs. S. F. Doak, L. A. S.

ENTERPRISE GRANGE, No. 38, LOS ANGELES CO.—F. B. Clark, M.; S. W. La Dow, O.; F. R. Slaughter, L.; J. H. Snyder, C.; M. M. Green, S.; R. K. McGue, A. S.; H. Vogt, T.; E. S. Butterworth, Sec'y; J. Pound, G. K.; M. L. Butterworth, Ceres; S. Green, Pomona; Sister Vogt, Flora; Sister La Dow, L. A. S.

UPPER LAKE GRANGE, No. 109, LAKE CO.—J. W. Doty, M.; J. W. Denison, O.; D. O. Shattock, L.; W. I. Rice, S.; A. J. Doty, A. S.; Mrs. E. E. Ford, C.; R. P. White, T.; M. Shepard, Sec'y; G. W. Ford, G. K.; Mrs. M. White, Ceres; Mrs. M. E. Tallman, Pomona; Mrs. M. C. Thompson, Flora; Mrs. Lucy Shepard, L. A. S.; J. B. Robinson, Trustee.

EDUCATIONAL DISCUSSION.—We would call the especial attention of Patrons to the standing notice on this page of the meeting of Golden Gate Grange to be held Tuesday evening, April 10th.



## AGRICULTURAL NOTES.

## California.

## COLUSA.

ANGORA GOATS.—*Sun*, March 3: Thos. H. Harlan, of Glen valley, has commenced shearing his Angora goats. We were shown some of the mohair, which was soft and like silk, which measured one foot in length. Mr. Harlan informed us that the fleeces weighed from three to nine pounds, from graded goats. He has about 3,000 goats in the Coast range. Next week he will ship six sacks of the hair East, being the first shipment from northern California.

## FRESNO.

STORM.—*Expositor*, March 1: A heavy thunder shower passed over this valley on Thursday night. In this vicinity the fall of rain was light, but in the foothills we understand it came down in torrents.

## KERN.

ITEMS.—*Californian*, March 1: Sheep shearing has commenced, but many fear storms may fill up the month of March, when poor feed and cold weather would cause a sacrifice of the sheep to the fleece. The late rain is great encouragement to outside herders. Monday last was cloudy, with light showers. In consequence of the recent rains the sheep owners begin to wear a more hopeful look, and the mountain farmers assume an independent air, as if crops in their region were assured. One of the finest rains of the season commenced falling at five o'clock on the morning of Friday last, and continued the greater part of the day. At times it poured down in torrents and drenched the streets. It would be impossible to estimate its great worth to the country.

## MONTEREY.

GONZALEZ.—*Index*, March 1: We had about three hours' rain here on Sunday, the 25th inst. During that time it fell to the amount of about half an inch, making the total rainfall of the season here one and one-half inches. Much more rain has fallen in the mountains on both sides of us than it has in the valley, which insures a good crop of grass in the hills and will keep the valley green for several weeks. The farmers who had quit work before the last rain have commenced to sow and plow again in the hope that we may yet get a crop.

RAIN AND CROPS.—*Salinas Democrat*, March 3: The rain, of which we had a slight sprinkle here Sunday last, fell copiously for several hours from Chualar south. At the same time, in the Tulareitos country, it was still heavier. On the table lands east of this town the young grain looks very well, covering the ground fairly and having a bright healthy color. Having spring showers, with the fogs that belong to the early summer, we may yet have good crops from large surfaces in our valley.

TROUT.—The Eastern trout which have just been placed in several of the streams of this county, belong, of course, to the same family as our native trout. We understand, however, that its coloring is brighter, that it is a bolder, in other words a gamier fish, and that in favorable localities it will attain much larger dimensions. Being a native of the streams of the Allegheny range, it is found in such waters from Georgia to Labrador, being larger, brighter in coloring and delicate of flavor in proportion to the coldness of streams in which they are taken. They grow rapidly, and probably by the next season we shall have the opportunity to compare these "naturalized citizens" with the *hijos del pais*.

## NAPA.

TURKEYS.—*Reporter*, March 3: Mr. Montague, who lives a short distance from town, on the Berryessa road, raised 700 turkeys last season, and contemplates raising 2,000 this year. After the harvest he will rent stubble fields and let the turkeys glean them. He thinks there is a profit of one dollar each on every turkey raised, counting the feed at the market rate.

PURCHASE.—*Register*, March 3: Mr. Abram Clark has purchased the Wilkinson ranch in Berryessa of 4,777 acres, 1,000 acres being valley land and the remainder hills. With the land Mr. Clark gets 2,500 head of sheep, some horses, wagons, harness and tools. He also owns the growing crop. The price paid is in the neighborhood of \$40,000. Mr. Clark has in 11,000 acres of wheat this year, from which he will probably get 11,000 tons.

THE VALLEY.—A drive up through Napa valley enables us to say that the crops from one end of it to the other never looked better at this season of the year than at present. The grain is growing so rapidly in some places that the sheep are turned in or the scythe is used to cut it back to save it from lodging. Supervisor Harris has 50 acres of grain sown only two weeks ago which is already up and looks green and thick. Peach and almond trees are in blossom, and the ornamental trees and flowering shrubs that surround the pleasant homes of the farmers give additional grace and beauty to the rural scenery that invests the county road. If you want to take a 30 mile drive through a perfect garden, go from Napa to the base of old Mt. St. Helena.

## MENDOCINO.

RAINFALL.—*EDITORS PRESS*:—You will see that we are the favored portion of the State. No snow on our highest hills, scarcely any frost since January 15th, grass and grain doing splendidly, stock fat, roads fair, and what more can be wanted. The rainfall has thus far been up

to the average, and we look confidently for five inches more. It has been measured and recorded every morning at eight o'clock, and each date therefore records the amount which fell for the month. A much greater breadth of ground has been sown than usual, and we shall be prepared to furnish seed to our dried-up neighbors, no matter who is president. The following is the record of the fall and the totals for the months: September, 5.32 inches; October, 5.20-32 inches; November, 23.32 inches; January, 8.18-32 inches; February, 3.14-32 inches; March, 19.32 inches. Grand total, 19.3-32 inches.—A. O. C.

## PLACER.

THE ALDEN COMPANY.—*Argus*, March 3: The Directors of the Alden Company met Tuesday night and completed the work of organization. E. L. Craig, Esq., was chosen to fill the vacant place on the Board, occasioned by the failure of the stockholders to elect, and was afterwards chosen President of the company. Everything is now arranged for the coming year, and the erection of the works and preparations for business will go on vigorously.

## SACRAMENTO.

VINE AND ORCHARD.—*Folsom Telegraph*, March 3: Our visit in the country during the week has been one of pleasure and information. The pruning knife is freely used, separating the bearing vine of last year's growth, thus making room for the prospective crop of luscious fruit this season, while the saw and shears of the orchardist are doing the same work. Should we be relieved this season from the north winds that sometimes prevail, grapes and other fruits will be placed upon the tables in the Atlantic States much earlier than previous years. From the statistics of the State and past experience we can claim this section as one of the most profitable for those interested in fruit culture and grain productions. Yesterday the wind blew and the rain fell. This rain will benefit the grain crops and vegetation generally.

## SAN BERNARDINO.

PROSPECTS.—*Argus*, Feb. 26: We have again had rain—not as much as we would like, but enough we believe to insure good crops the coming season in our valley. The acreage seeded this year is much greater than heretofore, and the yield must of course be above the usual average, even should we have no more rains, and the probability is that we will have more. Should our anticipations be realized, then the Valley of San Bernardino has an encouraging prospective indeed, and at the worst, we know at present of no cause for complaint, as our planters will not only be able to supply all home demands, but will have an abundance for export. The grass is springing up on the hill-sides and in pastures, and alfalfa never looked better at this season; wheat, rye and barley measure in height from two to five inches, and have a very healthy and promising appearance. Fruit trees are in bloom.

## SAN DIEGO.

HONEY NOTES.—*World*, Feb. 24: In conversation to-day with a prominent honey raiser, we learn that the prospects for the beekeepers this season are above the average. In the mountains, the season has been so much milder than usual that the bees have already in many places begun to store honey. The manzanita has been in bloom for two weeks, or more, in many places, and the bees have been working busily on that. In most of the mountain districts too they have had probably three times as much rain as on the coast, with likelihood of showers from this time forth sufficient to bring out the flowers and insure a fair crop. The season is at least three weeks earlier than usual. Several beekeepers report that the drones have made their appearance, which does not usually occur till about the first of March. The market for honey in the East is becoming more extended and assured. It is now selling at wholesale for good fair comb, in Chicago, at from 16 to 25 cents per pound. We are informed by a French gentleman of this city that in his country a very superior article of French cordial is made by the distillation of honey, and if some chemist or experienced distiller would get up a process by which these varieties of honey could be worked up here there would be large money in it both for the distiller and the honey men. We have tasted of a liquor a year old, made by Mr. Deleval of this city, by fermentation of honey, that was equal to a very fair peach brandy, and with a little clarifying process and flavoring would make an exceedingly choice cordial. Let some one experiment upon this.

## SAN JOAQUIN.

RECLAMATION.—*Pioneer*: Gen. H. E. Naglee has been engaged for several months in reclaiming his land on the San Joaquin from the incursions of that river. It will be remembered that several years ago the San Joaquin left its channel about four miles above the railroad bridge and cut across the country, submerging a vast extent of country. Its track was through Naglee's land, and it is the work of reclaiming this tract that has occupied the General's attention since last September. He has built a dam twenty feet wide at the base, ten feet wide at the top, seven feet high and seven hundred and fifty feet long. In this work he has had in steady employ an average of four hundred men. He has not only reclaimed and brought into a tillable condition some two thousand acres of choice land, but he has made a stream navigable for all varieties of river craft. He will have the reclamation of Union island completed in about a week and will finish up the main land in a couple of months. The engineering was

all done by himself. He expects, when the work is all completed, to have one of the finest estates in California.

TRAINING TREES ON TRELLISES.—*Independent*: The gardeners of Europe exercise their taste and ingenuity to a considerable extent by training all kinds of fruit trees over trellises, stone walls and other places where the branches are spread out upon a flat surface and held in that position. In America but little of this fancy gardening is seen, and probably on that account our attention was more closely arrested the other day while visiting Roberts island, to notice a large peach tree in front of Aug. Danger's house which had been trained to a trellis next the porch, and seemed to take to that position as kindly as a grape-vine would do. It covered about 200 square feet, and a portion of the branches had been turned at a right angle around the corner of the porch. As it was in bloom it appeared very handsome and we were struck with the idea as being quite an excellent one. Any one can try the experiment without difficulty by taking a little pains to train and prune the wayward branches while young. We have seen fig trees trained in this way in Eastern hot-houses with excellent effect.

## SANTA CRUZ.

PRICE OF PAJARO LAND.—*Pajaronian*, March 1: Taking the farming lands of the valley the price per acre ranges from \$200 down to \$40. The latter sum has reference to lands in the foothills that has not been cleared of wood, and of a sandy soil. Near town there are some pieces that could not be bought for less than \$300 per acre, including improvements and their nearness to schools, markets, etc. There are excellent places for sale for \$100 and \$150 per acre, and foothill lands, well wooded, on the Chittenden ranch, are offered at \$80 per acre. But it is claimed that the wood alone will almost if not quite pay for the land. There are several thousands of acres, denominated the "table lands," in this valley, well improved and located, that can be purchased at prices ranging from \$75 to \$90 per acre, susceptible of high cultivation, and are in every way valuable for pleasant homes. Terms of purchase are generally made easy and interest reasonable.

## SOLANO.

EDITORS PRESS:—We have been having a winter season unprecedented in peculiarity. Very early rains last fall seemed to indicate, in the minds of all our farmers, a beautiful, wet winter. In exulting over the early fall of the rain, the small amount of rain which fell was overlooked. The deficiency was soon realized when a protracted dry "spell" of from six weeks to two months immediately followed. The writer walked upon hard, dry ground last Christmas Eve, while the moon shone around him full and clear, and upon reflection felt himself astonished. Never before had the holiday pleasures, especially upon Christmas Eve, been unsweetened by the necessity of shawls and overcoats, in consequence of some dampness "out of doors." Winter plowing remained unsown by the discreet farmer, while grain was thrown to the birds by the more hopeful "tiller of the soil." Time brought us rain however, and cultivated ground was sowed and unplowed land was rendered tillable. Farmers, by working assiduously, soon "made up" for the lost time sustained, and their work for the season is in the usual advancement. Crops upon the poorer lands are not so good, in consequence of the drouth, but the greater body of the land proclaims its excellence in crops that seem to have known no thirst for rain. Beautiful spring is here in advance and the farmer and nature alike are joyous. Our town is still improving. Building, painting, the repairing and laying of sidewalks, gum trees, prospective of shady streets, and all is given in evidence.—AMPHION, Rio Vista, Solano County.

BRIDGEPORT.—*EDITORS PRESS*:—The crops are all looking fine, and all the farmers around here are in the best of spirits and expect a big yield next harvest.—W. D. BOWIE.

## SONOMA.

CROPS ON COTATE.—*Democrat*, March 3: Wm. McDowell, foreman of the Cotate ranch, was in Santa Rosa on Saturday, and informed us that in 14 years' experience he never saw such a growth of grain at this season. Eighty acres of early sown grain in one field and 30 in another; he was obliged to feed down with sheep and the dairy cows. On Monday last he turned 1,000 sheep into each field and over 80 dairy cows. The wheat was 18 inches in length and was commencing to lodge. Several of Mr. McDowell's neighbors have been compelled to cut their grain with a machine. He also informs us that the sheep on the farm, about 6,000 head, are all fat, and the same may be said of the cattle, of which there are between 400 and 500 head. Mr. McDowell has sold five car-loads of this winter's lambs at \$1.75 per head.

NOTES.—*Petaluma Argus*, March 3: For three or four weeks past the vineyardists have been very busily engaged in pruning their vines. P. C. Smith, a native of Big valley and a farmer there, informs us that crops are coming forward splendidly, the prospects for a large yield being much more favorable than ever before at the beginning of March. Several thousand sacks of potatoes are stored near Bloomfield, Pet. Hinshaw having about 7,000. At present prices it is not profitable to ship to San Francisco. E. H. Cheney, of Bodega, informs us that the grass and crops in his section are very promising. On his dairy he is at present making one pound of butter per day to each cow, and he says some of his neighbors will average one pound and a quarter to the cow. A. W. Parks,

of Bennett valley, called upon us on Tuesday. He has been a farmer in that section for many years, and informs us that he has never seen vegetation so far advanced at this season of the year as now. A larger area has been planted than usual, and is looking well. There is no question that the yield will be large.

## SUTTER.

WHEAT BOUGHT.—*Banner*, Mar. 3: C. E. Wilcoxon & Co. have made another large purchase of wheat during the week, buying from J. W. Humphreys, down the river near Nicolaus, 500 tons at \$2 per cental. This is now being sacked and banded, and will be shipped as rapidly as it can be got ready. They also purchased 100 tons of Live Oak and Gridley stations, at prices ranging from \$1.72½ to \$1.85 per cental, according to quality. This latter has been mainly shipped by railroad from their warehouses at those points.

## TEHAMA.

CROP PROSPECTS.—*Tocsin*, Mar. 1: From all parts of the county we hear encouraging reports in respect to the in-growing crops. From Mr. Ormsby and Mr. Oviatt, we learn that the crops are looking remarkably well in the Stony Creek section—looking even better than elsewhere in the county, excepting on some of the few rich farms along the river bottom. Upon the red land, grain may suffer some if we do not have more rain soon, although there is little fear entertained by any one, and the general belief is that the crops this year will be above the average. There is no doubt but what the prospects so far this year are better than they were last. The salvation of this part of the country depends upon the late rains in the latter part of March and during the month of April. While rain is not absolutely needed at present it would still prove of great benefit in some localities, and do no damage where it is not really needed. The hay yield bids fair to be abundant, and the general prospects for the coming season are flattering. Some of our old settlers tell us that even if we have no more rain for three or four weeks there will be no occasion for uneasiness, as everything depends upon the late spring rains.

## TULARE.

ITEMS.—*Delta*, March 3: The hog raisers of this and adjoining counties are finding a ready sale for all they have in the hog line. Quite a rivalry has sprung up here between the various buyers, which has kept the price of live hogs at a good living rate. Now, however, the market is pretty well stocked, and dealers are only paying five and a half and five and three-eighths for choice lots. One lot brought in a few days ago numbering 666 averaged a little over 200 pounds each, which, for such a large band, is the heaviest average reported. The prospects for water in the lower ditches of Tule river are not very flattering, from the report we hear concerning the flow of water after the cutting of the dams a couple of weeks ago. The mouths of all the ditches where dams were cut were filled up, so that no water could get into them, and yet during the five days which intervened before the dams were repaired, the flow of water in the river only reached Rocky Ford. Thursday evening a light shower of rain fell in Visalia. Whether it visited the surrounding country or not we are not informed. Though enough rain did not fall to more than lay the dust, the clouds that are hanging over us will prevent the sun from so rapidly drying up what little moisture there is in the soil. A heavy shower of rain fell in this city on Monday morning last, an equal if not larger amount of water falling than on the occasion of the thunderstorm. So far as we have been able to learn the rain was confined to a radius of three miles, Visalia being the center.

## VENTURA.

ITEMS.—*Free Press*, March 3: It is raining. The grain crop between this place and Hueneme looks much better than we expected. Ventura county is this season exporting a very great number of fat hogs. All the summer, fall and winter, stock boats have been carrying away hogs by the hundreds from Hueneme and this place, and still there are many more to ship. As the price advances, they are thrown on the market, and it is believed shipments will be made for two months yet. Those of our farmers who turned their grain crops into hogs have made money rapidly.

MATANZA.—A matanza has been established at Hueneme by Al. Gerberding, which has a capacity sufficient to work up from three to four hundred sheep per day. It was to have commenced operations on a band of 3,000 head about Thursday last. There is now but little hope of sufficient rain to make good grazing on the higher lands of the county, and this section being overstocked, sheep must be worked up to the best possible advantage, or they will prove a total loss in a short time. A good shower of rain would make crops in the valleys, and the best sheep could be saved. The hides and tallow are worth nearly as much as the animals.

## Nevada.

EDITORS PRESS:—We have had an open winter and but little snow in the mountains—our main dependence for water, and if we have no more snow the farmers will not put in more than half the usual amount of grain, but will trust to volunteer to help them out. Long faces are not uncommon, and there is some talk of taking refuge in the Black hills. Some few are plowing and sowing at the present time.—W. P. D., Paradise Valley, Nevada, February 25th, 1877.





## Mother.

When she undid her hair at night,  
About the time for lying down,  
She came and knelt; I was so small  
There in my bed, her curls did fall  
All over me, light, gold and brown.

I fell asleep amid her prayers,  
Her fair young face (far off it seems),  
Her girlish voice, her kisses sweet,  
The patter of her pretty feet,  
Passed with me into charming dreams.

And when I woke at merry morn,  
Through her gold hair I saw the sun  
Flame strong, shine glad and glorify  
The great, good world. Oh, never can I  
Forget the words—"My darling one!"

Ah! checkered years since then have crept  
Past her and me, and we have known  
Some sorrow and much tempered joy;  
Far into manhood stands her boy,  
And her gold hair now-white is blown.

The world has changed by slow degrees,  
And as old days recede, alas!  
So much of trouble have the new,  
Those rare far joys grow dim, seen through  
Sad times as through a darkened glass.

But just this morning when I woke,  
How lovingly my lips were kissed,  
How chaste and clear the sunlight shone  
On mother's hair, like gold-dust sown  
Athwart thin clouds of silver mist.

—Harper's Bazar.

## "The American Bald Eagle."

## An Incident.

[Written for the Press by X. Y. Z.]

I was young and inexperienced—far more inexperienced, in other words "greener," than I could at the time have been induced to admit. I had been born in town, and had spent almost all my life between brick walls, when, in my seventeenth year, my father purchased a farm in one of the fertile valleys among the foothills of the Allegheny mountains, and removed thither with the family. I had opposed the plan from its inception and refused to agree to it, so it was decided I should remain in the city and pursue my occupations as before.

After the family had become well settled in their new home, I took a vacation of a few weeks, and went down to pay them a visit. It was in June, the most delightful season there, and I found so much enjoyment in gunning, fishing, riding and roaming about at free will, and the farm work seemed so light—they were plowing, merely following the horses around the field—that by the time the first week was passed I had renounced all my former prejudices, and was taking a deep interest in all pertaining to farm, field and forest, with a growing intention of altering all my former life-plans and becoming an agriculturist; and to this end I bothered all around me for information as to what was the largest crop of wheat to the acre ever harvested in the valley, and how the fastest horses must be raised, or whether it wouldn't pay best and be least work to raise nothing but horned stock—and the like inquiries.

One Sunday afternoon I mounted my horse and set out for a ride. I chose the State turnpike up the side of the mountain, but left it at the summit and followed an old timber-road that swung round a semi-circle down into the valley again; and then rode down the creek home. At the toll-gate at the summit I found a stuffed catamount mounted upon the toll-bar for show. The keeper's wife explained that it had been killed the week before by her son, while milking the cows, and in answer to my further inquiries gave me such an extended account of the number of wild and ferocious animals still inhabiting the mountains, that while traveling over the old wagon-road through the woods down the mountain, I was on tiptoe of expectation to meet a bear or a wildcat, or something of the sort. But not even a squirrel appeared, and I saw nothing in the animal kingdom to attract my notice until I had reached the valley and crossed over the creek. There I found, nailed up just beneath the eaves of a stable that stood with its gable end to the road, a bird that drew my attention by the size of its body and the great breadth of its wings. It was of a species unknown to me, and I turned towards a man whom I had noticed lounging over a side-gate, for information.

He was a representative of the half-hunter, half-farmer mountaineer class of that region; in age, about 30; tall and angular, with a long, bony face and prominent nose and chin, the latter ornamented with a black stub of a beard and a great deal of tobacco juice. His dress was of homespun and his hat of home-woven straw, and his whole appearance such as to justify me, city boy as I was, in saying to myself, "Here's a specimen country Jake. Shouldn't

wonder if I could get some fun out of him." Had I been a closer observer I would have noticed that his face, though it did not express a high or even moderate degree of culture, was that of a man naturally shrewd and quick-witted.

As I turned toward him, he saluted me with "How d'do," a salutation I of course returned, and then, before I could ask my question, he added:

"Stranger in these parts?"

"Yes, sir. Would you please—"

"How long you been here?"

"About two weeks. I would like to know—"

"Look as though you might belong to them folks that bought old Isaac McCrum's place this spring. I heard there was one come out from the city 'bout two weeks ago."

"Yes, that's me," said I, and then, seeing that something desperate must be done, or my buckwheat acquaintance would, in a few minutes, have our entire family history, while I should never be any wiser in regard to the species of the fowl that had excited my curiosity, I shouted, so as to drown the new question that was half issued from his lips, "I would like to know what kind of a bird that is on the barn?"

"That? Oh, that's a b-a-l-d e-a-g-l-e," said he, pronouncing the last two words slowly and impressively, as though it were a revelation of importance.

"Indeed, I didn't know there were any eagles left in this neighborhood."

"They are getting to be mighty scarce. I hadn't seen one for three or four years, until I caught this fellow the other day trying to steal my chickens. Come and take a look at him."

Of course I doubted his word. My only recollection of having seen an eagle was when, in my extreme youth, I passed by a certain slaughter-house in the suburbs of the city, where a couple of dilapidated birds of Columbia were kept in a wooden cage, and fed upon the offal of the establishment. This bird was much smaller than they had been, and besides it seemed to lack the noble aspect that I had always associated with the proud bird of freedom.

But as I drew nearer and clambered upon the top of the fence to closely examine it, my doubts vanished. The wings were of prodigious sweep, about five feet from tip to tip, I thought, and the nobility of its features seemed to grow upon me, too. Perhaps death has distorted its once august mien, I reflected. But the crowning evidence (no pun) was the fact that it was perfectly bald—not a feather grew upon its head. There could be no doubt about it, it was the bird of my country, the great American bald eagle; and I got down the fence and stood a few yards away to gaze up to it, my bosom swelling with feelings of patriotic pride, and in my memory reciting Percival's noble ode, from our old school reader:

"Bird of the broad and sweeping wing,  
Thy home is high in heaven," etc.

Then I clambered up again and took accurate measurements of the wings and body of the bird, and after listening to Buckwheat's account of how he had brought it down stone dead at the first shot, while it was circling around over his barnyard, at least 200 feet above the earth, a feat which, he was willing to stake his reputation for veracity, no other individual in Big Springs township was competent to perform, I was compelled to answer a few more questions in regard to my father's intentions in the management of his farm, and the actual number of the members of our family, after which I mounted my steed and galloped home.

I found the family gathered around the supper table, and after I had taken my place regaled them with a graphic account of what I had seen during the afternoon, of which my mind was of course full to overflowing. The recital was listened to with interest and wonder. My father was at first slightly inclined toward misbelief, but I was so positive, "for I ought to know what a bald eagle looks like. Didn't I often see those that were kept out at the Two Mile Run slaughter-house?" that he was at last satisfied, and my mother began to speak anxiously about the safety of our poultry yard if such feathered insatiates were likely to swoop down upon it any day from their eyries in "the ridge."

"That would be a good item for Harry Evans's paper," said my sister Carrie. "If I were you I'd write it up. He'd be glad to get it, for he takes a great interest in everything pertaining to natural history."

Harry Evans was the good-looking young editor of one of the county papers, whose acquaintance Carrie had made during a visit to the county seat, since which time her thoughts had ever been on literary matters.

"I believe I will," said I, with my mouth full of potato. "I don't think any of the papers have got hold of it yet. He only shot the bird day before yesterday."

So that evening I sat down and penned an epistle somewhat similar to the following:

"MILLER'S MILLS, June 20th, 18—.

"To the Editor of the Gazette—Sir: Deeming it a matter of some public interest, I desire to report through your columns that Mr. —, residing on the west bank of Indian creek, some two miles above this place, had the honor last week of bringing down a genuine American bald eagle, the only one that has been shot in the neighborhood for years. It was just on the point of making a descent upon his poultry yard that would doubtless have been a disastrous one, when Mr. —'s bullet intervened. Mr. — now has it on exhibition in his barn,

and to those who have never seen the typical standard-bearer of our country it is well worth a visit of inspection. The length of body is by careful measurement just two feet; of the wings, from tip to tip, four feet five inches. It is evidently a young bird, and as this would indicate the presence, somewhere in the adjacent ridge, of a family of the majestic but troublesome brood, we would advise the farmers of the southwestern part of the county to keep their eyes skinned and their priming dry if they would preserve their chickens."

I thought that very good for a first attempt at writing to a newspaper—it was brief and to the point. I read the last sentence over with a great deal of complacency and self-satisfaction. I already felt myself quite a benefactor to the agricultural community, as I thought of the many peaceful and happy hen-roosts that I would probably save from instant and awful destruction by my timely warning to their now unsuspecting owners.

I carried this letter over next morning to the country store at Miller's Mills, that was post-office as well, and there learned by inquiry that my hero's name was Pete Wommack, which sweetly-sounding name was filled in the places left blank for it in the letter, which was then sealed up and mailed to its destination. I was under great temptation to speak to the people about the store of the discovery I had made the afternoon before, but I had resolved to tell no one else about it until my letter was published; then every one would know it.

Thursday was publication day, and it chanced that father and I visited the county seat the next Thursday on business. While he was in the court-house I ran around to the printing office and took one of the sheets damp from the press. As soon as I was outside the door I opened it and eagerly scanned its columns for my communication. Yes, there it was, and in a prominent place; but the editor had prefixed a few introductory sentences that filled me first with surprise and then with burning indignation. They were after this fashion:

"We print below a communication from a young gentleman who has lately taken up his residence in Indian valley, from whom we shall be pleased to hear frequently upon such matters of general interest as may come beneath his notice. The present letter is in relation to the shooting of an eagle upon Indian creek, which seems to us quite a remarkable circumstance, as to our knowledge there has been no eagle shot within the borders of the county for the last ten years. Is our correspondent sure it is an eagle? There is a bird somewhat resembling the eagle in appearance and apt to mislead a beginner in ornithology, that is frequently met with about Miller's Mills, as we know by personal experience, called the red-tailed fish-hawk (*Buteo borealis* of the naturalists), though the *Buteo* seldom attains the proportions mentioned in the letter. Will our correspondent please investigate further and report?"

"Well," said I to my father as soon as I met him, "that's the last time I ever write for a country paper. Why, it's insulting! He might as well proclaim me a fool to all the world. Not know an eagle from a fish-hawk? Next week he'll be telling me it's a dunghill rooster or a canary bird!"

"Why, what's the matter, what's the matter, boy?" said father, somewhat astonished at the vehemence of my utterance.

So, trembling with the excitement and rage I felt, I opened the paper and pointed out to him the paragraph. He read it, reflected a moment, and then said: "I'll tell you how we'll settle this. We'll drive home the creek road to-day and I'll take a peep at it. I think I can tell what it is."

"All right," said I, "and if it isn't a bald eagle I'll eat my boots without salt."

So home the creek road we drove, in silence, I nursing my own wrathful thoughts, father silent because I said nothing. We had a good team of horses in front of us, and it was not long after we struck the level valley of the creek until the now-familiar barn came in sight, and as we drew nearer I could distinguish the outlines of the eagle, still nailed beneath the eaves as upon the Sunday before.

"There," said I, excitedly, and eager to place myself right before the world, "if that isn't a bald eagle, I'd like to know what it is?"

By this time we were just opposite, and my father turned his head and gave it one sharp, quick glance. The next moment there was an explosion—of laughter, that amazed me beyond measure, and sent the horses forward at a gallop.

"Whe-e-ew! Whoo! Frank! You infernal little fool! Why, that's a turkey buzzard!"

To my discredit be it recorded, I did not keep my vow—I did not sup that night upon boot or nature; but I did pack my valise, and next morning, before the arrival of the mail containing the *Gazette*, I had left the valley on my way back to the city; nor were the farmers ever afterwards indebted to me for "timely warnings" or hints how to take care of themselves and their live stock.

ONE HUNDRED AND NINETEEN.—According to the Adams, Mass., *Transcript*, there is now living in the town of Washington, in the same county, a Frenchman named Shephard, who is 119 years of age. He still walks without a cane, and has not given up work. He has several sons and daughters who have large families, and his great-grandchildren number 50. A daughter, 75 years of age, has just come on from Michigan to take him home with her. Mr. Shephard served in the old French war.

## Rural Homes.

Donald G. Mitchell is as good a farmer as "Ik Marvel" is a writer, and both being one and the same individual is one of many proofs that agriculture is not incompatible with culture. Mr. Mitchell writes an article on "Rural Homes" in the last issue of the *Massachusetts Ploughman*, and from it we quote a paragraph or two as follows:

With the railroads and telegraph have come in upon towns-people water companies, gas, pavements, markets, and scores of appliances to make living easy and enjoyable, which, by the necessity of conditions, cannot reach the remote homestead. As a rule, I think that all town houses built within the last 25 years, have shown a gain year by year in all the equipments, whether interior or exterior, which go to promote comfort. I fear that as much cannot be said for farm-houses in the country. Many such, so far from making gain, are hardly equal in the conditions of solid comfort to the old-fashioned farm homestead of a half century ago. Now, none are so quick to see this disparity as the sharp-witted sons and daughters of farmers, who with young blood and hopeful spirits are eager to lay hold upon whatever advantages of home-life the town may supply. And it is to this eagerness, more, I suspect, than to any strong distaste for country pursuits that we must attribute the drifting away of sons and daughters from farm homesteads. We all like to make the conditions of every-day life easy and comfortable, however vigorous may be pursuit of duty, and why shouldn't we? There are of course ambitious boys of larger hope, who want to wrestle with the world at closer quarters than they find in a country home, and adventurous girls who want to flash their light upon a larger field; but there are plenty of home-spun ones who are yet keenly alive to whatever makes housekeeping easy, and who think they must go to the town to find it.

I am aware that the tendency to gregariousness—to cities which attend the later forms of civilization—though it multiplies and intensifies all sources of corruption—is most determined; and there are satirists who insist that this tendency is not only inevitable, but that the simplicities of the old scattered homesteads must go down and disappear under it. There are those who say this is a necessary result of civilization and of progress.

But whatever may be true of countries where education is less general and less thorough than in our own, I am loath to believe that it is true of this country, or that we can ever have any well founded hope of perfecting a model republic until we have spread model homes over the whole face of it. And what must a homestead be—and what its conditions to ensure that content in the household, without which no real thrift can come, and which if it do not wholly cheat that drift of young people from the maelstrom of cities, where within these few years past so many wrecks have been cast up—will at least fasten on their minds an image of homely comfort, which shall make them better wives and husbands wherever they may go.

## Value of Life.

The precise monetary value of human life in various parts of the world would be an interesting subject for careful investigation. In Dahomey we probably begin at one of the lowest rungs of the ladder. A few beads or a strip of calico there will purchase a well-developed specimen of humanity. In China any criminal possessed of \$15 may procure a substitute, who, having deposited the money in the hands of his poor relatives, will cheerfully undergo the operation of decapitation. Then, ascending a little higher on the allegorical ladder, we come to slave-marts, where often an elephant's tusk is worth four women. It is unpleasant to come nearer home, and ask what some phases of so-called civilized life are worth. A German professor, who rejects Malthusian doctrines, computes that, taking the whole world for an average, a woman is worth one-eighth of a man. He thinks there are at least 250,000,000 unmarried women in the world. As a rule, out of Europe, horses are more valuable than members of the fair sex. However, Esquimaux women are scarce, and each one is probably worth two men. In new settlements, such as many in California, a woman rises vastly in estimation—sometimes outvaluing seven men.—*Phrenological Journal*. [Yes; we have some California women who are worth 100 men.—Eps. Press.]

A COLONY COMING.—A family consisting of husband and wife and 18 children, went west yesterday on the Union Pacific emigrant train. The oldest child was not over 14 years of age. Twins and triplets on several occasions explain this. The thrifty family came from Ohio.—*Omaha Bee*.

DID YOU ASK HER?—Have you not forgotten something? You are riding to town alone and your buggy has room enough for two. Perhaps your wife, mother, sister or daughter would have been delighted to accompany you, had you invited them to do so.—*Son of the Soil*.

LOVE is circumspect, humble and upright; not yielding to softness or to levity, nor attending to vain things; it is sober, chaste, steady, quiet, and guarded in all the senses.—*Thomas a Kempis*.



## Farmers as Husbands.

Writers are many upon the points of disadvantage and hardship which rural housewives experience. We see few expressions on the qualities of farmers for husbands, and therefore give the following from the *Journal of Agriculture*:

I may not be posted, but, if allowed to speak from personal observation, I would challenge the world to produce a class of men that make better husbands as a class than the American farmer.

Of course there may be exceptions to all rules, but what class of men—those of wealth and competence excepted—keep their families more regularly provided with the necessities of life? And what class show a smaller percentage who frequent the dram-shop and gambling saloon?

There is no vocation which brings the husband and wife nearer together, or allows them a fuller enjoyment of each other's society, than that of farming. The farmer's work being at home, of course his presence is demanded there, also; and his evenings are almost invariably spent at his own fireside.

The nature of her vocation compels the farmer's wife to do many things which do not fall to the lot of those in other callings; but is this always the fault of the husband? Does he not do many things that are tiresome and disagreeable as well?

It has been urged that the farmer hires much of his work done, besides availing himself of the many appliances of machinery to help him in his tasks. Admitting this to be true, how is it to be remedied or changed for the better?

There is no man, even had he the strength of a Hercules, who can, by his own unaided labor, do the work on a farm of sufficient size to yield what society would consider a decent living for even a small family.

Therefore, as help is essential, the wife who raises an objection to machinery on the farm is simply placing a burden on her own shoulders; as everything that can be done by machinery lessens the demand for hired help, and thus lightens the labor in the kitchen, for what is more tiresome and unprofitable than cooking for "hired hands?" In regard to furnishing and beautifying homes I don't believe there is one farmer in ten who is not quite as willing as his wife to spend his means in that way, as soon as his circumstances will admit. And if you should canvass the United States to-day, I believe you would find hundreds, nay, thousands of farmers' homes in which the sewing machine is the first, perhaps only, piece of machinery the place can boast. In regard to bare floors I think, where carpets cannot be afforded, they may be kept very nice by scrubbing once a week; and I don't think Hubby would scold if they were not scrubbed so often. It is this unnecessary scrubbing and trying to be as fine as my neighbors that causes many women more unrest and vexation than the real demands of their families.

**WEDDING KISSES.**—Through Cleveland, he who gives the bride away claims the first kiss in honor of his temporary paternity. One clerical gentleman in this part of the world, supposed to be good authority on the subject, declares, however, that it is the privilege of the parson who ties the knot, and although he will not own to having availed himself of it, he is acquainted with an old northern clergyman who never fails to do so. A story is told of another clergyman, a stranger in the country, who, after performing a marriage ceremony in a country village of Yorkshire, was surprised to see the party keep together as if expecting something more. "What are you waiting for?" he asked at length. "Please, Sir," was the bridegroom's answer, "ye've no kissed Molly." The late Dr. Ranie used to relate how the Vicar of Merrington invariably kept up the custom. Although one of the most bashful and retiring of men, he looked upon the matter as one of obligation, and nerved himself to perform his duty with heroism. Within the last ten years one fair lady from the county of Durham, who was married in the south of England, so undoubtedly reckoned upon the clerical salute that, after waiting for it in vain, she boldly took the initiative, and bestowed a kiss upon the much-amazed south-country vicar.

**CONFIDENCE** is everything between husband and wife; and a woman who loves desires above all things to be trusted. She would not be glad when her husband is sad; she would not be ignorant of his troubles or his anxieties; anything is better to her than to be shut out from the innermost of the life of one who should be all hers as she is all his.

**HOPE** is a vigorous principle; it is furnished with light and heat to advise and execute; it sets the head and heart to work and animates a man to do his utmost. And thus, by perpetually pushing and assurance, it puts a difficulty out of countenance, and makes a seeming impossibility give way.

A **CHRISTIAN** is like a locomotive. A fire must be kindled in the heart of the thing before it will go.

**THEY** look stove doors on railroads to keep the fire from going out.

"**SHURE**, and where is the entrance out?" asked an Irishman of a jailor.

On every night there lies repose.

## Young Folks' Column.

### Stars and Daisies.

The stars are tiny daisies high,  
Opening and shutting in the sky;  
While daisies are the stars below,  
Twinkling and sparkling as they grow.

The star-buds blossom in the night,  
And love the moon's calm, tender light;  
But daisies bloom out in the day,  
And watch the strong sun on his way.

—St. Nicholas.

### The First Dollar.

The following story is true, and must please as well as counsel our young readers:

Many years ago, a gentleman from the town of Methuen, Mass., while on a visit to a prominent merchant in Boston, was asked by the merchant if he knew a boy in Methuen that he could recommend to work in his store. At first the merchant could think of no one, for he knew none but a faithful, honest boy would suit the thrifty merchant. At length, however, he called to mind a boy of excellent character in the neighborhood, but feared he would hardly do, as his parents were very poor, and he had no education or other advantages to fit him for such a position.

But the description of the boy's habits pleased the merchant so much that he handed the gentleman a dollar with which to pay the boy's fare to Boston by stage, and requested him to send the lad to the city, and if, on a personal interview, he should not prove satisfactory, he would pay his fare back home again. The gentleman, as requested, visited the boy's parents, and stating the merchant's proposal, advised them to send the boy for trial. He then gave him the dollar which was to pay his fare to Boston, and departed.

Under similar circumstances, 99 out of every 100 boys would have said, "Now for a good time! I never saw a city, and never rode in a stage. Oh, there will be so much to see, and it will be such a long ride, and here is money sent to pay my fare!" Not so with this boy. Putting the money carefully in his pocket, he said to himself—

"This is the first dollar I ever had. How I wish I could save it! It is only 25 miles to Boston. I can walk there in a day. I'll do it, and save my dollar."

His mother patched up his clothes as well as she could, and early next morning the little fellow parted with his parents at the door of their humble home, and set out on his long tramp to the great city, which he reached, tired and dusty, a little before sunset. He found the merchant, who sternly asked—

"Where have you been all day? The stage came in hours ago!"

The boy thought he had displeased the merchant at the outset, and with downcast eyes and tremulous voice, he answered—

"I did not come on the stage, sir."

"Did not come on the stage! What do you mean? Didn't I send you money to pay your fare?"

The boy thought it was all up with him, sure, and amid gathering tears he managed to reply—

"I am very sorry, sir! I did not mean to offend you. I thought I would walk and save the dollar. I never had one before."

Placing his hand gently upon the boy's head, the merchant replied, "My little man, you did exactly right. Come home with me and get some supper."

Then turning to a bystander, he remarked, "I wouldn't take a thousand dollars for this boy to-day."

That boy has grown to manhood, and has since become widely known in business circles. He is now owner of the extensive mills at Methuen, the Pemberton mills at Lawrence, a banking-house in Boston and one of the finest farms in Massachusetts.—*Phren. Journal*.

### Who Did It?

I am as sure as sure can be that the black pussy-cat did it, for the white kitty was sound asleep behind the stove. I'll admit that the white kitty was generally at the bottom of all the mischief, but of course she couldn't have been this time. Besides, the black pussy-cat looks very guilty, it seems to me, for she puts down her ears as if she knew she deserved a whipping.

What was the matter? Why, a moment ago mamma's work-basket was safe and sound on the sofa, and now there it is upside down on the floor, and as many as 20 spoons, I should think, running away as fast as they can.

O pussy, what a naughty, naughty cat to do it, when I give you two saucers of milk every day of your life. I think I shall have to drown you, or do something just as bad, because I've told you a thousand times that you must not touch a thing. You needn't look so demure, for I am out of all patience, and you will not get a mouthful of anything to eat all day; no sir, not one single mouthful, and—why what is that under the sofa? It looks like—yes, it really is my own baby's curly head. So it wasn't pussy after all. Dear me, what a difference it makes. Do you think I am cross about it now, and that my baby will have to go hungry all day? Not a bit of it. I don't believe many babies are smart enough to pull down such a great big basket.—*New York Tribune, Jr.*

## Good Health.

### How the Young Become Nearsighted.

Dr. Agnew, the famous optician of New York City, has been investigating the causes of the prevalence of a tendency to nearsightedness among young people. He says:

The eye is an organ which is soft, as it were, when the child is born, it is plastic—it is in a condition to be changed in its shape, and its tissues are in a condition to be moved—that is, the tissues which go to make up the organ can be molded in various shapes on pressure. Ordinarily the child goes on until it has reached the age of eight or ten years, or perhaps a little older, when it is observed that it is obliged to hold the object at which it is looking a little nearer than before. An examination reveals the fact that the child is nearsighted. This condition usually progresses more rapidly between the ages of 10 and 26. But we know by means of the ophthalmoscope, and by an examination of the body after death, that the nearsighted eye is changed in shape from the spherical to an elliptical or ovoid form, and that progressive nearsightedness is always marked by a change in the shape of the eye. As the eye is made up of healthy tissue, and it is constantly undergoing waste and repair in use, you readily perceive that the quality of its repair is going to be determined very much by the character of the tissue-building quality of the particular child, and by the way in which that child uses its eyes. Parents at home are very often at fault in not teaching their children how to use their eyes—he had suddenly entered the dwellings of many people, and seen little girls curled up on a sofa, or in a chair, with head down in the lap, the vessels of the forehead turgid with blood, remaining in that situation for a greater or less time; and often, before the child can read, some object, like a doll with its wealth of intricate clothing, or some other plaything, the child holding the object near her eyes—using her accommodation and focalizing its eyes; and all the time waste and repair is going on—because there can be no use of the eye without alterations of tissue, and the child will go blind because the proper nourishment of the eye is interfered with, and the tissues cannot be reproduced as fast as the wasting process. If the child uses the eye for a long time or too closely at any particular form of work, the tissue cannot be reproduced or nourished as it should be; and the pressure of the muscles upon the eyeball and the difficult act of the girl in focalizing, means that the tissue of the soft and pliable eye is undergoing alteration, which will lead to a lamentable form of the disease. Then the child goes into the school and is there put into forms and classes, and oftentimes is made to do work on slates and copy-books which, perhaps, might be better done on the blackboard, and thus the eye is strained until the mischief is perceived in its effects.

### Petroleum for Baldness.

We do not know that any of the prescriptions for inducing a growth of the hair are successful. The latest proposed is petroleum, and as the application can do no harm in any event, we reprint the following from the *London Pall Mall Gazette*, a trustworthy paper: Persons afflicted with baldness will be glad to hear that a luxuriant growth of hair may be produced by a very simple process described by Consul Stevens in his commercial report of Nicolait for the past year, which has just been issued. In the summer of 1875, Consul Stevens's attention was drawn to several cases of baldness amongst bullocks, cows and oxen, and the loss of manes and tails among horses. A former servant of the consul's, prematurely bald, whose duty it was to trim lamps, had a habit of wiping his petroleum-besmeared hands in the scanty locks which remained to him; and after three months of lamp-trimming experience, his dirty habit procured for him a much finer head of glossy black hair than he ever possessed before in his recollection. Struck by this remarkable occurrence, Colonel Stevens tried the remedy on two retriever spaniels that had become suddenly bald, with wonderful success. His experience, therefore, induced him to suggest it to the owner of several black cattle and horses affected as above stated, and while it stayed the spread of the disease among animals in the same sheds and stables, it effected a quick and radical cure on the animals attacked. The petroleum should be of the most refined American qualities, rubbed in vigorously and quickly with the palm of the hand, and applied at intervals of three days, six or seven times in all, except in the case of horse's tails and manes, when more applications may be requisite.

**DISGUISED THE TASTE OF CASTOR OIL.**—A modification of the old and favorite mode of administering castor oil in orange juice is offered by Potain. He directs that the juice of half an orange be squeezed into a glass, and after carefully pouring the oil upon this, to add the juice of the other half of the orange so as to inclose the oil. If pains be taken to avoid mixing the layers, the combination can be swallowed, it is said, without the least perception of the flavor of the oil.

## Domestic Economy.

### Working and Making Work.

The fact, says a lady in the *Chicago Tribune*, that woman's work at home is made up of petty details, makes it important that she should have interests outside of these, and read good books, especially if she is necessarily deprived of good society, in order that her mind should not get into a treadmill, with no other outlook than the physical wants of the family. She can work with less expense of nerve force if, while the hands are busy, the mind has something pleasant to enjoy. Change of scene and exercise is as important for the mind as for the body. It is a woman's duty to husband, children, as well as herself, to keep her mind fresh and invigorated. But the great plea is, "I have no time." Very well, make time, or steal it from a pudding or a cake or some puffs or pleatings. There are two rules which would save as many moments, viz: Avoid rich and elaborate dishes, and, above all, don't make work as you proceed. When you sew, don't drop threads and scraps on the floor, for then you must pick them up; have a scrap basket handy or lay them on the table. Save your steps. When going from one room to another have in mind all the things which are to be carried there, and all which must be brought back, and make one trip instead of three or four. You will be surprised if you carry these rules into everything, how much time you save if you exercise forethought, "Make your brains save you heels," as the old saying is. I once had an opportunity to contrast the different methods of a number of friends in so simple a matter as washing dishes, which was an index of their ways in other departments of housework. No. 1, with three in the family, had an astonishing number of dishes scattered all over the dining-room and kitchen tables, stove and sink. She splashed a few about in the water, wiped without dripping, then washed a pan or two, and poured out the water; then brought fresh water and a few more dishes, going through the same operation half a dozen times, until after a great deal of time, fuss, flying about, all was done.

No. 2 was always occupied more than an hour working hard, to wash the dishes for two or three persons. What she did I could never discover, but all her work was done in the same way.

No. 3 removed all crumbs and refuse neatly, piled up the dishes according to size, put them in a large pan, poured hot water over them, and in a very short time everything was in order. Her work was always done early. She would bake bread, beans, and 20 pies, besides getting a hearty breakfast, between 6 and 11 A. M. The secret of it was neatness, quickness (no hurrying), and never making a bit of work as she proceeded. Of course, a natural ability is needed, but even those who haven't what the Yankees call "faculty" can learn to economize labor to a great extent. There, my lecture is long enough.

### Apples as Food.

Many persons do not value apples sufficiently as an important article of diet. Besides containing a large amount of sugar, mucilage and other nutritive matter, this fruit contains vegetable acids, aromatic qualities, etc., which act powerfully in the capacity of refrigerants, tonics and antiseptics, and when freely used at the season of mellow ripeness prevent debility, indigestion, and avert, beyond doubt, many of "the ills which flesh is heir to." The operators of Cornwall, England, consider ripe apples nearly as nourishing as bread, and far more so than potatoes. In 1810, which was a year of much scarcity, apples, instead of being made into cider, were sold to the poor; and the laborers asserted that they could "stand their work" on baked apples without meat; whereas a potato diet required either meat or some other substantial nutriment. The French and Germans use apples extensively, as do the inhabitants of all European nations. The laborers depend on them as an article of food, and frequently make a dinner of sliced apples and bread. There is no fruit cooked in as many different ways in our country, nor is there any whose value, as an article of nutriment, is so great.

An old gentleman recently stated to us that every fall he used to have a severe sickness, but since he bought, during the season, a barrel of good apples, for himself alone, and ate the whole barrel in two or three months, he had every year saved himself from this sickness without wanting a doctor.

Two good apples eaten before or soon after breakfast are an almost sure cure for constipation.

**GLOSS ON SHIRT BOSOMS.**—In answer to a query in last week's Press we print the following: Take two ounces of fine white gum arabic powder, put in a pitcher, and pour on it one pint of boiling water, cover it and let stand all night. In the morning pour it carefully from the dregs into a bottle; use one tablespoonful to a pint of starch made in the usual manner; use a polishing iron also.

**FRIED EGG SANDWICHES.**—Beat some eggs well; fry them in butter as a pancake. When cold, cut in small square pieces and lay them between brown bread and butter.





A. T. DEWEY. W. B. EWER. O. H. STRONO. J. L. BOONE.  
PRINCIPAL EDITOR: W. B. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 .80 2.00 5.00  
Half line (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, March 10, 1877.

#### TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Japan Persimmon; "Potato Bugs in Arizona"; Measuring Cattle; Salt Marsh in Lower California, 145. The Week; Manufacture of Citric Acid; Bees and the Citrus Family, 152. Production of Rain by Human Agency; The Lieo Lands; Ancient Ruins, 153. Desert Lands; Notices of Recent Patents, 156.

ILLUSTRATIONS.—The Japan Persimmon, 145. Ancient Ruins in Northwestern Colorado, 153.

CORRESPONDENCE.—A Chapter of California Experience; Siskiyou County—A Correction, 146.

THE DAIRY.—Holsteins as Dairy Cows, 146.

POULTRY YARD.—Pate de Foie Gras, 148.

HORTICULTURE.—Wood Ashes for Scale and Other Insects, 147.

THE VINEYARD.—The Vineyards of Santa Cruz County, 147.

SHEEP AND WOOL.—Sheep in Colorado; Suggestions for the Season, 147.

THE SWINE YARD.—Hog Diseases; Points of Economy in Pig Feeding, 147.

PATRONS OF HUSBANDRY.—Nevada Grange Work; A Grange Victory; A New England Winter Grange Meeting; Taxation; The New York State Grange; Disfavor for Delinquents; From the Granges; Election of Officers, 148.

AGRICULTURAL NOTES from various counties in California and Nevada, 149.

HOME CIRCLE.—Mother, (Poetry); The American Bald Eagle; One Hundred and Nineteen; Rural Homes; Value of Life, 150. Farmers as Husbands; Wedding Kisses, 151.

YOUNG FOLKS' COLUMN.—Stars and Daisies, (Poetry); The First Dollar; Who Did It? 151.

GOOD HEALTH.—How the Young Become Near-sighted; Petroleum for Baldness; Disguising the Taste of Castor Oil, 151.

DOMESTIC ECONOMY.—Working and Making Work; Apples as Food; Gloss on Shirt Bosoms; Fried Egg Sandwiches, 151.

QUERIES AND REPLIES.—Plaster for Potatoes, Etc.; Apricots and Almond Stocks, 153.

GENERAL NEWS ITEMS on page 156 and other pages.

#### NEW ADVERTISEMENTS.

Churns, E. K. Howes & Co., S. F.; Agricultural Implements, Frank Bros., S. F.; London Assurance Corporation, London, Eng.; Napa Valley Property, F. H. Thompson, Napa, Cal.; 25 Elegant Cards, G. Reed & Co., Nassau, N. Y.; Prize Poultry, F. P. Lord, Reno, Nev.; Plymouth Rock Poultry, J. L. Skinner, Placerville, Cal.; Cattle, M. Wick, Oroville, Cal.; To Color Butter, Wells, Richardson & Co., Burlington, Vt.; 25 Fancy Cards, J. Husted, Nassau, N. Y.; Fancy Goods, Palmer Bros., S. F.

#### The Week.

Events have culminated during the week in Washington, and the whole country has been wrapt in contemplation of them. For the time the consideration of home interests has been merged in the contemplation of the wider issues. The result of the prolonged electoral count was a majority of one vote for Rutherford B. Hayes, of Ohio, for President, and William A. Wheeler, of New York, for Vice President. These officers have been duly sworn in to their respective trusts, and the country is glad that the issue is closed and the opportunity for a steady trade and the revival of industry has arrived. The American people has possessed itself in noble calmness while the momentous questions were being settled by due process of law, and now that the end is reached, the country is blessed with quiet obedience.

At home the chief interest and hope has centered in the rains which have christened several mornings of the week. In some counties quite bountiful amounts have fallen, considering the fleeting nature of the showers. Although these refreshings have gladdened our nearest neighbors, there still exists the lack in more distant counties, which only hope remains to fill. May hope succeed.

#### The Manufacture of Citric Acid.

We recently printed a letter from Mr. Garey, of Los Angeles, concerning the capacity of the lime market, provided due care is had in selecting the fruit. His points were well made, and will, we trust, be heeded. But when the selection is made there must be some outlet contrived for the inferior fruit. This is a subject now receiving attention from the Los Angeles press, and a citric acid factory is urged. Such being the condition of affairs we have thought that some information concerning the manufacture of citric acid on a large scale, would, perhaps, be interesting, and we compile it from the writings of Robert Warrington, remarking, by way of introduction, that the market is at present sharp on citric acid because of reported disease in the Sicily orchards, whence the material comes to the English manufacturers.

The concentrated lemon juice of Sicily is obtained from windfalls, and from more or less damaged fruits, which could not be shipped as lemons; from such fruit essence and juice are prepared. The lemons, after, peeling, are packed in flag baskets, having a very small mouth; these baskets are placed one on the other, so that the mouth of each is closed by the basket above it; the whole is then pressed in a screw press. On an average 13,000 lemons are required to yield one pipe (108 gallons) of raw juice. The concentration is effected in a copper vessel over an open fire; the juice is boiled down till it marks, when cold, 60° on the citrometer. On the citrometer 1° is equal to .004 specific gravity, 60° therefore equal 1.24 specific gravity. The hot concentrated juice is strained through canvas into pipes, and is then ready for exportation.

The process for preparing citric acid from juice is exactly the same as that employed by Scheele in his original investigation; the improvements since his time have been chiefly mechanical. The concentrated juice, diluted with water, is first neutralized by whiting, the operation being aided by heat. The resulting citrate of calcium has a different mechanical character, whether the juice is added to the whiting or the whiting to the juice; in the former case precipitation is immediate, and the precipitate is finely divided; in the second case precipitation is more gradual, and the citrate heavy and more crystalline.

A considerable improvement in the manufacture both of citric and tartaric acid is the introduction of vacuum filters; by their means precipitates can be washed with a far smaller quantity of water than formerly; this is specially important in the case of citrate of calcium, owing to its partial solubility in water. There is no doubt that a rather considerable loss occurs in washing citrate, and in warm weather there is also risk of decomposition if this operation is not quickly conducted.

The citrate of calcium, after washing, is mixed with water, and is then ready for decomposition with sulphuric acid, by which sulphate of calcium (gypsum) and free citric acid are produced. There is a very clever practical test for ascertaining when the sulphuric acid has been added in excess. The manufacturer employs as his test chloride of calcium; this in a liquor saturated with gypsum yields a precipitate only when free sulphuric acid is present; the precipitate takes a little time to form.

The gypsum resulting from the decomposition of the citrate is washed on a vacuum filter, and the citric-acid liquors are evaporated, generally in leaden baths about 9 inches deep, heated by steam. The first crystallizations are by granulation. The hot concentrated liquor is run into a tub provided with a revolving agitator; this is kept in motion for about 24 hours, and the acid is deposited as a granular salt. The mother-liquor is then again concentrated, and a second granulation takes place. From the second mother-liquor a third crystallization can be obtained. The residual liquor is then generally too dark and impure to yield further crops of crystal, and is then known as "old liquor."

The white salable crystals of citric acid are obtained by redissolving the granulated salt, heating it with animal charcoal, filtering and then crystallizing the concentrated bright liquor in leaden trays about three inches deep.

The "old liquor," which will no longer yield crystals of citric acid, is diluted with water, and precipitated by whiting with the aid of heat, precisely as in the case of the original juice. The citrate of calcium thus obtained is pure and clear; it is decomposed with sulphuric acid in the ordinary way, and the citric acid thus recovered is added to the general liquors. Old liquor is never perfectly neutralized by chalk.

Samuel Parkes in his essay, published 1815, says that 20 gallons of (raw) lemon-juice will yield 10 lbs. of citric acid. Supposing the juice to contain 12 oz. to the gallon, this is a yield of only 66 per cent., one-third of the acid being lost. In the trade it is usual to speak of 20 per cent. as being the loss in making citric acid. This, however, may be taken as the extreme loss, occurring only in years of inferior juice. If the citric acid in the juice is reckoned from its acidity, we may assume the loss in manufacture to vary from 12 to 20 per cent. as its extreme ranges, and depending chiefly upon the season.

The quantity of citric acid made in England in 1875 was about 300 tons.

#### Bees and the Citrus Family.

EDITORS PRESS:—Will you please answer the following questions in your next issue: 1. Do bees in the vicinity of an orchard decrease the yield of fruit of any tree, and do they dwarf the fruit of the orange, lemon and lime trees in particular? 2. Would you consider the planting of an orchard next to an apiary advisable? 3. Name one or two standard works on horticulture, particularly adapted to this coast, especially in reference to orange, lemon and lime trees.—JAMES D. NORTH, San Fernando, Cal., Feb. 24th.

There has been much discussion concerning the effect of honey bees on fruit trees. It has been an issue ever since the days of Aristotle. Two thousand years ago he wrote: "Bees hurt no kinds of fruit, but wasps and hornets are very destructive to them." We believe that the old Greek was right. The latest phase of the question came up in a discussion at the East two years ago, and the issue was made on grapes. Perhaps no one was wholly convinced by the debate, but we saw nothing to set aside the position taken by Langstroth, when he wrote: "Though many bees were seen banqueting on grapes, not one was doing any mischief to the sound fruit. Grapes which were bruised on the vines, or lying on the ground, and moist stems, from which grapes had recently been plucked, were covered with bees; while other bees were observed to alight upon bunches, which, when found by careful inspection to be sound, they left with evident disappointment."

"Wasps and hornets, which secrete no wax, being furnished with strong, saw-like jaws, for cutting the woody fiber with which they build their combs, can easily penetrate the skin of the toughest fruits. While the bees, therefore, appeared to be comparatively innocent, multitudes of these depredators were seen helping themselves to the grapes. Occasionally a bee would presume to alight upon a bunch where one of these pests was operating for his own benefit, when the latter would turn and 'show fight,' much after the fashion of a snarling dog, molested by another of his species while daintily discussing his own private bone."

"After the mischief has been begun by other insects, or wherever a crack or a spot of decay is seen, the honey-bee hastens to help itself, on the principle of 'gathering up the fragments, that nothing may be lost.' In this way they undoubtedly do some mischief; but before war is declared against them, let every fruit grower inquire if, on the whole, they are not far more useful than injurious. As bees carry on their bodies the pollen, or fertilizing substance, they aid most powerfully in the impregnation of plants, while prying into the blossoms in search of honey or bee-bread."

We have seen nor heard nothing in regard to the relations of the bees to the members of the citrus family which would lead us to believe that they were less desirable in the orange grove than in the orchard. If such facts are known to our readers we should like to hear them.

We should not hesitate to plant an orchard adjoining an apiary; in fact, such a surrounding we should consider very desirable in many situations.

We know of no such book as our querist desires; indeed, we think such a book would be very desirable if some of our fruit growers should have the literary taste and leisure to prepare it. The literature of the citrus family is mainly in foreign tongues and consequently not generally available. This lack is supplied as well as possible by the many practical writers for the RURAL PRESS, who relate their experiences and experiments.

On the general subject of the citrus family we have before us a very praiseworthy pamphlet which we have just received from the publishers, Charles H. Walton & Co., of Jacksonville, Florida. This monograph treats its subject in a most careful and crude manner, and contains much information which would be highly prized by many of our readers. Although points of local culture on this coast are of course lacking, there are many principles presented which are of universal application. It was written by M. George Gallesio, who was a man of leisure in the south of France, and devoted himself to the investigation of the nature and peculiarities of these fruits. Grafting, fructification and cultivation are thoroughly discussed. The different species of this remarkable family are carefully described, together with their varieties, hybrids and monsters. The history of the orange, lemon and citron, the climates where they are found, and how they came there, and also the uses to which each has been put, are treated with completeness and practical sense. What renders the work especially valuable, is the experiments made by the author, in every case giving only those results which his own labor has proved. He not only was himself a practical cultivator, but traveled through orange-producing countries for the purpose of observing its fruit, peculiarities and methods of culture. The pamphlet contains 65 pages, and is sent by the publishers named above for \$1.

CONDUCTOR SHOD.—The valuable stallion Conductor, the property of Judge W. E. Greene, which we some time since noted as operated upon by Dr. Dunbar for contraction of the hoof, has been favored with such a perfect recovery that he was reshed on Tuesday of this week. The examination of the hoof at the time of shoeing, showed clearly the result of the treatment, and we congratulate Judge Greene and Dr. Dunbar upon the rescuing of the valuable animal for future usefulness.

#### QUERIES AND REPLIES.

##### Plaster for Potatoes, Etc.

EDITORS PRESS:—I have heard that land plaster or gypsum is a remedy for wire-worms and alkali. Is it true? Will it pay to use it on land for potatoes? How much should be used to the acre to prevent wire-worms eating potatoes? They are very bad with us. Where can it be had and what is it worth per ton? I don't see it advertised in the RURAL PRESS.—WILLIAM HADDOX, El Monte, Los Angeles Co., Cal.

The only way we can conceive of in which land plaster can serve as a remedy for wire-worms, is in inducing a rapid and vigorous growth of the plants to which it is applied and thus enabling them to thrive in spite of the worm at the root. Thus the plaster would act in its proper capacity as a spur to plant growth. We have no experience in its special efficacy in rescuing potatoes from wire-worms, and should be pleased to receive evidence on this point.

The action of plaster as a neutralizer of alkali in the soil is a more definite matter, and has been explained by Professor Hilgard in the RURAL PRESS of May 6th, 1876. It is a simple matter. The substances of which the plaster is composed change partners with the substances in the alkali and being satisfied fully with their new union, become inert, or at least lose their injurious abilities.

Plaster as a special fertilizer for potatoes has often been tried, and the verdict is a general acknowledgment of its value. The question is, however, very liable to be modified by the condition of the soil as regards moisture, and we should not recommend any extensive application of the substance until the grower has tested the result under the conditions which prevail in his location. It is impossible for us to say how much to apply "to kill the wire-worms," for we are not sure that it will kill them at all; but for purposes of exciting growth it is customary to make a local application of a small handful to each hill of potatoes, either before the sprouts rise above the ground or soon thereafter. A large application for this purpose is not desirable. If the object be to neutralize alkali, it must be known by analysis in how great is the proportion of alkali in the soil before a prescription can be made of the amount of plaster to use to the acre. If our querist will take the trouble to send to Prof. Hilgard (State University, Oakland, Cal.) a sample of the soil, according to instructions which he will furnish on application, he will, we doubt not, give an accurate prescription.

The price of land plaster at the Golden Gate Mills in this city is \$10 and \$12.50 per ton, as quoted in our market columns. It should be advertised in the RURAL PRESS, because it is an article largely entering into farm economy.

##### Apricots on Almond Stocks.

EDITORS PRESS:—I have this day mailed to your address the stub of what was formerly an apricot tree; the tree bore fruit last year, also the year before; this last winter the tree broke off about four inches above the ground. You will perceive the wood of the stub I send you is of the almond nut tree, and that it broke where the apricot was grafted or budded on the almond stock. Second, that the wood of the almond did not form a connection with the wood of the apricot. The bark formed a connection and the tree, although it grew well and bore fruit two years, was sustained by the bark only. This is one of a lot of apricot trees which I bought in San Buenaventura in 1874. The trees were shipped here from San Francisco, but I do not know from what nursery. In the winter of 1875 one of the trees broke off near the ground where it had been grafted, and left a smooth stub the same as the one I send you. I did not remove the stub, as it was too late in the season to replace the apricot. In a few weeks the stub threw out an almond sprout and I let it grow, and to-day it is a fine-looking almond tree, ten feet high, covered with almond blossoms and little nuts just set, but I am by no means satisfied with the exchange; first, because the fruit may be of poor quality, and second I do not like to see trees of various kinds indiscriminately mixed up in an orchard. These apricot trees were set in a sheltered place, or they would doubtless have all broken off long ago; but if they fruit heavily this year they will probably all break off, as the trees all show the same enlargement where they were grafted. Those purchasing apricot trees should be sure they are not grafted on almond stocks, as such trees are worthless.—ROBT. LYON, Ventura Avenue, Ventura Co., Cal., Feb. 27th, 1877.

The specimen which our correspondent describes accurately above is very interesting and shows that there has been no union of wood at all. Although we cannot fully affirm that it was the one fact of the kind of stock employed, it is very evident that this or some other cause has done evil work. We believe there has not been very much grafting on almond stock in this State, because the almond seedlings have been more valuable to sell for their own fruiting. The same indication which our querist discovers has attended grafting on other stocks and with other fruits. It is quite frequently seen in pears and when the bulge is seen at the juncture it is evidence that a healthy union has not been secured. In early days of our tree selling we are informed numerous frauds were practiced; such as grafting on willow sets, in which the grafts lived a year or two, but we trust that now the more temperate trade has led nurserymen to more upright and careful deeds. As a general principle of course grafts should be set upon the nearest related stock and the farther you get from this in selecting stock the more dubious the results become.

FINE PRINTING.—We have received from Col. Otis, of the Santa Barbara Press, a handsome specimen of job printing in gilt and colors. It is a splendid testimonial to the skill of his workmen and the resources of his office.

ON FILE.—"Value of Pure-Bred Poultry for Farmers," J. P. L.; "English Box-Stall System," Cirencester.



### Production of Rain by Human Agency.

Ever since it became the impression that the winter of 1876-77 in California, was to be what is known as a "dry" one, there has been more or less discussion on the subject of the production of rain by human agency; many persons believing that by exploding large quantities of powder the rain could be made to fall, through some unexplained meteorological conditions. This theory has many firm advocates, and the idea was somewhat strengthened by the fact that a bounteous rainfall occurred immediately after the heavy cannonading which took place during the celebration of the Fourth of July in this city. This confirmed many in the belief, as rain at that season of the year in California was considered very unusual. The subject has been pretty thoroughly discussed in the interior press, and numbers are desirous of trying the experiment. Among these believers in the theory is one who writes a letter from Placer county to the President of the Academy of Sciences, asking the Academy to secure the use of "Uncle Sam's" guns here to test the theory in the interests of science.

He says, as is generally known, that our last Fourth of July celebration was unusually prolonged for three days, and was followed on the 6th of July by a heavy rain all over the State. Living at Iowa Hill, Placer county, he had good facilities for observing the peculiarities of the storm: "The clouds came rolling up in dark, dense masses, accompanied by a fearful amount of electrical discharge. It seemed to indicate its origin in some unusual, unnatural cause, and the tall pines to-day plainly show the marks of the lightning. The rain fell for one day and night, upwards of two inches falling in that time."

The writer then goes on to say that if this was the result of the firing, as is generally believed, the same effect could, of course, again be produced by the same cause, and suggests an accurate scientific test of the matter.

In commenting on the letter, Prof. Davidson, of the United States Coast Survey, President of the Academy, said that there was a popular belief that after great battles, when heavy artillery was used, a rain storm necessarily followed. This belief rests on no foundation of facts whatever, and comes down to us from almost prehistoric times. It is on a par with the prediction of weather changes at the quarterly changes of the moon's phases, and of the special supplication for rain in particular localities. "Old Probabilities" is gradually sapping and undermining the popular faith in the lunar influence, because the daily predictions of the Signal Service show no relation between the atmospheric storms upon the world's surface and the ever-changing phases of the moon. But the former belief will not be so easily and surely eradicated, because the great battles hardly occur with sufficient frequency to afford the numerical cases demanded to satisfy the illogical mind. Even the actual coincidences can be shown to be not necessarily physical relations of cause and effect.

The belief referred to has not arisen since the invention of gunpowder, but is the tradition of nearly 1,000 generations. Classical readers will recollect that when the Teutones and Ambrones, numbering over 100,000 armed warriors and as many women and children, left their Germanic homes about 110 B. C., to seek in Italy a milder climate and more productive country, the Roman army under Caius Marius, crossed the Alps to prevent the invasion. A great battle ensued and 100,000 invaders were slain or captured; and Plutarch in mentioning the report that the earth was enriched by the dead bodies, says:

"It is an observation, also, that extraordinary rains pretty generally fall after great battles; whether it be that some divine power thus washes and cleanses the polluted earth with showers from above, or that moist and heavy evaporations steaming forth from the blood and corruption thicken the air, which naturally is the subject of alteration from the smallest causes."

But from the contest there was no immediate storm of rain and he especially refers to the subsequent winter's rains. Nor was there rain after the equally great battle fought in the following August by the Romans, under Caius Marius and Catullus, against the Cimbri, who had crossed the Alps and were overwhelmed. The peculiar difference in the ancient and modern belief will be at once noticed as residing in the causes which produce the rain. Then there was no gunpowder, but suggestions of a divine power or a moist exhalation; now the divine power is overlooked and villainous salt-peter conjured up.

As far as the instance of the 4th of July firing here was concerned it is much more probable that natural causes produced the subsequent rain than the burning of powder. The weather, for some time before, had been very hot, and in a measure, rather peculiar for this climate. Professor Davidson was, at that time, on Mount Diablo with the Coast Survey party and kept a record of the thermometer, etc. In

the morning of the 1st of July the thermometer was 86°, at 2 P. M., 101°; on the 2d, at same time, 84° and 103°; on the 3d, 86° and 101°; on the 4th, 88° and 101°; on the 5th, 86° and 101°, and on the 6th, 64° and 78° and 7th, 57° and 64°.

Dr. Henry Gibbons, Sr., who has kept a more complete meteorological record for over 25 years in this city than almost any one else, says that there is generally a tendency to rain about July 4th. The rains in California seem to have a very peculiarly marked periodicity. The most marked is probably that which occurs on or about the 20th of May each year. The meteorological conditions on the 4th of July were favorable to a rain. The tendency to rain showed itself before the firing took place at all. It followed very hot weather all over the State. The atmosphere was not only very hot but very moist. For the first time in the history of the State sunstroke cases were recorded, especially in the San Joaquin valley. The only explanation was the very hygrometrical condition of the air. A tendency to cloud was the natural result of this accumulation of moisture, which resulted in rain. The very hot weather seemed to gradually advance eastward, where, it will be recollected, it was unusually hot. The heated wave crossed the Atlantic to Europe where it

### The "Lieu Lands."

The bill confirming title to California school indemnity selections was signed by the President on March 1st, and became a law. It will have the immediate effect of quieting title to several hundred thousand acres of the most valuable lands in the State, preventing an otherwise incalculable amount of litigation and disturbance of property interests. A dispatch from Washington gives the following account of the passage of the bill. "Notwithstanding their failure to defeat the passage of the bill, the jumpers and their Washington attorneys made desperate efforts to prevent its approval by the President. Eighty of the Los Angeles jumpers telegraphed to the President, earnestly requesting him to veto the bill on the ground that it would deprive them and other honest settlers of homes and other valuable improvements. He therefore referred it to the Interior Department for examination and advice as to whether he should approve it or not, and Judge Widney, who, as the representative of the State titles, has

disposed of as other public lands of the United States; Provided, that if there be no such 16th or 36th section, and the land certified therefor shall be held by an innocent purchaser for a valuable consideration, such purchaser shall be allowed to prove such facts before the proper land office, and shall be allowed to purchase the same at \$1.25 per acre, not to exceed 320 acres for any one person; Provided, that if such person shall neglect or refuse, after knowledge of such facts, to furnish such proof and make payment for such land, it shall be subject to the general land laws of the United States.

Sec. 3. That the foregoing confirmation shall not extend to the lands settled upon by any actual settler, claiming the right to enter not exceeding the prescribed legal quantity under the homestead or pre-emption laws; Provided, that such settlement was made in good faith upon lands not occupied by the settlement or improvement of any other person, and prior to the date of certification of said lands to the State of California by the Department of the Interior; and provided further, that the claim of such settler shall be presented to the Register and Receiver of the District Land Office, together with the proper proof of his settlement and residence, within 12 months after the passage of this act, under such rules and regulations as may be established by the Commissioner of the General Land Office.

Sec. 4. This act shall not apply to any mineral lands, nor to any lands in the city and county of San Francisco, nor to any incorporated city or town, nor to any tide, swamp or overflowed lands.

### Ancient Ruins.

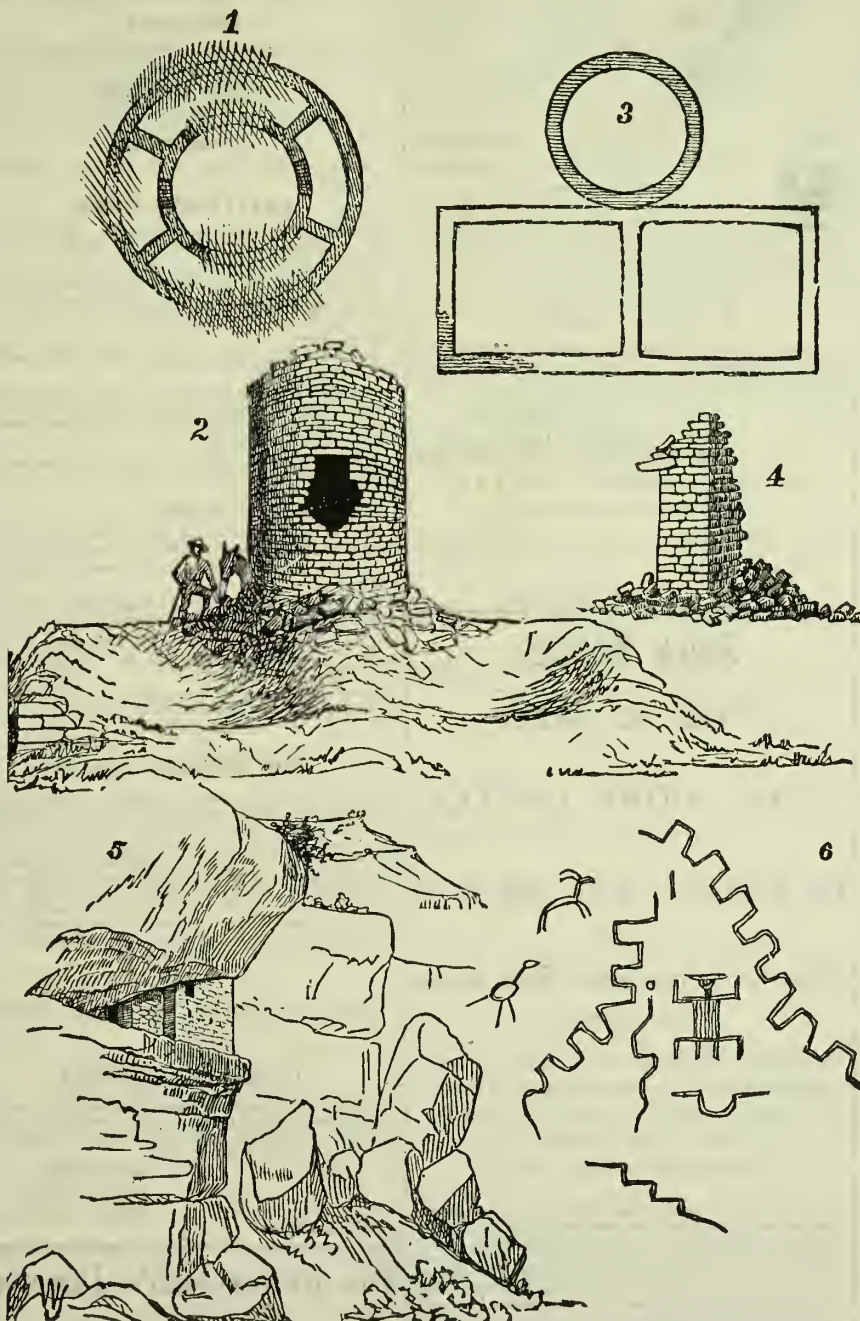
In the extreme southwestern corner of Colorado Territory, west of the one hundred and eighth meridian are numerous groups of old ruined houses and towers, proving that in former times a more civilized and intelligent race lived there than at present. Mr. W. H. Jackson, who accompanied the Hayden survey, wrote a paper on the subject of these towns, describing them in detail. Ruins of a similar character are said to exist along the Rio Las Animas and San Juan, but the observations of the party were confined to the valley of the Mancos. Mounds in different localities show that the banks of the streams once held numerous villages. Foundations of great square blocks, of single buildings and of circular enclosures, can be made out; the latter generally with a depressed surface, showing an excavation for some purpose. The greater portion of these mounds are now overgrown with artemisia, pinyon pine and cedar, concealing them almost from casual observation. The surest indication is the quantity of pottery, curiously ornamented, painted and glazed, all broken into very small pieces.

Some of the buildings are found in a remarkable state of preservation, considering the time since they were built and occupied. The engravings on this page represent a few of them, and other illustrations which we will give hereafter show even better preserved and more curious specimens.

Figure 1 shows a portion of an old tower, which was found in the midst of a group of more dimly marked ruins or foundations, extending some distance in each direction from it. As seen in the figure referred to, the tower consists of two lines of walls, the space between them divided into apartments with a single circular room in the center. The outside diameter of all is 25 feet, and the walls 18 and 20 inches thick. The stones of which the tower was constructed are irregular in size and shape, but with the outer face dressed to a uniform surface.

Figures 2 and 3 show another view. The tower is circular as shown, is 12 feet in diameter and now almost 20 feet high, with 16-inch walls. Facing the valley to the north is a window-like aperture. By referring to Figure 3 it will be seen that a rectangular structure, divided into two apartments, each about 15 feet square, joins the tower. Only one corner of three or four courses of masonry remains, shown in the sketch by shaded lines; the rest being indicated by loose debris. These squares were probably under-ground apartments, their roofs not reaching to the window.

Fig. 4 shows the corner and portion of the doorway of a house, showing considerable care and skill in its construction. Fig. 5 is one of the little nest-like habitations built in the vertical face of the rock. Communication with the outside world is from a small window-like door not shown in the sketch. Two small apertures furnish a lookout over the valley. The walls are as firm and solid as the rocks upon which they are built. The stones are small but regular in size. This is not a commodious dwelling; 15 feet would span its length and six its height, while in depth it is not more than five feet. Near by, upon a low ledge, and readily accessible from below, is a string of five or six houses, evidently communicating. Scratched into the face of the cliff which contains these houses are various inscriptions, one of which is depicted in Fig. 6. As they are not cut in very deeply, and in some places mere scratches, it is very doubtful whether they are cotemporaneous with the houses themselves.



ANCIENT RUINS IN SOUTHWESTERN COLORADO.

was severely felt. According to all this, therefore, it seems our rain in July was due to natural causes, and not the agency of man.

**THE BRANDY BILL.**—Our wine and brandy makers have secured from Congress the aid which they claim is vital to the success of their business. A Washington dispatch gives the following particulars: "The bill for the relief of California fruit distillers has become a law. One amendment provides for the establishment of bonded warehouses in each collector's district. Under the provisions of the bill several grape growers in a neighborhood may provide for a warehouse, which the collector will control. They can then store their brandy and leave it stored three years before paying the revenue tax on it."

In the month of February the Harbor Commissioners report a total of receipts from wharves of \$34,041.85, and in addition \$8,426 drawn from the harbor improvement fund. The disbursements include \$2,807.04 for urgent repairs, \$2,479.33 for steam dredger, \$8,615 on construction account and \$22,154.98 remitted to the State Treasurer.

spent nearly a year in procuring the passage of the bill, found himself last week obliged to encounter seven or eight attorneys in a two-days' argument before the Commissioner of the General Land Office on the whole merits of the question.

We append the text of the bill:

**SECTION 1.** Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the title to the lands certified to the State of California, known as indemnity school selections, which lands were selected in lieu of 16th and 36th sections, lying within Mexican grants, of which grants the final survey had not been made at the date of such selection by said State, is hereby confirmed to said State and its vendees, in lieu of the 16th and 36th sections, for which the selections were made.

**SEC. 2.** That where indemnity school selections have been made and certified to said State, selection shall fail by reason of the land in lieu of which they were taken not being included within such final survey of a Mexican grant, or are otherwise defective or invalid, the same are hereby confirmed, and the 16th or 36th section in lieu of which the selection was made, shall, upon being excluded from such final survey, be



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES: Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$10 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahma, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Poultry.

OAKLAND POULTRY YARDS,  
Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish Hamburgs, Game and Sebright Bantams, Aylesbury and Rouen Ducks

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

THOROUGHbred FOWLS,  
BRONZE TURKEYS,  
Pekin Ducks, Embden Geese,

SAFE ARRIVAL

Eggs Shipped to

OF FOWLS

Any part of the

GUARANTEED

Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

## PLYMOUTH ROCKS.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. I offer for sale a few settings; price, \$12 per sitting of thirteen eggs. Eggs always fresh and well packed. Orders accompanied by the money will be filled in the order in which they are received. Send money by postoffice order, registered letter or by express.

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

## LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

## WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California brood Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.



I. P. LORD, BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

RENO, NEVADA.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *227 State where you saw this.*

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,  
Ceres, Stanislaus County, Cal

## INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

## Stock Notices.

## PUBLIC SALE

—OF—

## SHORT HORN CATTLE,

TO BE SOLD

On Thursday, April 5th, 1877,

AT THE

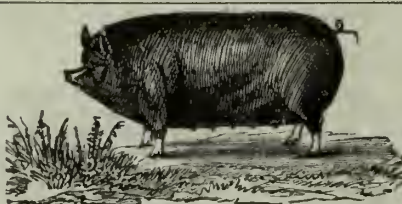
Fair Grounds, near San Jose, CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US TO CLOSE UP OUR PARTNERSHIP AFFAIRS; WE SHALL THEREFORE SELL, AT PUBLIC SALE, THE ENTIRE AVENUE RANCH HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to Breeders, and all parties wishing to purchase high bred Short Horns.

*227 Sale Catalogues furnished on application.*

CYRUS JONES & CO.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,

NAPA, CAL.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Polson, Cor. Ninth St., S. F.

## A JOINT AUCTION SALE

—OF—

## Blooded and Graded Stock.

—ALSO—

## A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville,

Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

PACIFIC,

By Red Cloud, out of Reta, two years old. (Herd book No. 24,249.)

PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of Imported Cows.

Also, four head of Thoroughbred Cows and Heifers.

Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows.

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers.

Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums under \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

## THE BENNER RANCH

Will also be sold at Public Auction, consisting of 560 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

## SALE POSITIVE, IN GOLD COIN.

## Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,  
HENRY PRESTON,  
DAVID S. BENNER.

Feb. 24th, 1877.

## The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

NURSERYMEN, FLORISTS, SEEDSMEN, TREE DEALERS, HORTICULTURAL IMPLEMENT MAKERS, ETC., of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,  
Publishers, Galena, Illinois.



## RUPTURE CURED

Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or

Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.

Send for Illustrated Circular and Price List. MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, San Francisco.

## TO COLOR BUTTER.

EVERY DAIRYMAN SHOULD USE

Wells, Richardson & Co.'s

## PERFECTED BUTTER COLOR.

It adds five cents per pound to the value.

It gives a pure rich Dandelion color.

It imparts no taste or smell.

It is as harmless as salt.

It is better than Carrots.

It is better than Annatto.

It is better than any other coloring.

Foreign or domestic, liquid or solid.

*227* A sample sufficient to color fifty pounds of butter will be sent to any address, postpaid, on receipt of ten cents. Every Dairyman who wishes to realize the highest price should give it a trial now.

*228* An energetic man wanted to act as agent in every town. Liberal terms to the right man. For terms and territory, address at once,

WELLS, RICHARDSON & CO.,

Burlington, Vermont.

## LEVI STRAUSS &amp; CO.,

Patent Riveted

Clothing,

14 & 16 Battery St.,

San Francisco.



These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.

USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## Practical

## BOOKS

—AT—

## BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

CIVIL ENGINEERS,

FARMERS,

MACHINISTS,

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street, SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## PACIFIC RURAL PRESS,

A first-class 16-page Agricultural Home Journal, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Subscription, \$4 a year. DEWEY & CO., Publishers. No. 224 Sansome Street, SAN FRANCISCO.

## LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.







## Desert Lands.

Senator Booth's bill to encourage the irrigation, sale and settlement of desert lands, has become a law, and such portions of our western territory are now open to enterprise and may be made applicable to settlers so soon as formal regulations and instructions shall be issued by the Interior Department. Senator Booth, in the course of an able report recommending the bill for passage, made the following interesting points:

There are extensive regions of country in the States and Territories named in the bill where there is not sufficient rainfall to render the cultivation of the soil possible without irrigation. In other words, large portions of the country from the Rocky mountains west are deserts, but it has been ascertained that by irrigation these lands can be made exceedingly productive. The subject of irrigating these lands has attracted the attention of the Interior Department and Congress for many years, and various schemes have been proposed to Congress, and to the States interested, to secure aid for that purpose; but Congress has hitherto wisely, as we believe, refused to aid any of these projects further than to provide for examinations and reports upon the subject.

The whole subject should be left, as far as practicable, to private enterprise, and the Government should interfere as little as possible with the subject. It is certainly best to give the people an opportunity in the first instance, and when they have failed to utilize both the water and the land it is time enough to call for Government aid or legislative control, but it is necessary that the people have an opportunity to acquire title to the lands before private enterprise will undertake a reclamation of these deserts.

Experience has shown that the homestead and pre-emption laws afford no means of acquiring title to desert lands. Those laws require settlement and occupation as a prerequisite. Neither settlement nor occupation is possible without water. Irrigation must precede the settlement. But this is expensive, and settlers upon the public lands are unwilling to construct the necessary ditches and canals to irrigate lands to which they have no title and no certainty of obtaining title.

It has been suggested that these lands be sold in large quantities in order to induce private capital to undertake the work of their reclamation. Your committee fear that any system of sale whereby the title would pass before irrigation, would encourage speculation without inducing settlement. The bill provides for the sale of a section of land to any person who will first irrigate the same, at the usual price of \$1.25 an acre. A more liberal policy has been suggested of granting lands, after irrigation, without any money consideration. But the committee believe that when these lands are irrigated they will be of sufficient value to enable the purchaser to pay the Government price charged for other public lands. Besides, the quantity allowed will be an additional inducement to settlers to undertake the work of irrigation. At all events, it will be time enough to make donations of these lands when it is ascertained that settlers are unwilling to purchase them. It is believed that by far the larger portion of the lands bordering on the streams, where sufficient moisture exists for cultivation, and where irrigation is cheap and easy, have been appropriated, but the provisions of this bill enable settlers by combined effort to construct more extensive works and reclaim a class of lands that are now absolutely worthless.

The bill, in its full text, is as follows:

A bill to provide for the sale of desert lands in certain States and Territories: Be it enacted, etc., That it shall be lawful for any citizen of the United States, or any person of requisite age "who may be entitled to become a citizen, and who has filed his declaration to become such," to file a declaration with the register and the receiver of the land district in which any desert land is situated, that he intends to reclaim a tract of desert land not exceeding one section, by conducting water upon the same, within the period of three years thereafter. Said declaration shall describe particularly said section of land if surveyed, and, if unsurveyed, shall describe the same as nearly as possible without survey. At any time within the period of three years after filing said declaration, upon making satisfactory proof of the reclamation of said tract of land in the manner aforesaid, and upon the payment to the receiver of the sum of one dollar and twenty-five cents per acre for a tract of land not exceeding 640 acres to any one person, a patent for the same shall be issued to him.

Sec. 2. That all lands, exclusive of timber lands or mineral lands, which will not, without irrigation, produce some agricultural crop, shall be deemed desert lands within the meaning of this Act.

Sec. 3. That this Act shall only apply to and take effect in the States of California, Oregon and Nevada, and the Territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico and Dakota.

CINCINNATI ADVERTISING AGENTS.—We lately called at the office of E. N. Freshman & Bros., in the queen city of Ohio, and found an active and well organized business firm. These gentlemen have transacted business for us for over three years with entire satisfaction.

## New Agricultural Implement House in Sacramento.

The advantage of the Capital City as a center from which to distribute agricultural implements is seen in the fact that our leading dealers find it to their advantage to locate branch establishments there. The rich and prosperous counties of the central region and the northern region of the State naturally look to Sacramento for many of their supplies, and wise merchants and manufacturers are not slow to discover the fact and profit by it. The latest manifestation of the fact is seen in the announcement which is made in our advertising columns this week. Frank Bros. & Co., of Market street, S. F., have found that their northern and interior trade can better be served from Sacramento, and so they open a branch establishment at the corner of J and Second streets. Last year this firm opened the Portland branch and did a business which fully encourages them to put forth farther efforts, and we doubt not the Sacramento branch will meet with similar success. The prospect is now that the central counties of the State will outdo themselves in the weight and quality of their crops, and consequently will need the best aid of the men who provide the necessary harvesting machinery. In this direction Frank Bros. & Co. will push the Wood machinery, with all its California improvements. They will also present the well-known Fish wagon and other useful implements, as they will announce in their advertisements. We can but bespeak for the new Sacramento house a fair consideration from our many readers in the counties tributary to the Capital City.

## California Truffles.

A gentleman in this city, says the *Stockton Independent*, recently received a letter from a friend residing at Albany Flat, Calaveras county, relating the circumstance of the discovery of that delicious, edible, subterranean fungus known as the truffle. He sent a small package of them by express, but unfortunately it was in the express box carried off by the road agent who stopped the Milton stage last week. The disgust of the robber looking for treasure may be imagined when he opened the package of black fungi, but if it should have turned his attention to digging for them he would doubtless make more money in this honest way than he has ever done at his unhallowed calling of stage robbery, for the truffle is very valuable. So highly is it prized for its delicate flavoring qualities that it is worth in California at least \$5 a pound. All of the article in use in this country is imported from France, where it is found in abundance. The common truffle is of an irregular, globular form, having a hard black or brown cracked rind, with an interior texture netted or veined or mottled like the nutmeg. It is found 10 or 12 inches below the surface of the ground in calcareous soil, covered with moist, light vegetable mold, in young woods or under the shade of large oak trees. It has neither root, stem nor other appendage, and ranges in size from that of a bean to that of an English walnut. The flesh is solid, somewhat juicy, and when ripe of a sharp fragrant odor. When the air is moist, and just before a thunder-shower they are said to emit a peculiar odor, which facilitates their search, and such is the esteem in which they are held that hogs are trained to hunt for them and dig them out of the ground. Truffles are rarely found in the United States, and the discovery of an edible species in California will be hailed as one of the greatest importance. We are not informed as to the kind of soil the truffles of Calaveras were dug from, but the writer of the letter mentioned the fact that the Indians were in the habit of digging them for food. He promises to send another consignment, which, on its arrival, will be submitted to the examination of experts to test the identity of the truffle.

PALMER BROTHERS.—We call attention to a new advertisement which appears in the *PRESS* this week. It is the announcement of Palmer Bros., of this city, of a large and varied stock of millinery, notions and ready made clothing of various kinds. We have found this firm straightforward and upright in all our business transactions with them, and have reason to expect that any trade which comes to them from our readers will be transacted in the same manner.

BEST BOOK FOR EVERYBODY.—The new illustrated edition of Webster's Dictionary, containing 3,000 engravings, is the best book for everybody that the press has produced in the present century, and should be regarded as indispensable to the well-regulated home, reading-room, library, and place of business.—*Golden Era*.

AN association has been formed in Edinburgh for the purpose of purchasing and slaughtering cattle and other stock in the United States and Canada, and for also purchasing farm and dairy produce to sell in Edinburgh and other parts of Great Britain.

COLONEL JNO. A. GODFREY, of New York, of the Associated Pioneers, formerly a resident of San Francisco, and Consul General at Guaymas, Mexico, died in New York on the 3d inst.

## General News Items.

THE China Mail Subsidy bill was defeated in Congress.

THE Baldwin hotel in this city was formally opened on Monday evening.

JOEL T. HART, the American sculptor, living at Florence, is dead.

THE rates of interest have been reduced by the Odd Fellows bank to eight per cent. on securities of the first class.

THE Senate receded from its amendment proposing an appropriation of \$250,000 for the erection of a National museum building in Washington.

THE Harding paper mills, at Franklin, Ohio, were burned on Thursday night. Loss, \$200,000; insurance, probably light. The mills were the finest of the kind in the country.

THE House concurred in the Senate amendment appropriating \$25,000 to pay the expense of a commission of five skilled entomologists to be appointed by the Secretary of the Interior to report the best practical methods of guarding against invasion by the Rocky Mountain locusts or grasshoppers.

THE reply of the Powers to the Russian circular will be presented next week. The Powers have agreed to acknowledge the meritorious zeal of Russia on behalf of the Christians in Turkey. The reply will be carefully worded to make Russia's retreat from her threatening position easy. It is understood that the Powers will propose that the Porte be granted time for the execution of reforms.

THE London Money Market Review says: The Bank of France has announced that it will hereafter make advances upon bar silver at one per cent. per annum, with a margin of 10% in greenbacks deposited with the bank. This is a return to the custom prevailing before the panic in silver. The effect will be to steady the market, and may be regarded as an indication of faith in the future of silver.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

FRUIT DRIER.—R. B. Blowers, Woodland, Yolo county. This fruit drier is more especially valuable as an assistant in curing raisins which have been partially dried in the open air, but have not been completed because of bad weather. It is adapted, however, to all classes of fruit. It consists of a series of rooms provided with cleats to receive sliding trays, which are especially arranged to cause the currents of hot air to pass over them in a peculiar manner from above. These rooms are arranged on each side of the central heating apparatus, and are provided with transom doors by which the heat is admitted or cut off, as may be desired. The hot air, after doing its work, escapes through openings in the bottoms of the chambers into parallel flues which open into a central chimney of sufficient height to produce a proper draft. Each drying chamber is provided with doors opening outwards and any number of them may be used or cut off at will by simply closing the hot-air gates. In curing grapes for raisins it is well known that the best product is obtained by open air or sun drying, and this can only be accomplished in climates which are rendered very dry by reason of long, rainless seasons such as occur in California and some other parts of the United States. A great difficulty is however encountered from the fact that the season when the grapes are in proper condition to be cured is so near the border of the rainy season that the half-cured fruit is often caught by the early rains; and, although it may be covered and protected from the direct injury of wet, yet the atmosphere never becomes dry enough again to complete the curing of the raisins. This sun drying is therefore supplemented by the addition of artificial heat, and it is necessary at the same time that the fruit should be handled as little as possible from the time it is picked until packed in boxes. To effect this the inventor has devised this peculiar style of drier.

UNDERGARMENT.—Coelia C. Curtis, Oakland. This is an improved undergarment for female wear. The invention relates to a mode of cutting and forming that class of undergarments for female wear, in which the waist and drawers form a single garment. It consists in forming the entire garment, with the exception of the sleeves and back of the waist, in two pieces or parts, each of which pieces or parts form one leg and one side of the waist front, thus economizing in material and labor. The back of the waist is cut on which is known as a "saque style," so that it will fit the person more comfortably and snugly. This provides a complete and convenient garment which is cut in the most economical style and without waste.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

INFORMATION is wanted at this office of the whereabouts of Wm. John Lawrie, formerly newspaper agent. Last heard from Jan. 27th, 1877, in Petaluma.

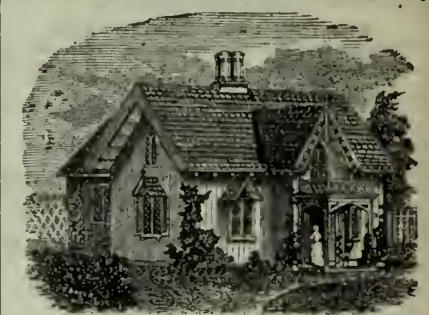
## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte and Sutter counties.  
A. W. McGREW—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERLAIN—Tulare, Kern and Fresno counties.  
A. W. STRONG—Lake, Napa and Solano counties.  
G. KUTNOW—Santa Barbara, San Luis Obispo and Ventura counties.  
W. D. WHITE—San Bernardino and Los Angeles counties.

SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

## CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA.  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

WANTED.  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address  
Rev. DAVID McCURE, Principal,  
OAKLAND, CAL.

London Assurance Corporation,  
OF LONDON, ENGLAND.

Established in 1720.  
Cash Assets - - \$14,993,466

Western Assurance Company,  
OF TORONTO, CANADA.

Incorporated 1851.  
Cash Assets - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

## NAPA VALLEY PROPERTY.

The undersigned, a resident and practical farmer and horticulturist in Napa Valley for the past twenty-five years, is now making REAL ESTATE in this valley a specialty. Parties contemplating investing in Napa Valley can derive much valuable information relative to true values, seasons, rain-fall, crops, etc., by calling on or addressing the undersigned. Fine Wheat Farms at \$20 to \$60 per acre, ON LINE OF RAILROAD AND NAVIGATION. Superior Alfalfa Lands on Napa River; Productive Vineyard Properties; Garden Lands and Villa Residence Properties.

THOS. H. THOMPSON,  
Wells, Fargo & Co.'s Building, Napa, Cal.



# S. F. MARKET REPORT.

## Weekly Market Review.

### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, March 7th, 1877.

The trade of the week has been without special character. The showings which have fallen have increased confidence in the coming crop, but it is still regretted that the rains have come chiefly on those parts which had already enjoyed the refreshing, while still the great south of the State is denied the general drenching which it desires. There have been local showers in some of the southern counties, but the generous downpour has been as yet withheld. On the other hand, the northern and central counties are rejoicing in unusual signs of prosperity.

There is just now considerable activity in fine selections of Grain, Potatoes and Beans for seed, and the Produce-dealing streets are lined with very superior samples. The seedsmen and nurserymen are still at the height of their season and some report a brisker and larger trade than ever before.

The general course of prices in all Grains save Wheat shows but little fluctuation. Wheat is not now commanding the extremes of a week ago. The English market, although promising, as has been all along expected, shows present signs of weakness and has declined during the week, as may be seen by the following:

### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
	10s	7d@10s	9d	10s	9d@11s	2d		
Thursday.....	10s	7d@10s	9d	10s	9d@11s	2d		
Friday.....	10s	7d@10s	9d	10s	9d@11s	2d		
Saturday.....	10s	7d@10s	9d	10s	9d@11s	2d		
Sunday.....	10s	7d@10s	9d	10s	9d@11s	2d		
Tuesday.....	10s	7d@10s	9d	10s	9d@11s	2d		
Wednesday.....	10s	7d@10s	9d	10s	9d@11s	2d		

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
	10s	7d@10s	9d	10s	9d@11s	2d		
1875.....	8s	11d@9s	3d	9s	3d@9s	10d		
1876.....	8s	10d@10s	—	10s	2d@10s	8d		
1877.....	10s	3d@10s	6d	10s	7d@10s	10d		

### The Foreign Review.

LONDON, March 5th.—The *Mark Lane Express* in its weekly review of British commercial trade says: Winter-grown Wheat and other cereals continue to present a fairly satisfactory appearance, except in Lincolnshire and the few districts whence reports are somewhat indifferent, the plant in some places having been entirely rotted by long submersion. Little change is noted in the condition of English Wheat or the quantity marketed, the bulk of offerings being still damp and inferior in quality. Dry weather has not continued long enough to induce farmers to thresh more freely. Dry samples have maintained last week's prices in London and the country markets, but sales of inferior parcels have been difficult. Values having been irregular, they were scarcely quoted. Imports of foreign Wheat into London have been very light, amounting to less than 17,000 quarters, the greater portion of which was from Germany, America being only represented by about 3,000 quarters. The diminution in the supply of red spring Wheat from America still bears out the leading characteristics of the season, namely, that even the advance which has taken place in prices here has failed to induce the increased exportation of red Wheat from Atlantic ports. The course of trade has been quiet but steady, although speculation has been wanting. Consumption continues and prices have been maintained for all descriptions of Wheat. This steadiness is noteworthy, as we have had no political uneasiness, and should the Continental demand begin our markets might readily present a hardening tendency, especially as the California supply will attain its maximum in the course of the present month and afterwards steadily decline in volume. Even in the event of a Continental demand, the California arrivals of the present month ought to be readily absorbed. As the total prospective supplies will fall short of the requirements of the country as soon as California supplies begin to diminish, the inroad upon stocks will become more marked and we shall urgently need increased shipments from America and Russia, particularly as shipments from Australia and Chile seem likely to prove disappointing. The floating cargo trade has been steady and late prices occasionally slightly exceeded those previously obtained.

### Freights and Charters.

The past week, says the *Commercial News*, has been the dullest in the history of this port for a long time. Nothing has been done, and no one has manifested much of any disposition to do anything. The last Wheat charter drawn was at £2 4s to Cork, U. K. To-day we cannot quote at above £2 2s 6d for same destination. Outside business has continued very dull also, and we have no transactions to report. At the close we see no prospect of any improvement in freight. The amount of tonnage here and to arrive will evidently be more than enough for all requirements. We have now 16,725 tons in port under engagement to load Wheat, 25,086 tons disengaged and 4,970 tons miscellaneous.

### February Wheat Fleet.

During the month of February the total exports of Wheat from San Francisco to Great Britain amounted to 802,022 cwt., valued at \$1,780,716.

### New York Grain Market.

NEW YORK, March 3d.—Lower points for Gold, higher freights and unsatisfactory cables have led to a decline in Flour, Wheat and Corn, with a very light export trade. Spring Wheat has sold at \$1.30@1.48, and winter at \$1.40 @1.63; Corn, 56¢@60¢, and Barley 65¢@81¢. For inferior to prime shipping Flour, \$5.60 to \$7.

### Chicago Grain Market.

CHICAGO, March 3d.—The week's markets have been weak, and prices have finally made a decided break from the unusually high and, for several weeks, well-maintained prices, and though there was a partial rally at the close of the week, the feeling is by no means strong, and good judges look forward to a return to nominal rates, which past experience shows are the normal ones. Prices closed as follows: Wheat, \$1.22; Corn, 40¢; Oats, 33¢; Rye, 62¢; Barley, 50¢ per bushel; Lard, \$9.55 per barrel. Following are the receipts for the week: Wheat, 86,000; Corn, 688,000; Oats, 185,000 bushels. Shipments of Wheat during the week amounted to 580,000 bushels; Corn, 375,000; Oats, 111,000. For the same time last year the shipments of wheat were 235,000 bushels; Corn, 660,000; Oats, 183,000.

### Eastern Wool Markets.

NEW YORK, March 3d.—The Wool market presents but few features of interest during the week. Trade is very quiet, the condition of the Goods market not warranting important purchases. Manufacturers have confined their purchases to parcels sufficient only for their present necessities; but holders, notwithstanding, continue to demand full market prices, as the supply of choice grades is exceedingly limited. Fall California has perhaps attracted more attention, the selling prices of which are 10¢@23¢ for good, 15¢@18¢ for ordinary and 13¢@14¢ for inferior. The sales for the week are; 71 bales spring California at 24¢

27¢; 114,000 lbs fall do, 16½¢@18¢; 248,000 lbs Western Texas at 16¢@18¢ for coarse and 25¢@26¢ for fine; 40,000 lbs Nevada at 27¢; 40 bags extra pulled, 35¢; 62,000 lbs Ohio, 42¢@44¢; 50,000 lbs State delaine, 45¢; 2,000 lbs unwashed Western, 25½¢@28¢; 10,000 lbs coarse combing, 45¢; and 41 bales Buenos Ayres, 5,000 lbs black Smyrna, 35,000 lbs Eastern Texas, 2,000 lbs extra pulled, 1,000 lbs super do, 2,200 lbs No. 1 do, 1,000 lbs No. 2 do, 3,000 lbs Ohio combing and 2,000 lbs unwashed locks on private terms.

Boston, March 3d.—Wool has been in good demand, and prices have ruled in favor of buyers. Fine Wools are a shade easier. Sales are reported of Ohio and Pennsylvania amounting to 92,000 lbs, medium, at 41¢@43¢; XX, 45¢@47¢; XXX and picklock, 45¢@50¢. Michigan is active, with sales of 118,000 lbs at 38¢@40¢. New York, Wisconsin and Michigan medium and choice are quotable at 37¢@40¢ ½ lb; combing and delaine are unchanged.

PHILADELPHIA, March 3d.—Buyers have taken all that is offering at current prices. Pulled is in fair demand. Sales of 232,000 lbs super and X within a range of 40¢@46¢. Some choice California is selling as high as 50¢. California is in fair demand, with sales of 37,800 lbs spring at 23¢@26¢; fall, 10¢@27¢ ½ lb.

### Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Feb. 14.	WEEK Feb. 21.	WEEK Feb. 28.	WEEK March 7.
Flour, quarters sals.....	84,135	15,772	61,242	60,220
Wheat, centsals.....	356,523	87,537	111,835	236,948
Barley, centsals.....	8,101	8,537	6,487	10,416
Beans, sacks.....	656	1,465	1,049	1,726
Corn, centsals.....	4,249	1,024	2,324	3,860
Oats, centsals.....	3,894	3,368	7,843	1,285
Potatoes, sacks.....	19,144	11,081	16,026	9,754
Onions, sacks.....	1,736	680	1,149	1,503
Wool, bales.....	86	148	98	346
Hops, bales.....	144	—	45	167
Hay, bales.....	931	706	686	955

Bags.—The Bag trade has been very quiet and prices are unchanged. The men in the trade seem hanging wholly on the chances for heavier and wider rains. The jobbing trade is proceeding slowly at quotations.

Barley.—Since July 1st, 1876, the exports of Barley from this State by sea have been 273,529 cwt., including 1,052 cwt. via Wilmington, against 147,205 cwt. for the first eight months of 1875-76. Prices a little above last week's range. We note sales as follows: 600 sks ordinary Coast Feed at \$1.25; 400 do good do, \$1.27½; 400 do choice do, \$1.30, all silver; 1,200 sks Coast Feed at \$1.20 per cwt, gold; 600 sks do do at \$1.30 per cwt, silver, and 400 do Bay Feed at \$1.27½ per cwt, silver; 800 sks dark Coast, \$1.25, silver; 1,200 do fair Brewing, \$1.25, gold; 1,200 do good do, \$1.27½; 319 sks fair Bay at \$1.20; 500 do do, \$1.21½; 150 sks dark Coast at \$1.23½, silver; 550 do Bay Feed at \$1.25, silver; 1,200 do Coast Feed, \$1.20, gold; 400 do Bay, \$1.27½, silver; 510 sks Bay Feed at \$1.25 per cwt, gold, and 1,400 sks Coast Feed at \$1.30 per cwt, silver. Ten thousand bushels of California Barley, of the cargo of the Rebecca J. Moulton, which recently arrived at Baltimore from this port, have been sold to a malster in that city. The balance, amounting to 25,000 bushels, will be forwarded to Chicago by rail.

Beans.—Prices are generally unchanged. There is occasionally a sale made of choice selections for Seed above the market. We note a sale of a few sacks choice Bayos at \$3.50 for this purpose.

Buckwheat.—Buckwheat sales are at \$1.80 per cwt, silver.

Corn.—Considerable sales of Corn have been made at prices reached by the late advance. We note sales as follows: 350 sks large White at \$1.50; 190 sks small Yellow at \$1.52½ per cwt, gold; 400 sks mixed Yellow at \$1.45 per cwt; 100 sks small Yellow at \$1.50; 200 sks large Yellow at \$1.47½ per cwt, gold; 800 sks large Yellow at \$1.50 per cwt, silver.

Dairy Produce.—Receipts of butter are still large, but the price is held from material decline by packing. Packing is now in progress both in the city and on the ranches. We have had conversation with several leading butter dairymen during the week, and they are firm in the belief that the market has touched bottom, because packing will relieve the present pressure and the prospective short season in some of the dairy counties will draw upon the product of the other better favored localities. Cheese is unchanged and is selling slowly.

Eggs.—Eggs are another point lower. The receipts are large.

Feed.—The prices for ground Feeds are unchanged. Hay has ruled dull during the week and large sales have been difficult. We note a few transactions as follows: A cargo of fair Wheat at \$15, also a cargo of common stock at \$9.50; 50 tons fair stock at \$10.50; 41 tons choice Wild Oat at \$15; 35 tons stained Volunteer, \$10. The choicest Wheat is quoted at \$16 per ton.

Fruit.—The novelty of the week has been 50 lbs of Strawberries, which sold at \$1 per lb. California Oranges have sold at a higher average and California Limes range toward the outside quotations. Full prices for Fruits may be found in our table.

Hops.—We note a sale of 52 bales choice Russian River Hops at 20¢ per lb, and this may be considered the top of the market. Emmet Wells's report of the New York market has not come to hand this week. A local dealer says: "Latest advices from New York report no improvement in price; business depressed. With us there has been a constant inquiry, and a few sales at prices within the range of our quotations. There seems to be a disposition to purchase fair to good grades at, say 10¢@12¢."

Oats.—Oats have sustained a little lower range than a week ago. We note sales: 250 sks choice at \$2.20 per cwt, silver; 250 do do, \$2.15, silver; and 170 sks common Feed at \$1.70 per cwt, half gold; 100 sks Feed at \$2.07½ per cwt, silver; 100 sks inferior Coast at \$1.70, half silver; 200 do good Feed, \$2; 200 do choice do, \$2.12½. Choice heavy Milling sells up to \$2.25 per cwt.

Onions.—Onions to-day are lower than earlier in the week, and \$1 per cwt is the top price. A few days ago there were sales of 250 sks Union City at \$1.12½ and sales of Stockton at 75¢@87¢. The lowest price for good Onions to-day is 90¢ per cwt.

Potatoes.—Potatoes are a shade better, bringing 75¢ per cwt for the best. We note a sale of 250 sks choice Tomatoes, 75¢. Inferior grades still sell down to 30¢. Sweet, 75¢ per cwt.

Provisions.—Fresh Meat a shade lower, the average decline reported by dealers being one-half cent per pound. Cured Meats are unchanged.

Poultry and Game.—Poultry gains an important advance on Hens, Roosters, Broilers and Ducks. Prices are given in full below.

Rye.—The latest sales are reported at \$1.95@2 per cwt. Vegetables.—Although we have no novelties to report this week, the increasing abundance of green stuff already is working a sharp decline in it. Asparagus now sells by the box, bringing \$1.50 per box of 50 lbs. Green Peas, common, are selling at 4¢ and sweet at 7¢. Rhubarb drops to 7¢@8¢ ½ lb. Turnips are accumulating and range a little lower.

Wheat.—Sales have been made at a lower range as may be seen from the following: 2,500 cwt. choice Milling, \$2.15 per cwt, in two lots. An extra choice lot of 350 sks sold for \$2.20. 3,000 cwt. choice Milling, \$2.12½, and 600 do choice Sonora, \$2.15 per cwt; also 2,000 cwt. choice Milling, \$2.17½ per cwt; 2,400 sks choice Milling, \$2.14; 7,000 do extra is reported sold at \$2.20; 400 sks choice Milling, \$2.10; 1,000 sks choice Milling, \$2.05@2.10; 1,200 sks Sonora, to a miller, \$2.15; 200 do do, \$2.20; 1,600 sks choice Milling, \$2.15; 1,800 do do, \$2.15. Many of the above sales were made early in the week, before the decline occurred. The prices ruling to-day may be found in our table of prices.

Wool.—The receipts of the Spring clip are increasing, and trade may be expected soon. As yet not a pound of the Spring is reported as sold. There is a disposition to clear up old stock and one house reports to us sales of 80,000 lbs Fall to clear up at 10¢; another, 50,000 lbs Fall at 10¢@12¢ per lb.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., March 7, 1877.

BEANS. Bayo, cwt..... 3 00 @ 35 00  
Butter..... 1 50 @ 20 00  
Pea..... 2 12 @ 35 00  
Red..... 2 75 @ 30 00  
Pink..... 2 75 @ 30 00  
Sm'l White..... 2 00 @ 25 00  
Lima..... 2 75 @ 30 00

BRO CORN. Common, lb..... 2 @ 24  
Choice..... 3 @ 4

CHICORY. California..... 6 1/2 @ 7  
German..... 6 1/2 @ 7

COTTON. Cotton, lb..... 15 @ 18

DAIRY PRODUCE, ETC. BUTTER. Cal. Fresh Roll, lb..... 22 @ 25  
Point Reyes..... 25 @ 25  
Pickle Roll..... 22 @ 25  
Firkle..... 22 @ 25  
Western Reserve..... 16 @ 20  
New York..... — @ —

CHEESE. Cheese, Cal. lb..... 12 @ 15  
Old..... — @ —  
Eastern..... 12 @ 15  
N. Y. State..... 15 @ 18

EGGS. Cal. fresh, doz..... 24 @ 26  
Ducks..... 25 @ 26  
Oregon..... — @ —  
Eastern..... — @ —

FEED. Bran, ton..... 16 00 @ —  
Corn Meal..... 34 00 @ 35 00  
Hay..... 10 00 @ 16 00  
Middlings..... 27 50 @ —  
Oil Cake Meal..... 32 50 @ —  
Straw, bale..... 16 00 @ —

FLOUR. Extra, bbl..... 6 50 @ 7 00  
Superfine..... 4 75 @ 5 50  
Graham..... 5 50 @ 6 00

FRESH MEAT. Beef, 1st quality, lb..... 6 @ 6 1/2  
Second..... 4 @ 5 1/2  
Third..... 3 1/2 @ 4  
Mutton..... 3 @ 4  
Spring Lamb..... 10 @ —  
Pork, undressed..... 6 1/2 @ 7  
Dressed..... 8 @ 9  
Veal..... 5 1/2 @ 6  
Milk Calves..... 6 1/2 @ 8

GRAIN, ETC. Barley, feed, cwt..... 20 @ 30  
Brewing..... 1 25 @ 1 30  
Chevalier..... 1 25 @ 1 40  
Buckwheat..... 1 80 @ —  
Corn, White..... 1 45 @ 1 50  
Yellow..... 1 45 @ 1 50  
Oats..... 1 70 @ 1 72 1/2  
Milling..... 2 25 @ 2 25  
Rye..... 1 85 @ 2 00  
Wheat, shipping..... 2 00 @ 2 05  
Milling..... 2 05 @ 2 10

HIDES. Hides, dry..... 16 @ 16 1/2  
Wet salted..... 7 1/2 @ —

HONEY. Beeswax, lb..... 25 @ 27 1/2  
Honey in comb..... 10 @ 15  
Strained..... 6 @ 8

HOPS. California..... 16 @ 20

## FRUITS AND VEGETABLES.

[WHOLESALE.]

FRUIT MARK. Apples, bx..... 50 @ 1 0  
Crab, lb..... 2 @ 3  
Bananas, buch..... 2 00 @ 3  
Cocoanuts, 100..... 5 00 @ 6 1/2  
Cranberries..... 15 00 @ 17 1/2  
Limes, Mex..... 15 00 @ 17 50  
Lemons, Cal M..... 10 00 @ 15 00  
Sicily, bx..... 9 00 @ 10 00  
Oranges, Mex..... — @ —  
M..... — @ —  
Tahiti..... — @ —  
Cal..... 7 50 @ 30 00  
Pears, bx..... 1 00 @ 2 50  
Pineapples, doz..... 6 00 @ 8 00

DRY FRUIT. Apples, lb..... 4 1/2 @ 6  
Apricots..... 10 @ 12 1/2  
Citron..... 28 @ 30  
Figs, Black..... 5 @ 6  
White..... 6 @ 8  
Peaches..... 7 @ 8  
Pears..... 3 @ 4  
Plums..... 12 1/2 @ 13 1/2

PRUNES. Prunes, Cal, bx..... 12 1/2 @ 17  
Raisins, Cal, bx..... 1 50 @ 2 50  
Malaga..... 3 00 @ —  
Zanto Currants..... 9 @ 10

VEGETABLES. Artichokes, doz..... — @ —  
Asparagus, bx..... 1 60 @ 1 50  
Cabbages, 100..... 5 00 @ —  
Carrots..... 37 1/2 @ 40  
Cauliflower, doz..... 50 @ —  
Celery..... 50 @ —  
Garlic, lb..... 1 @ 2  
Peas, Green..... 4 @ —  
Sweet..... 7 @ —  
Lettuce, doz..... 10 @ —  
Mushrooms..... 8 @ 10  
New Potatoes..... 2 1/2 @ 3 1/2  
Parsnips, lb..... 1 @ —  
Rhubarb..... 6 @ 8  
Squash, Marrow..... 4 @ 5

SPICES. Cloves, doz..... 12 @ 14  
Choice..... 12 @ 16  
Northern..... 17 @ 21  
Burry..... 10 @ 16  
Oregon, Eastern..... 20 @ —  
Valley..... 25 @ —

## RETAIL GROCERIES, ETC.

WEDNESDAY M., March 7, 1877.

Butter, California..... 35 @ 40  
Choice, lb..... 18 @ 30  
Cheese..... 25 @ 30  
Eastern..... 18 @ 20  
Lard, Cal..... 20 @ 25  
Eastern..... 20 @ 25  
Flour, ex. bbl..... 21 @ 3  
Corn Meal, lb..... 12 1/2 @ 13 1/2  
Sugar, wh. crishd..... 8 @ 9 1/2  
Light Brown..... 23 @ 35  
Coffee, Green..... 50 @ 60  
Tea, Fine Black..... 55 @ 60  
Finest Japan..... 15 @ 25  
Candied Adm'to..... 7 @ 10  
Soap, Cal..... 7 @ 10

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., March 7, 1877.

BAGS.—Jobbing. Eng Standard Wheat, 9 @ 9 1/2  
Neville & Co's..... 9 @ 9 1/2  
Hand Sewed, 22x36, 9 @ 9 1/2  
24x36..... 9 @ 9 1/2  
23x40..... 10 @ 10 1/2  
Machine Swd, 22x36, 9 @ 9 1/2  
Flour Sacks, halves..... 9 @ 11  
Quarters..... 6 @ 7  
Eighties..... 4 1/2 @ 5  
Hessian, 60 inch..... 11 @ 12  
45 inch..... 8 @ 9  
40 inch..... 7 1/2 @ 8  
Wool Sacks, 3 1/2 lb..... 50 @ —  
4 lb..... 55 @ —  
Standard Gunnies..... 11 1/2 @ 12  
Bean Bags..... 7 @ 8

CANNED GOODS. Assorted Pie Fruits..... 2 1/2 @ 3  
2 1/2 lb cans..... 2 75 @ 3 00  
Table do..... 3 75 @ 4 00  
Jams and Jellies..... 4 25 @ —  
Pickles, hf gal..... 3 50 @ —  
Sardines, qr box..... 1 65 @ 1 90  
Hf Boxes..... 3 00 @ —

COAL.—Jobbing. Australian, ton..... 8 50 @ 9 00  
Coos Bay..... 8 00 @ —  
Bellingham Bay..... 8 00 @ —  
Seattle..... 8 00 @ 9 00  
Cumberland..... 14 00 @ 17 00  
Mt Diablo..... 5 75 @ 7 75  
Lehigh..... 22 00 @ —  
Liverpool..... 8 50 @ 9 00  
West Hartley..... 14 00 @ —  
Scranton..... 13 00 @ 16 00  
Vancouver Id..... 10 50 @ 12 00  
Charcoal, sack..... 75 @ —  
Coke, bbl..... 60 @ —

COFFEE. Sandwich Id, lb..... 21 1/2 @ —  
Costa Rica..... 22 @ 22 1/2  
Guatemala..... 20 1/2 @ 21 1/2  
Java..... 24 1/2 @ —  
Mandarin..... 20 @ 21  
Ground, in cs..... 25 @ —

FISH. Sack'd Dry Cod..... 5 @ 7  
Boneless..... 8 1/2 @ 10  
Eastern Cod..... 7 @ 7 1/2  
Salmon, bbls..... 9 00 @ 10 00  
Hf bbls..... 4 50 @ 5 00  
2 lb cans..... 3 00 @ —  
Pkl'd Cod, bbls..... 22 00 @ —  
Hf bbls..... 11 00 @ —  
Mackerel, No. 1..... 15 00 @ 16 00  
Hf Bbls..... 3 00 @ 3 25  
Ex Mess..... 3 50 @ 4 00  
Pkl'd Herring, bx 30 @ 35  
Boston Mkt'd Hg..... 40 @ 50

LINE, STK CRUZ. Lime, Stk Cruz..... 2 00 @ 2 25  
bbl..... 2 00 @ 2 25  
Cement, Rose-ale..... 2 75 @ 3 50  
Portland..... 4 75 @ 5 50  
Plaster, Golden Gate Mills..... 3 00 @ 3 25  
Land Plaster..... 10 00 @ 12 50

SALES. Ass'td sizes, keg 3 25 @ 4 00  
Japan, 1st quality..... 25 @ 35  
2d quality..... 25 @ 35

SOAP. Castle, lb..... 10 @ 10 1/2  
Common brands..... 4 1/2 @ 6  
Fancy brands..... 7 @ 8

SPICES. Cloves, lb..... 45 @ 50  
Cassia..... 25 @ 25  
Nutmegs..... 85 @ 90  
Pepper Grain..... 15 @ 17  
Pimento..... 15 @ 16  
Mustard, Cal..... 1 50 @ —  
SUGAR, ETC. Pkl'd Cube, lb..... 13 1/2 @ —  
Circle A crushed..... 13 1/2 @ —  
Pine crushed..... 13 1/2 @ —  
Granulated..... 13 @ —  
Golden C..... 11 @ 11 1/2  
Hawaiian..... 10 @ 11  
Cal Syrup, kgs..... 72 1/2 @ —  
Hawaiian fine..... 25 @ 27

TEA. Young Hyson..... 35 @ 50  
Moynoe, etc..... 35 @ 50  
Country pckd Gunpowder & Imperial..... 50 @ 60  
Gate..... 35 @ 35  
Foo-Chow O..... 35 @ 60  
Japan, 1st quality..... 40 @ 50  
2d quality..... 25 @ 35



## Nurserymen.

**FRUIT AND ORNAMENTAL TREES,**  
Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
516 Battery Street,  
P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

## FRUIT, EVERGREEN, NEW AND RARE TREES.

BRIGGS' RED MAY PEACH,

THE EARLIEST PEACH IN THE WORLD.

CALIFORNIA FAN PALM,

(Pritchardia Filifera.)

THE FASTEST GROWER AND MOST HARDY OF ALL PALMS.

FLOWERING PLANTS AND FLOWERING BULBS.

For a Complete List send for a Catalogue. Address

JOHN ROCK, San Jose, Cal.

**TREES, TREES AND PLANTS,**

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG & CO.,

Nos. 6, 8 and 10 J Street, Sacramento.

200,000

Australian Gum Trees For Sale,

—AT—

STRATTON'S GUM TREE FOREST NURSERY,  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

JAS. T. STRATTON,  
East Oakland, Alameda County, Cal.

## HANNAY BROS.' NURSERY, SAN JOSE, CAL.

FRUIT, SHADE AND ORNAMENTAL TREES, APPLE, PEAR, PLUM, CHERRY, PEACH, APRICOT, ALMOND, QUINCE, OLIVE, FIG, GRAPEVINES, AND SMALL FRUITS.

EUCALYPTUS, CYPRESS, PINE, ACACIA, PEPPER, ELM, POPLAR, ETC., ETC.

Our Trees are well grown and healthy, and those wishing to plant largely will study their own interests by giving us a call before purchasing elsewhere.

HANNAY BROTHERS.  
P. O. Box 32.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor.

CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

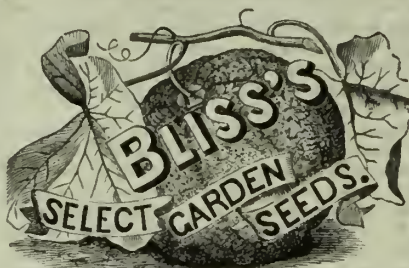
**LOS GATOS NURSERIES,**  
S. NEWHALL, Prop'r., - - - San Jose, Cal.,  
A large and general assortment of

**Fruit and Ornamental Trees,**  
Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stalky fruit trees a specialty. Address,  
S. NEWHALL, - - - San Jose, Cal.

**SQUILLS,**  
Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

## Four Grand Prize Medals

AWARDED OUR EXHIBIT  
AT THE CENTENNIAL.



Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—128 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, B. K. BLISS & SONS,  
34 Barclay street (P. O. box 5,712), New York.

**SEEDS**  
Our Combined CATALOGUE for 1877  
OF  
**EVERYTHING**  
FOR THE  
**GARDEN**  
Numbering 175 pages, with Colored Plate,  
**SENT FREE**  
To our customers of past years, and to all purchasers of our books, either  
Gardening for Profit, Practical Floriculture,  
or Gardening for Pleasure,  
(Price \$1.50 each, prepaid, by mail.)  
To others, on receipt of 25c.  
Plain Plant or Seed Catalogues, without plate, free to all.  
*Peter Henderson & Co.*  
Seedsmen, Market Gardeners and Florists,  
35 Corlandt St., New York.

## One Million Pear Seedlings,

From two to three-sixteenths of an inch in diameter; well branched roots, just the thing for grafting. Sent by mail, securely packed, postage paid, for five dollars per thousand, or delivered at the express office here, boxing free, at two dollars per thousand. Pear root-grafts made to order, five dollars per thousand. Terms, cash.

HUNTER & BREWER, Springwater,  
Livingston Co., New York.

## PETALUMA NURSERIES.

Established - - - - - 1860.  
We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an over-stock of Pinus Insularis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Arancaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address,  
WM. SEXTON, Petaluma, Cal.

**TREES**  
300,000 Fruit  
250,000 Evergreen  
250,000 Greenhouses  
Hedging Plants, etc.  
Three Catalogues Free. 25d Year. 40d Acres. 13 Greenhouses.  
STORRS, HARRISON & CO., PAINTERVILLE, LANE COUNTY, OREG.

**Trees, Plants, Bulbs.** Fall Price List and Bulb Catalogue GRATIS. Address, F. K. PHENIX, Bloomington Nursery, Ill.

## Seedsmen.

### R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application.  
My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

**Trees, Plants.** Spring Lists free. F. K. PHENIX, Bloomington Nursery, Illinois.

## SEEDS.

## SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth } Sweet Corn.  
Stowell's Evergreen  
Mexican Sweet, New

Early Canada } Yellow Flint Corn.  
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe  
White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco.

A New and Delicious Fruit.

## THE DIOSPYROS KAKI,

KNOWN AS THE

Date Plum, or Japan Persimmon.

BEAUTIFUL IN COLOR,  
DELICIOUS IN FLAVOR,  
MAGNIFICENT IN SIZE.

Average Weight, One-half to One Pound Each.

Four Varieties, Warranted Genuine, and will Bear in from One to Three Years.

Grafted and Reliable Stock Only.

PERFECTLY ADAPTED TO CALIFORNIA, AND NOW GROWING IN SANTA BARBARA, SAN FRANCISCO AND SONOMA COUNTIES.

"Its introduction will be a boon to our country."  
J. M. RODGERS, Admiral U. S. N.

"A magnificent fruit."  
J. C. WATSON,  
Commander U. S. Navy.

"Worthy to be ranked with the peach and pear of California."  
P. V. VEEDER, D. D.,  
Tokio, Japan.

Fruit on exhibition, and Trees, Gums and Seeds for sale by REV. H. LOOMIS, at R. J. TRUMBULL'S Seed Store, 421 Sansome street, San Francisco. Send for circular.

## JAPANESE PERSIMMON.

Just received and For Sale, a choice selection of Trees, 3 and 4 years old, of this new, rare, and Valuable Fruit.

SOME OF THIS STOCK HAS BEEN GROWN BY SHINN & CO., NURSERYMEN, NILES, ALAMEDA CO., CALIFORNIA, FROM SELECTIONS OF THE CHOICEST VARIETIES KNOWN IN JAPAN.

Other portions of the stock now offered is from an importation made by that enterprising firm this season, of the variety known as the SEEDLESS PERSIMMON. Both (the California grown and the imported) are in every respect reliable.

The former will have the preference with experienced fruit growers, as being already naturalized and sure to bear transplanting. Price, for the California grown, \$1 each; for the seedless, \$2 each. Samples can be seen and orders given at 317 Washington St.

GEO. F. SILVESTER, Seedsmen, S. F.

## BULBS SEEDS TREES

SEVIN VINCENT & CO.,

Wholesale and retail dealers in and

Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. Trade price list on application.

\* \* We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,

607 Sansome street, S. F.

P. O. Box 1023.

**SPANISH CHUFA**  
Address  
L. L. BEQUETTE,  
Downey City, Los Angeles County, Cal.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

### MUTUAL PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76. \$6,202,435.00	\$136,622.18
Less Amount Canceled..... 435,419.00	9,568.38

Amount in force, Dec. 31, '76. \$5,767,016.00	\$127,053.80
Losses paid.....	\$16,330.00

### CASH PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76. \$3,005,935.00	\$71,805.16
Less Canceled and Expired..... 1,587,240.00	28,585.16

Amount in force, Dec. 31, '76. \$2,018,695.00	\$43,280.00
Losses paid.....	\$12,718.71

### OFFICERS.

J. D. BLANCHARD.....	PRESIDENT
I. G. GARDNER.....	VICE-PRESIDENT
G. P. KELLOGG.....	TREASURER
A. W. THOMPSON.....	ATTORNEY
FERD. K. RULE.....	SECRETARY

### TRUSTEES.

J. D. Blanchard.....	San Francisco
G. P. Kellogg.....	Salinas
I. G. Gardner.....	San Francisco
Chas. Laird.....	Salinas
Uriah Wood.....	San Benito
A. B. Nally.....	Santa Rosa
A. W. Thompson.....	San Francisco
A. D. Logan.....	Colusa
I. C. Steele.....	San Mateo
G. W. Colby.....	Butte County
A. Wolf.....	Stockton
C. J. Cressey.....	Oakland
J. C. Merryfield.....	Dixon
E. W. Steele.....	San Luis Obispo
C. S. Abbott.....	Monterey
Dr. T. Flint.....	Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated accordingly to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

### OFFICERS:

PRESIDENT.....	GILBERT W. COLBY.
MANAGING DIRECTOR.....	C. J. CRESSEY.
CASHIER.....	ALBERT MONTEPELLIER.
SECRETARY.....	F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.



## Webster's Dictionary.

10,000 Words and Meanings not in other Dictionaries.  
3,000 Engravings. 1,840 Pages Quarto.

### FOUR PAGES COLORED PLATES.

"THE BEST PRACTICAL ENGLISH DICTIONARY EXTANT." *London Quarterly Review*, Oct., 1873. The sales of Webster's Dictionaries throughout the country in 1873 were 20 times as large as the sales of any other Dictionaries.

One family of children having WEBSTER'S UNABRIDGED, and using it freely, and another not having it, the first will become much the most intelligent men and women. Ask your teacher or minister if it is not so, then buy the book, and use, and urge its use, freely.

Published by  
G. & C. MERRIAM, Springfield, Mass.

U  
N  
A  
B  
R  
I  
D  
G  
E  
D



AVERILL MIXED PAINT,

MANUFACTURED BY THE

CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

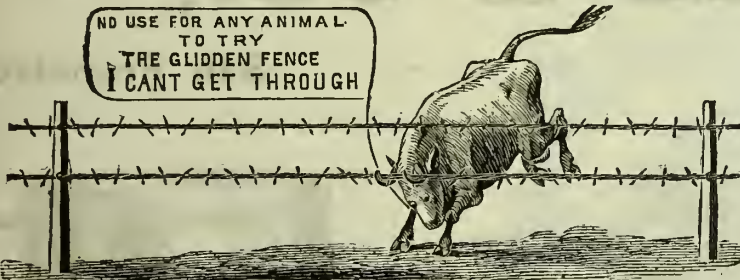
For Sample Cards and Circulars, Address

CALIFORNIA PAINT COMPANY,

27 STEVENSON STREET, SAN FRANCISCO.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

NO USE FOR ANY ANIMAL TO TRY THE GLIDDEN FENCE I CANT GET THROUGH



About one-half the cost of any other good fence, and can be put up in one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO., - - - SACRAMENTO, CAL.

Ask Your Grocer for Them.



TRADE-MARK.

Use None Other.

B. B. SCOTT, General Agent, - - - Sacramento, Cal

- References—Wholesale Grocers:
- |  |                               |                                  |
|--|-------------------------------|----------------------------------|
| Messrs. Tillman & Bendel, San Francisco, | A. P. Whitney, Petaluma,      | Adams, McNeil & Co., Sacramento. |
| Taber, Harker & Co., San Francisco,      | Luther & Schroeder, San Jose, | T. M. Lindley & Co., Sacramento. |
| Newton Bros. & Co., San Francisco,       | Chas. Jones, Oakland,         | Booth & Co., Sacramento,         |
| J. A. Folger & Co., San Francisco,       | J. H. Seymour, Los Angeles,   | H. S. Sargent, Stockton.         |

25 ELEGANT CARDS, 20 styles, with name, 10 cents, post-paid. GEO. I. REED & CO., NASSAU, N. Y. | YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

- |                                |                          |                 |
|--------------------------------|--------------------------|-----------------|
| DANIEL INMAN, (PRESIDENT).     | AMOS ADAMS, (SECRETARY). | THOS. FLINT     |
| R. C. HAILE, (VICE PRESIDENT). | THOS. UPTON.             | G. P. KELLOGG   |
| JOHN LEWELLING, (TREASURER).   | I. C. STEELE.            | W. L. OVERHISER |
| O. HUBBELL.                    | D. CAMPBELL.             |                 |

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

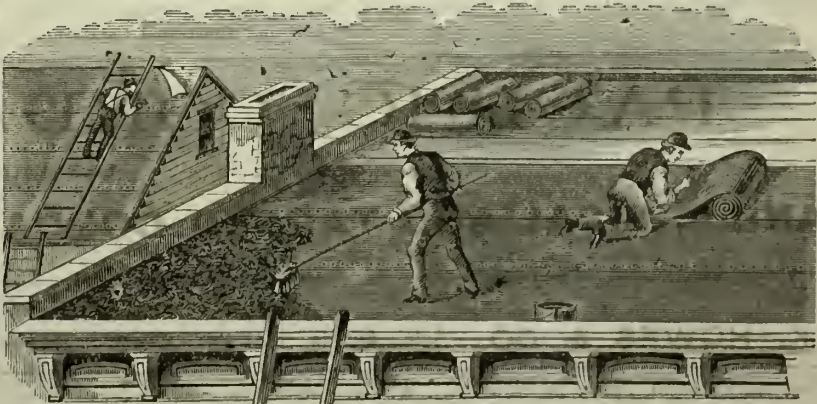
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

H. W. JOHNS' PATENT

ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS,  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.



# AGRICULTURAL IMPLEMENTS, FRANK BROS. & CO.,

Sole Agents for  
Walter A. Wood's

IMPROVED

Iron Mower,  
CHAIN RAKE  
—AND—  
SWEEP RAKE  
REAPERS.

WOOD'S

Imp'd Iron Wheel  
HEADER,

With Adjustable Reel  
Spring Balance, and runs  
with chain instead of belt.

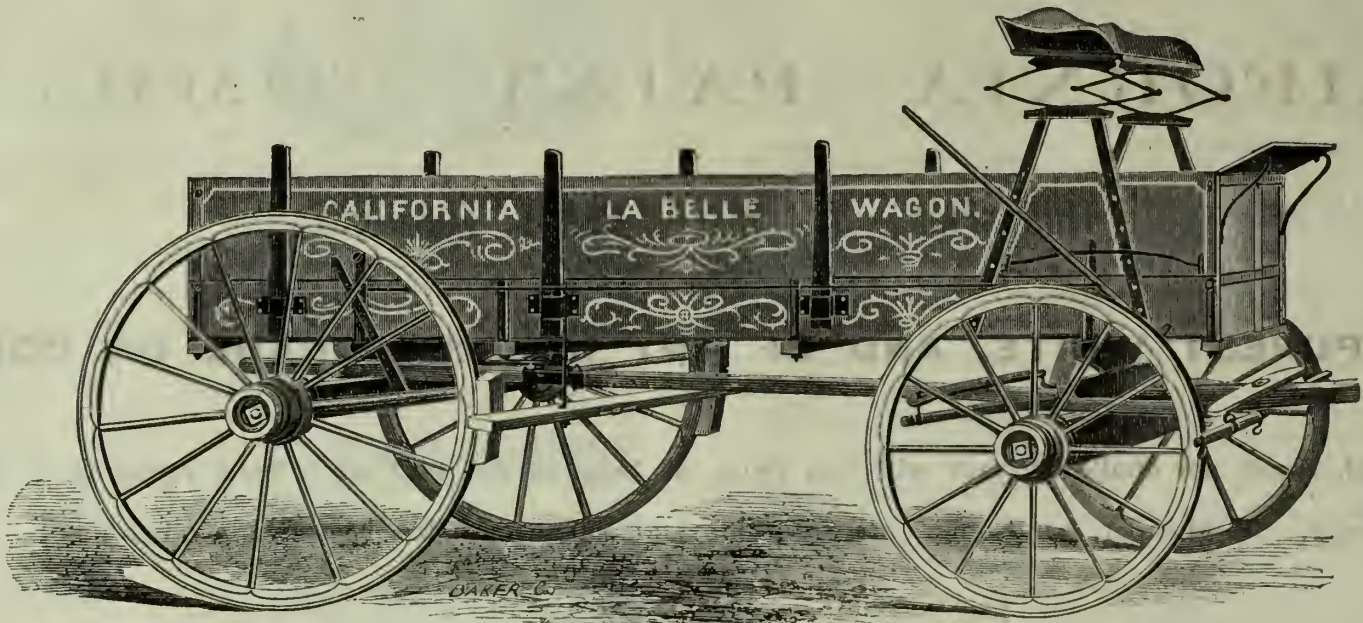
—AND—  
WOOD'S

HARVESTER

—AND—

SELF-BINDER.

A Complete Line of  
Improved Implements.



THE LA BELLE FARM AND FREIGHT WAGON.

Sole Agents for

Sweepstakes

Imp'd Thresher.

Coates's

LOCK-LEVER

—AND—

Victor Self-Dump

RAKES.

TIFFIN

Revolving Rakes,

Etc., Etc

A Complete Line of

WOOD AND STEEL  
GOODS, FORKS,  
RAKES, Etc.

Many Hundred of these Wagons have been sold the past Season, all giving Unbounded Satisfaction.

We also have a Large Stock of FISH BROS.' and WHITEWATER WAGONS, which we are bound to close out in the next 60 days at 20 per cent. below cost. ALL WAGONS WARRANTED. Call and see our goods before buying.

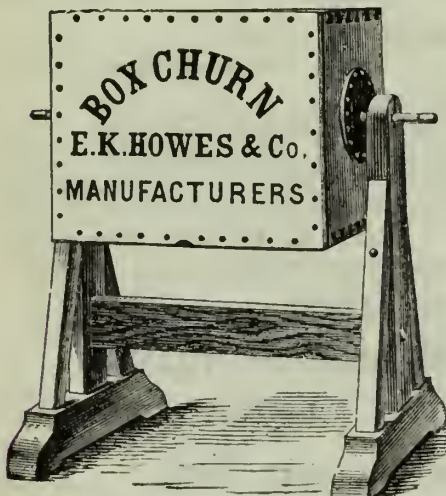
Corner Second and J Streets, Sacramento.

349 Market Street, San Francisco,

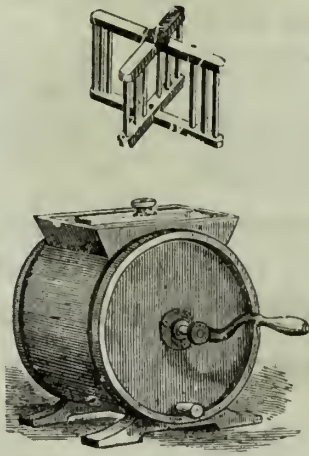
## E. K. HOWES & CO.,

Nos. 118, 120 and 122 Front Street,

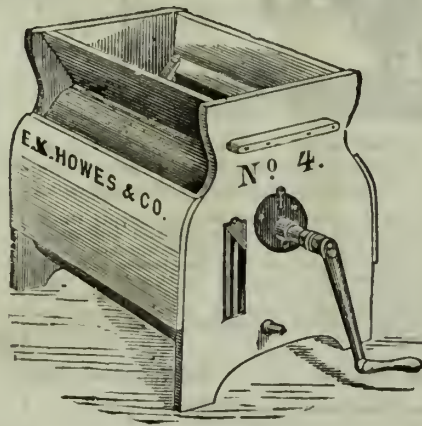
San Francisco.



Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

## PACIFIC CORDAGE COMPANY,

MANUFACTURERS OF

MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES & CO., Sole Agents for this Coast,

118 and 120 Front Street, San Francisco.

The Best Agricultural Paper in America.

PORTERVILLE, February 10th, 1875.  
TO THE EDITORS AND PUBLISHERS OF THE RURAL PRESS—  
Dear Sirs: I am going to change my residence, and I will take the RURAL PRESS again when I get settled, and will get back numbers. I can say without flattering you that it is the best agricultural newspaper in America, and I will use my influence in your behalf. Yours with respect,  
JOHN MCINTIRE, JR.

ANY person receiving this paper after giving an order to stop it, may know that such order has failed to reach us, or that the paper is continued inadvertently, and they are earnestly requested to send written notice direct to us. We aim to stop the paper promptly when it is ordered discontinued.

ALL SHOULD HAVE IT.—The last RURAL PRESS is worth the subscription for a year. Every farmer should have it. —Southern Californian, March 23d.

SANTA CLARA, CAL., April 6th, 1875.

MESSRS. DEWEY & Co.—Gents:—We have just received Patent No. 160,535, for J. T. Watkins & Co.'s Mammoth Road Grader, which was patented through your Agency. It is the neatest and best that we have ever received. We feel proud of it and thankful to you for the care and attention that you have given it, and when we have anything to do in that line of business, we will surely give you a call. Very respectfully,  
J. T. WATKINS & CO.

PACIFIC RURAL PRESS.—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the Grangers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribe at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid. —Mountain Messenger, Dec. 16th.





Volume XIII.

SAN FRANCISCO, SATURDAY, MARCH 17, 1877.

[Number II.]

#### Turning Squirrels to Profit.

If we could make these destructive squirrels of some commercial value we should take a long step on the way of their extermination. We are not sure that this matter has been sufficiently investigated. It seems to us that both skin and carcass can be utilized if some one can hit upon the right way to do it. Take the skins for instance. We propose to discover if possible whether they cannot be used by the glove makers. We are aware that local manufacturers have not done much with them, but we believe that the Eastern and foreign manufacturers, with their genius for the utilization of materials, could work them in to advantage. We have the names of a number of extensive glove manufacturers who exhibited at the Centennial, and we shall send them this issue of the Press and invite them to correspond with us if they are willing to make experiments with California squirrels, if dry hides are furnished them, and report to us if they find them of any value.

It is also possible that the meat of the squirrels may be put to profitable use and sold as canned meat. The Chinese in some places make good use of the carcasses. Many people tell us they have used them and they are far better than rabbits and are especially fine, when well dressed, at most seasons of the year. If canned and put upon the market in good shape we see no reason why they would not sell well. An Englishman assures us that the "canned squirrel fruit" would sell well in England, where squirrel pie is considered a rare delicacy.

There are other uses to which the parts of the animal might be put if the necessary skill and enterprise should be put to the task. If some manufacturing company should send an agent out here to study the question we think they could learn something to the advantage of their trade. There certainly seems a chance for some one to take the matter up and push it a little and get a system of trapping, preserving and selling or manufacturing. Such a solution of the question would keep down the increase of these varmints. The State could well afford to offer a premium on the first 100 tons of canned or pickled squirrel, on the first 1,000 squirrel skin gloves, portmonnaies, etc., on the first 1,000 squirrel tail brushes, dusters, etc. If we should succeed in interesting any manufacturer in making a trial of the skins we shall call upon our readers to furnish the material.

**How CALIFORNIA GRASS GROWS.**—It may surprise one or two people at the East who are somewhat skeptical concerning California greatness, to be informed that the grass grows so fast in this State that they have to rig up a mowing machine to cut a way through for the railway trains. We read in the *Stockton Independent* that Wm. G. Curtis, Esq., Superintendent of the Copperopolis railroad, has invented a mowing machine for the purpose of mowing the grass growing next to the rails of a railroad track. It is attached to a hand car and gets its motion by a series of pinion wheels from the motion of the car axles. It is arranged to cut a swath about nine inches on either side of the rail. A revolving reel, like that attached to a header, draws the grass to the knives, which get up a lively motion at a slow speed of the car. A track brush clears the rail of the mown grass. The grass grows so rapidly in this country that it is a serious impediment to railroad travel, as it grows over the track and produces about the same effect that grease on the rail would, causing slipping. Mr. Curtis's mower is calculated to keep down the grass next to the rail while the section men are engaged in uprooting it. This is also a tribute to California grass, that you have to knock it down before you can get a chance to dig it up. You have to cut it down and put a length of railroad iron on it, and then you stand some chance of getting it out of the way.

Information has been received at Winnipeg of the arrival of Sitting Bull at Wood Mountain, British possessions. He has 1,000 captured horses and mules.

#### Another Variety of Diospyros Kaki.

We give on this page another engraving of the *Diospyros Kaki* or Japanese persimmon, or the date plum, as it is described in Appleton's *Cyclopedia*. The dried fruit resembles the date in flavor, but it is much larger. Rev. Henry Loomis furnishes us with the following new statements concerning the fruit:

The wild and common variety differs from the *Diospyros Virginiana*, or American species, in being less astringent, and is quite hard when ripe. Its flavor is like that of a sweet apple, and the size and color are nearly the same as the persimmon of the Eastern States. It is very abundant in Japan and China, and keeps in the fresh state about three or four months.

The best varieties have but recently come to the notice of foreigners. They are found in the interior and in widely scattered sections of the country. Until recently they were mostly con-



JAPAN PERSIMMON—FLAT VARIETY.

sumed in the localities where they were grown; but the increased price realized at the open ports has brought them to general notice.

The natives have a strange taste in regard to all fruit, preferring it when hard and crisp rather than when soft and ripe. They eat the peach, plum and apricot in the green state, pickled in brine, as a relish with their rice. The recent effort of the government to introduce the foreign varieties is making a great change for the better in the fruits offered in market, and there seems also to be a gradual change in the taste of the people. It is a common sight to see the children in the street eating the green plums and peaches as they would confectionery.

The accompanying engraving represents the flat variety of the *Diospyros Kaki* (the "a" has the sound of "a" in far and the "i" an "ee" sound). It is more solid than the oblong variety, of a bright orange color, and will probably last in this climate until March. The oblong is larger and brighter colored, but does not keep so long in the fresh state.

During the past week Rev. Henry Loomis has received from Japan a consignment of dried persimmons—fruit like that illustrated in the Press last week. They are dried simply by sun heat and are rich in sugar. The flavor is very delicate, striking us as containing something of the fig and date combined. The fruit is large and forms a very desirable confection.

#### The Dhoura or Egyptian Corn.

In our issue of February 10th we answered a query concerning the Egyptian corn, and spoke of some experiments which had been made by Gen. Bidwell at his mill in Chico with flouring the grain. Gen. Bidwell sent some of the meal to Mr. Trumbull, at whose request the trial with the grain was made, and we have received a sample which we shall put to practical cooking tests and report in the future.

Additional information we are enabled to give at this time, in some notes on the subject prepared for us by Dr. J. S. Silver, who was so strongly impressed with the good qualities of the grain that he introduced it to Mr. Trumbull's attention, and the result was an importation of the seed. Dr. Silver writes as follows: Though not maize, dhoura, when growing, resembles maize and is cultivated like it. Instead of a cob, the grain clusters tightly around four or five spreading stems, like sumac. The

#### Berry Boxes and [Fruit] Baskets.

We heard lately that Geo. W. Swan & Co., of the Union Box Factory, in this city, had contrived a new machine for making berry boxes, which our readers use in such large quantities, and we made a trip to the factory on Monday to see what the improvement consisted in. About a year ago we described the huge knives which are used to shave off the thin plates of wood of which the berry boxes are made. This part of the process is unchanged. The "cut stuff" is still employed. The workman takes 60 thicknesses of this at once and passes it under a jig saw and at one cut turns out 60 pieces something of the shape of a section of the felly of a cartwheel, but wider. This piece has four scores or marks upon its outer edge. It is then ready for the sides of a berry basket. It is taken to the bending machine, which is a very simple contrivance. It works with a treadle. A square block comes down, catches the thin piece of wood and carries it down farther between two other blocks. Three sides of the square are thus held fast between the blocks, and the operator has but to slip in the straight piece of wood which forms the bottom, take a tack upon the point of his magnetic hammer, fold down the ends of the wood which rise above the blocks and drive the tacks through them, and the berry box is ready for the finisher to put the tin pieces upon the top. We do not expect to give a very good idea of the machine in the limited space we have at command. Our idea is simply to show that the manufacturers have so perfected their appliances that they can produce a box in the least possible space of time, and are thus enabled to furnish them cheaply. For instance, a man with this machine makes 2,000 boxes a day, while by the hand-bending which was used last year, he could make but 1,000. The pound boxes made as we have described are sold at \$5.55 per 1,000, without tinued tops, and with tinued tops they are sold at \$9 per 1,000.

Among other things noticed during our call at the factory was a new style of fruit basket, which seems to us very desirable. It is made of cut stuff three-sixteenths of an inch thick, with a square bottom of three-fourth inch pine. It is hooped with a strong wooden hoop and is very strong and firm. The Union Box Factory is now running full force and is turning out almost every description of wooden contrivance needed by fruit growers, beekeepers and others who have products to pack and market.

**PERSONAL.**—We have had a call during the week from J. C. Smith, of Sutter county, from whom we gained many suggestive points which will be of value to us hereafter. Mr. Smith reports crop prospects in his region fine, and with the usual spring weather very satisfactory results will be obtained. On the debris he speaks earnestly and convincingly. The people in defence of their homes insist that the debris must be cared for by those who make it, or the State must rescue the farmers from ruin. The matter will be pursued to the end, for it is a vital question. Mr. Smith deprecates extravagant and untrue statements about California. He has been here since 1849 and believes the facts are good enough without the exaggeration. He believes that this is a good State to gain a home in, but the one who comes to seek it must be prepared for disappointments and reverses such as overtake men in all parts of the world and must be content to labor diligently, confident that success will come at last. Of the way in which a young agricultural laborer must conduct himself to reach success we hope to present Mr. Smith's views at another time.

The Egyptian Finance Committee have accepted the proposals of M. de Lesseps, made in the name of the Suez Canal Company, to complete and work the canal between Cairo and Ismailia, provided the company be authorized to levy certain dues upon vessels passing through the canal. Nearly completed works were formerly abandoned for want of funds. By the execution of Lesseps's plan, large tracts of desert land will be reclaimed to cultivation.

The bill for compulsory education has been passed by both houses of the Ohio Legislature.



## CORRESPONDENCE.

### Potato Growing.

EDITORS PRESS:—We propose to say a few words on potato raising. The coming season we may not find potatoes a drug in the market, so that it would be cheaper to buy them than to raise them; but let them be ever so cheap, we had better at least raise our early supply. There is no reason why every farmer should not, the man of the plains as well as the river. We know this from experience. The mode is as follows: Let the lands be well plowed and put in good order. Mark out rows, say three feet apart. Drop the cuts and cover with about three inches of dirt with plow or hoe; if the latter, put on the harrow. Then cover the whole ground with straw from the old straw stack. If the straw is all burned up then you must do the next best thing you can and use the fresh manure from the stable. This answers as a mulching for the ground, and it will retain moisture enough to mature the crop. We have raised some of the best potatoes we ever ate in this way. We plant the Early Rose. There need be no plowing, hoeing nor weeding, so that the labor of putting on straw is compensated for in the saving of hoeing and weeding. It will pay to raise your early potatoes, especially when we have to pay from two to three cents per pound for our new ones. We get our early and late potatoes in this way, as they have kept good the winter round. Our communication is intended for those living on dry plains like the river.

This county is to harvest a heavy crop from all appearances. Wm. Ferguson.  
Sutter county, Cal.

### Hints.

#### Castor Beans for Gophers.

EDITORS PRESS:—The California gopher is a very mischievous pest in this section of country, and the most simple method of protecting all kinds of products from their depredations is to drop the castor oil bean into their burrows. And we plant a bean to each tree or valuable bush as we plant it out to save it from injury. The oil bean has nearly driven them from some of our alfalfa fields.

### Swine.

By nature, the hog is a cold creature and should be provided with a nest. If you watch their habits you will find, as a rule, that they prefer the heat of the sun to a shady grove at most any season of the year. One in moderate conditions is the most hardy. When fattened the solid pork they carry is of a cold nature, as but little blood flows through the meat. Where confined in close shaded pens with little nest, the improved breeds, like the Essex, with slight covering of hair, often take cold, stiffen up and die. Breeding sows confined in pens can have simple arrangements so constructed close by the nest, that may often save the young pigs from harm, by raising a shelf above the floor and close to the nest, about two inches high and from one to two feet in width. With a fine straw nest under this shelf, the little family soon learn to run under for comfort, and are thus protected from harm from overlying and sudden changes of the weather. These little attentions often pay by saving the lives of the young pigs. S. W. Jewett.

Kern County, March, 1877.

## FLORICULTURE.

### Floral Nomenclature.

EDITORS PRESS:—The animus for the remarks below is found in a letter which you publish from J. C. Lemmon, dated January 1st. In it he states that he has found a new flower and named it "*Gilia Parrye*," in honor of a lady whose name should be perpetuated because of "service to botany," etc. Friend Lemmon has followed a very common practice among botanists, that of naming flowers and plants for their discoverers, or rather for those whose scientific description of said flowers first appeared in print.

Now this common practice is just what I wish to protest against. And my reason for such protest is that such nomenclature to all who are not skilled and posted botanists, or who have not full, complete and numerous books of reference at hand is a hindrance and confusion.

I have at hand a catalogue of E. J. Bowen's seeds. In it he gives a long list of flower seeds, and many of them are named in accordance with the above plan. Take, for instance, such names as *Datura Wrightii*, *Gaillardia Richardsonii*, *Anagallis Eugenie*, *Helipterum Sanfordii* and others similar, bearing the names of persons. If all were provided with botanics and could refer to them at once (provided the names in different authors did not differ) we could at once tell just what sort of plants they are. But what idea of a *Gilia* can one form by being told that it is a *Parrye*? Or of a *Datura* from the annex *Wrightii*?

The point I wish to set forth is this: That the interest of the people, and full as much of science, would be better served by bestowing upon new plants (and upon many old ones), names derived from some peculiarity in form, color or habit of the plant. Take, for instance, the *Didiscus cerulea*; one who has any acquaintance with Latin at once imagines a blue flower; or *Sanvitalia procumbens*—the name proclaims it as a creeper, and perhaps just what I or you want; or *Magnolia grandiflora*—that has a magnificent flower sure.

Why cannot our dictionary of flowers be so amended that each name will carry with it an idea and not be a mere personal mention. Or, if this be impracticable, why not pursue this course in future, so the mere mention of the plant may show its distinctive feature without necessitating a costly library or still costlier technical education. E. C. PARKER.  
Lake county, February 17th, 1877.

## THE STABLE.

### The English Box System.

EDITORS PRESS:—One of the greatest druggeries on a farm is the manure question when many horses are kept. Each day a large pile of manure has to be removed, and generally it is piled against the outside wall of the stable, making an unsightly heap, taking up much room, hatching hosts of insects and after a year or so has to be removed elsewhere to make room for more. Though I have seen many stables, both rich and poor, here, those of our largest ranches down to the hovel made of shakes, I have never seen any planned on the English box system. It is true, it is for some reasons not advisable for livery stables, nor for the stables of fine carriage horses and those horses whose coats always require the finest shine and bright appearance; nor would it do for those who are not able, from circumstances, to erect either substantial or commodious buildings; but there are many who are able and do build good stables for their farm horses, (as the breed is more improved generally throughout the stable, this will become more necessary,) who do not avail themselves of this plan, and I have found by conversation that all with whom I have spoken have been ignorant of any such system. When I built my barn I built it with the intention of using it with my brood mares and their colts, and I made each box large enough to hold mother and colt comfortably. Each animal is in a loose box by herself, and to work the system properly they should never be tied. Of course a few hours at a time makes no difference. As the animals have their freedom in their own boxes they turn about constantly, and consequently they drop their dung wherever they may be standing. After a horse gets accustomed to being loose he takes full advantage of it. He eats at his manger until satisfied or until nothing is left, and he naturally turns exactly the other way, to rest either lying down or standing. The manure is dropped evenly or tolerably so all over his box, and as weeks go on he accumulates the heap under his feet. In making his bed, the first layer put down of bedding may be moderately plenty, but the next day and forever after it should be only just enough to cover the droppings of the previous day and no more. That will keep him clean and the less bedding put down, consistent with moderate cleanliness, the better. On this depends the whole success of the system. If too much be put down it allows a certain amount of air to be standing in the dung and the whole begins to ferment and heats and is very unhealthy. The horse walking about keeps the whole level and compact. I have just removed the dung from under four of my mares and I found it, from top to bottom, solid and as cold and fresh smelling as if only one day old.

The system has many advantages, and these are a few: It saves a great deal of labor in removing each day's excrements. It saves a great deal of bedding. I use only what the animals leave in their mangers each day. When the manure is finally removed, it is just as easy to put it into a wagon, cart it away and use it advantageously and it almost compels the removal of it completely away from the steading. The animal gets better rest by being allowed to rest as he chooses. The bed is softer and drier than being bedded on the ground, and the urine is absorbed by the manure instead of by the ground, where it afterwards decays and gives rise to injurious gases and obnoxious smells. And lastly, but to any farmer who appreciates the value of manure, not by any means the least, it remains perfect in strength and purity, not having been washed by rains and baked by the sun until everything of any value is gone. The bulk to be removed is only about one-third the size that it would be on the ordinary plan, as very little of it is composed of litter and bedding. CIRENCESTER.

Hanford, Tulare Co., Cal.

PEANUT OIL.—The supply of peanuts is so great that they may be purchased as low as five cents per pound, and at this price peanut oil can be made at a considerable profit, even taking into consideration the small percentage of oil peanuts yield. African peanuts are said to yield about one-half their weight when cold-pressed, and when heated and pressed, the yield is even greatly increased.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Value of Pure Bred Poultry to Farmers.

EDITORS PRESS:—Raise good stock or none, that is my motto, and I think if many Western farmers would only keep this fact in view you would see ten flocks of thoroughbreds where you only now see one. The point of it is, they don't take any pains with their fowls. They are not fed regularly, they do not receive any care or attention, and last, but not least, they are not the right kind of stock. On most of the farms are kept the common grade of fowls, or what is more properly the name, "Dunghills." There are no new breeding cocks obtained every year or two and the result is, a large flock of small hens, no eggs in the winter and but few in the summer.

Now, why not make your poultry pay as well as other things on the farm. I say if properly managed there can be as much money made from chickens as anything of the same cost on the farm. To be true there is not much time required to care for a flock of chickens, and the wife could profitably employ two hours a day to this branch as well as not. In the first place, how shall we begin. If in the spring, let us write to some breeder and find out the varieties he breeds, also their different habits and customs, and if it is large fowls we wish, both for eggs and table use, let it be known. Tell him we want to procure a setting or two of eggs and desire his price.

Upon receiving a reply you can judge for yourself and order the eggs sent to your address by express. If desired, the breeder will give you a few useful hints as to the rearing, care, etc., of your first flock of thoroughbreds. In a few months after the eggs hatch, you will notice the difference between them and your mongrels. The one flock will be bright and active, all of an even color and shape, and if you have the least bit of taste for beauty and symmetry you will never more raise the common grade of fowls, say nothing of the superior qualities of the thoroughbreds for eggs, size, etc.

We recommend the Brahmas or Cochins for size, as they frequently raise the scales at from 20 to 25 pounds per pair. The Leghorns or Hamburgs are fine layers and non-sitters. Reno, Nevada. I. P. LORD.

### "Douglas Mixture."

EDITORS PRESS:—In the RURAL of Dec. 23d, 1876, I noticed an article from M. Eyre, of Napa, regarding roup and its cure. 1. One of the things to be used was the "Douglas mixture" freely in the drinking water. Will you be kind enough to explain through the PRESS what this "Douglas mixture" is, and how to use it, that is, what quantity to use, etc.? 2. And also please tell me whether you think a small quantity of sulphur given occasionally to hens will prevent them from having diseases, or whether it is hurtful or not?—SEVERAL READERS, Haywood, Alameda county.

1. One pound sulphate of iron (green copperas or green vitriol the storekeepers call it; price, 10 to 15 cents per pound), and one-quarter ounce of sulphuric acid dissolved in four gallons of water. I keep it constantly on hand in an old five gallon tin coal oil can. Each day add to the soft food for 100 fowls one-half pint of such mixture. The causes of the disease which this prevents have been given in the PRESS; the symptoms are fully described in another query in this issue. 2. It is beneficial, say twice a month, but the quantity should be small.—M. E., JR.

### Poultry Diseases.

EDITORS PRESS:—Some of my chickens and those of my neighbors are singularly affected. Their combs and gills first commence to turn black; then the chickens mope around, head down and hunched up, refusing food. Then the head swells up and closes the eyes, sometimes completely, and the fowl dies. What is the matter and what the cure? What will cure diarrhoea in fowls, by which some of mine have died?—E. C. P., Lake county.

Two diseases are here described, a species of cholera and roup. The cures for both were given in PRESS of February 12th, 1876. The modes in which to avoid colds, snuffles, swell head and roup, and also enteritis or cholera have been repeated twice in the PRESS. They are given in full in my pamphlet, pages 7 and 9, and also cures for those afflicted. But an ounce of prevention is worth many pounds of cure. If fowls are bred in and in poor stock purchased, they will be subject to disease on every occasion; but with good healthy stock and a few simple precautions they will remain almost entirely exempt from disease.—M. E., JR.

## THE DAIRY.

### Packing Butter and Cheese.

It is an excellent thing sometimes to know what dealers' ideas are of the manner in which products should be prepared for the markets, because these men sometimes gain lessons from their experience which the producer may profit by. Mr. P. D. Mowell furnishes us with ad-

vance sheets of a circular which he has prepared for dealers, doubtless after consulting them upon points which they consider desirable. We quote as follows:

### Butter.

Too much stress cannot be laid on the importance of having all dairy produce in an attractive and presentable condition when ready to be offered for sale. The article in and of itself may be unexceptionable as to flavor, color, etc., and yet be slighted by purchasers, because of not presenting an attractive appearance to the eye. Assuming that your butter is all it should be in quality, it is essential that it be molded into full-edged, clean-cut rolls; and that just the right quality of muslin should be used. In wrapping, the cloth should always fully cover the side of the roll, leaving no part of the side of the roll bare; not cut too short nor too long, and folded just enough over the top so as to give the roll a "dressy" appearance. About three-eighths of an inch is the proper length to be folded, and that in regular plaits, equidistant and neatly done. The bottom of the roll should be covered also, so as to allow no soilage to the butter from the bottom of the box. These minor details may look like small matters, but they are much more important than dairymen are generally aware of. Much of the butter damaged by "melting down," would have been in order had the rolls been properly protected with the cloth—indeed, it is rare to see a box of butter melted down where the rolls are properly packed. Neatness—scrupulous and exact is indispensable. If a stamp is used avoid one that gives a roll a "flat" appearance. The stamp should enhance the appearance of the butter. The box should also look bright and clean, especially on the inside. Redwood boxes are not desirable, for besides being liable, when new, to stain the butter, the boards of which they are made split easily, and the dust is certain to find its way through the smallest crack. Boxes should be scalded thoroughly immediately before use as well as immediately after. To give the box a neat appearance paint it as often as occasion requires, if not made of maple or ash.

Never use a poor box, as the bottom is liable to fall out in handling. Be very careful to never send a box to market that has the slightest crack on the cover, as, in transporting, boxes are piled five or six high, and should the upper boxes leak, the brine will be sure to find its way into every crack in the cover, and leave a dirty streak on the top of the butter.

In preparing butter for pickling, it is a great mistake that it must be made extra salty; if your brine is right the butter will keep. Be sure your barrel is well lined and clean; put in your rolls so they will be tight, but not mashed out of shape; always, as in fresh butter, cover the side of the roll fully with the cloth, otherwise your rolls will stick to each other and often break up; be sure you place a cloth over each layer of butter as it goes into the barrel, so as to prevent rolls from "floating;" this also prevents the top of one roll and the bottom of the other from sticking. Never leave the barrel with the plug out, as it admits dust into the barrel when refilling with brine; if dust settles on the top of the rolls and cannot be removed, it causes a loss, and often prevents a sale that might otherwise have been effected.

Store packers should very carefully assort the butter that comes to them, so as to have but one color and quality in a package. Butter uneven in color always sells badly; do not mix new and old, or white and yellow, when avoidable. In packing butter in kegs or barrels, the packages should be numbered or dated by proper marks, as they are put down by dairymen, so that the seller may know which package to open to find the quality, color, etc., wanted. It is not generally known that it is very important that the dairymen should keep his salt in a clean and pure place. Salt absorbs moisture, and with it any bad flavors which it may have acquired. Use only the very best salt obtainable. Use no fresh water to wash your butter or wet your cloths with. It tends to soften it; it extracts the flavor. In fact, it takes out qualities that cannot be replaced. Use only the strongest and sweetest brine you can get.

Finally, send by a conveyance where your butter will be handled carefully and kept out of the sun. Equally as much care should be taken in preparing firkin butter and pickled roll as in preparing fresh butter; and anything that can possibly give a stain or soiled appearance should be avoided. If you pack poor butter, it will not have improved by keeping, and it will not be reasonable to expect a good price for it when sold.

### Cheese.

In regard to cheese, very much depends on its "style," but very poor cheese can be made to present an attractive appearance. Thousands of cheeses are sent to this city annually, and sold at from eight to ten cents per pound or less, and many rot altogether and dealers are obliged to dump them into the bay, which, had they been properly made, would have sold for from 12 to 15 cents per pound. Whatever you do, don't attempt economy by employing low-priced cheese makers. Men who can make an extra article of cheese are very scarce, but whatever you do, get a good cheese maker, if you have to send to Europe to get him. Aim to have your cheese uniform in quality, appearance and weight, and let the shape and general appearance be as nearly perfect as possible. Sent in tuing sacks, cheese is kept clean, and if sure of careful handling, it is the best way to send it.



## THE SWINE YARD.

### The Berkshire Association.

We receive notification from the "editor of the Berkshire Record, Springfield, Ill.," that pedigrees are now being received for the second volume of the Record; he is ready to send entry blanks, etc., to all Berkshire breeders.

We notice that the Association is gaining a foothold in England. Heber Humfrey, the Vice-President for that country, writes in favor of the Society to his countrymen as follows: "Our Berkshire breed is handed down to us by the last generation as a hardy, handsome, thrifty race of swine; and whatever the ambition of some may be in the way of progress, it seems the positive duty of all to try and keep them up to the standard as we found them when we first became breeders."

"If we go back to the early part of the present century, we have the authorities leading us to believe that our breed originated from swine sporting themselves in a variety of positive colors and many neutral tints; that they were flat-sided and lop-eared, rejoicing also in long legs, long necks and long noses. Relying to a certain extent on traditional lore, I must take exception to quite such sweeping descriptions of their ancestors so short time ago. Whenever we date the event, the improvement is so decidedly in our favor, that it must be worth some united effort to keep them from degenerating towards anything so hopeless."

"I would venture to submit, that if, through the difficulty of gaining information, we make our selections at hazard in the extremes of non-relationship, we risk a loss of the quality and appearance which is now our admiration; and still more certainly if we make our selections in the extremes of close relationship, shall we be risking the loss of hardy constitutions and many other useful qualities."

"A system of detailed pedigrees as published in the American Berkshire Record would place the desired information within the reach of all whose arrangements in the matter are likely to have any amount of influence on the future stock of Berkshires in the country."

## ARBORICULTURE.

### The Walnut.

EDITORS PRESS:—My attention having been called to a query put to the PRESS by a subscriber friend of your paper, and thinking of being able to give him and also your readers some useful information on this stately member of the fruit and forest kingdom, the walnut, I came to the conclusion to write you a longer reply than a simple query generally calls for.

Walnut trees are cultivated for three distinct and very different uses, and from that diversity of uses arises a difference of varieties to be planted. For, if the main object in view in planting walnut trees is to obtain nuts for the table, certain varieties have to be selected in preference to others; so it is if the nuts are raised for their oil—and in some countries this oil making is a most important branch of commerce; while still other varieties might be resorted to if walnuts are grown for their timber or wood. Your correspondent, like most of your readers, I suppose, had reference to the nut-bearing qualities of the walnut as a nut for the table.

I believe that you were right in classifying the Paradise walnut as a variety of the Brazil nut, and you were no less correct in your appreciation of that nut when compared to the fruit of the *Juglans regia* or common English walnut. As to the Persian walnut, it is likely some smart nurseryman thought the above name too common, and gave it that of its native land, Persia. The *Juglans regia*, which is a contraction of *Jovis glans* (Jove's tassel), is a native of Persia, Asia Minor, Caboul and Cashmere, near the Caspian sea, where it grows wild in the mountains. It was introduced in Europe, in Greece first, from time immemorial; and before the discovery of America it was the only species of that family known in Europe. The main varieties of the *Juglans regia* cultivated in the latter country are:

Common walnut, called in this country English, and by some Persian, walnut. Very productive nuts, partly oval, partly round, the very kind imported from Europe in the United States and kept in every fruit store. This nut contains much oil, but it is a slow bearer, and trees of that species will not commence to bear before being at least 10 years old. Some of them around Nevada City already 18 years old, never bore any yet.

Soft-shell or Mesange (tit-lark) walnut. This variety derives its name from its thin-shelled nuts, so thin and soft that this little bird, mesange or tit-lark, bores a hole through the shell with his bill to eat up the kernel inside. This nut is oval, very full and yields much oil.

Præparturiens (fertile) walnut. A new and most valuable variety, planted in France for the first time in 1837. It bears much earlier than all

other varieties, generally after being five or six years old; then the tree reproduces itself exactly from the seed. The Præparturiens got at once very popular on account of those qualities, and as an early bearer it is held in great favor in Europe. Its nut is of the same size and shape, oval-round, as that of the English walnut. Very productive.

Cluster walnut. The main peculiarity of this sort is that the nuts hang up on the trees in clusters of 15 to 20.

Large fruit walnut (*Juglans Maxima*), known, too, under the name of the jeweler's nut. Not very productive, but bears immense nuts, almost round. They are generally eaten up when fresh, they losing half their flesh when dried and containing but little oil. The jewelers employ their shells to make nice little boxes for ladies, and used as a lady's companion to keep gloves in, or needles, thread, scissors, etc.

Angular walnut. Very good nut to eat, but the kernel is so deeply set into its thick shell, like the American black walnut, that it is quite a job to extract it out. It furnishes abundantly a most excellent oil. This species, which gives the tallest and most vigorous trees of the whole family, is cultivated mainly for its wood, much in demand among cabinet makers.

Late walnut (*Juglans serotina*). A very desirable variety to plant where late frosts are rather frequent, it blooming only in the latter part of June. The nuts are rich enough with oil.

The common walnut and tit-lark are those that yield the most oil. The large fruit walnut produces the nicest wood, the common walnut and Præparturiens, the best nuts for market.

There are three species of walnut native of the United States, viz.: *Juglans nigra*, or black walnut; *Juglans cinerea*, or butternut; and *Juglans fraxinifolia*, or ash-leaved walnut. This list does not include the various species of hickory-nuts.

By what precedes, any of your readers that would be at a loss what varieties to select will see that the best varieties recommended for their fruit are the common English walnut and Præparturiens.

Walnut trees do not need to be grafted, as they reproduce themselves alike from the seed. Grafting, however, is resorted to in many cases, and for different reasons; for, excepting the Præparturiens, a grafted tree bears sooner and larger crops. The French graft on the angular nut, the most vigorous grower of the whole family. The American black walnut is a splendid stock to graft on. To obtain seedlings, the nuts must be planted as soon as they fall from the trees. When planted in the spring, the nuts have to be kept in sand in a dry cellar during the winter. It is the same with almonds and chestnuts.

The walnut likes a clayish, sandy soil, even rocky, if it holds moisture well. It can be grafted, like the grapevine, on the root, but still better, ring-budded (see No. 2, RURAL PRESS, 1876) when young. Common shield-buddings do not succeed well on the walnut, and cleft-grafting only occasionally. Ring-budding is done at the time the trees are full of sap, in July, and as soon as matured, wood of the year's growth can be procured. When done at that time of the year it never fails. I do not use any wax or mastic, though some people do, but a narrow strip of old rag to keep the bud secure. It is preferable to let the head of the stock remain on, that is, the bud in a dormant state, till spring, for, if allowed to grow right away, it would make, at the best, but a short growth during the remaining months of summer, and trees so obtained are far from having such a straight and nice body as those started out in the spring.

It is a pity that so many black walnuts have been planted in California, a variety most common in the States, and whose nuts, hard as rock, require a sledge-hammer to crack them, or a quartz-mill stamp to extract the oil from the kernel.

Having, I hope, answered your query most satisfactorily, I remain yours, very truly,

FELIX GILLET.

Nevada City, March 7th, 1876.

### More About the Præparturiens.

We are going to take a liberty with Mr. Gillet's favors, as we think for the benefit of our readers. The explicit and rare information which he gives above will abundantly compensate for any personal benefit which he may gain from what we shall print below. He writes us a personal letter, "not for publication," from which we shall print several paragraphs on our own responsibility. He says:

"I did not say so much as I ought, or wished to have said, on the excellent qualities of the Præparturiens; for, being the introducer of that valuable variety in California, if not in the United States, and expecting to have trees for market in a year or two, it might have looked too much as a free advertisement on my part—a thing I am not after when writing to your paper on any topic whatever. However, between you and me, let me tell you how I came to get this Præparturiens variety and why I keep no other."

"When, six years ago, I sent to France for trees to stock the place I was starting with, I addressed myself to a large and old nursery of Annover, of two centuries' standing, and left the selection of varieties to the nurseryman himself, telling him, however, to send me the very best kind of fruit and the nicest trees, and

allowing him to charge me 50% more than catalogue prices. Though having for sale trees of all the varieties enumerated in my communication, he did send me but Præparturiens trees; I having stated, too, that I wanted nuts for the table. I had two trees, one I planted on the south side of the hill, the other on the northern side. The former one did bear last year, though both had nuts on for the last four years, but it was the first time that one of them did have male bloom. This year both have lots of male buds, so they will bear nuts this year, and keep on bearing more and more every year. People about here have English walnuts 18 years old, one foot in diameter, but not a nut yet; they wish they had Præparturiens, for trees of that size and age ought to bear from four to five bushels of nuts."

"I planted every nut I had last fall; but I will send you some this fall so that you will be able to see for yourselves what kind of a nut is the Præparturiens. I have had many inquiries about nut trees, even from the Eastern States, since the publication of my little essay on 'Nuts' in the PRESS a year ago. I see, too, that all over the State people, little by little and one after another, are finding out, to their dismay, that chestnuts grown on seedlings (French and Italian chestnuts) are far from being so large and nice as the original one, and somewhat bitter. I knew that when I sent to France for 'grafted' chestnut trees and got the two best recommended sorts—*Marron de Lyon* and *Marron Comble*."

## THE VINEYARD.

### The French and the Phylloxera.

We have given from time to time items pointing to the results of the French experiments in destruction of the phylloxera. We now find in *Nature* a review of the final report made to the government, which, although our readers will find they know most of the facts presented, will serve to give some a comprehensive idea of the problem in the vineyards. It will be noticed that the investigator will close by stating that science has done its part and that agriculture must do the rest. We are not sure yet that science can claim the honorable discharge, but we quote as follows:

Some time ago we published in our columns a short account of the results of the investigations of various scientific men in France into the nature of phylloxera—that terrible scourge which is committing such wide spread ravages among the French vineyards. Latterly we have received some reports communicated to the French Academy of Sciences, dealing with the attempts which have been made during the last three or four years to arrest the mischief done by the insect, and ultimately to destroy it altogether, by means of some potent drug. It is obvious that the remedy to be employed must possess two qualities at starting, viz., it must destroy the insect and it must not damage to any great extent the vine. But, further, it is not sufficient that when put in close contact with the roots of the plant—as in a pot—it should prove fatal to the insect, it is necessary, if the remedy is to be of real practical value, that it should reach and destroy the phylloxera on all parts attacked by it in vines which are planted out in the open air. This is a real difficulty to overcome, as the remedy, be it in the form of solution or vapor, cannot easily permeate the soil, sometimes clayey, sometimes sandy, on which the vine is growing, so as to act upon the smaller root branches whose nutrition the phylloxera diverts into itself.

M. Monillefert, a professor at the School of Agriculture at Grignon, was the gentleman delegated by the Academy of Sciences to make the necessary experiments for the purpose of determining what agent was the most practically applicable to the destruction of the phylloxera, and the account of the numerous substances employed by him with varying results fills no less than 200 pages of a memoir presented to the Academy of Sciences. It is not our intention here to do more than give a brief resume of the results at which he arrived.

He divides the substances used by him into seven groups, the first of which was composed of manures of various kinds, such as guano, superphosphates, farm muck, etc.; the second of neutral substances, as water, soot, and sand; the third of alkalies, as ammonia and soda; the fourth of saline products, amongst which were the sulphates of iron, copper, zinc, potassium and ammonia, alum and sea salt; the fifth of vegetable essences and products, as decoctions of hemp, datura, absinth, valerian and tobacco; the sixth of empyreumatic products; and the seventh of sulphur compounds. It was only with some of the substances contained in this last group that really satisfactory results were obtained, and it is to Mr. Dumas, the permanent Secretary of the French academy of sciences, that the credit is due for suggesting the employment of the alkaline sulpho-carbonates of potassium and sodium and those of barium and calcium. All the other classes of remedies mentioned above were either without effect on the phylloxera, or in destroying it also destroyed or damaged the vine.

The sulpho-carbonates, which were carefully studied by the great Swedish chemist Berzelius, are obtained by combining the alkaline monosulphides with the bi-sulphide of carbon, are

either liquid or solid, and emit a powerful odor of sulphureted hydrogen and bi-sulphide of carbon.

The alkaline sulpho-carbonates in the solid state are of a beautiful reddish-yellow color and deliquescent, but are not easily obtainable in that condition; the sulpho-carbonate of barium can be easily procured, however, in a solid state and presents the appearance of a yellow powder, but little soluble in water. The sulpho-carbonates decompose under the influence of carbonic acid, forming a carbonate and evolving sulphureted hydrogen and bi-sulphide of carbon. These two latter substances are gradually liberated, and as they have a very powerful effect on the phylloxera, one can understand that the sulpho-carbonate, placed in the ground, may prove, by its slow decomposition, a powerful insecticide. In the case of the sulpho-carbonate of potassium, over and above its toxic effect, it has a direct invigorating influence upon the vine, as the carbonate of potassium is an excellent manure.

The employment of the sulpho-carbonates as a means for the destruction of the phylloxera, was suggested to M. Dumas by the clearly recognized need that there was of some substance that would evaporate less quickly than the bi-sulphide of carbon; he saw that it was desirable to apply the insecticides in some combination which would fix them and only allow them to evaporate gradually, so that their action might continue long enough in any one place to infect with their vapors all the surrounding soil.

But the task of eradicating the phylloxera has by no means been accomplished by the mere discovery of the value of these substances; there is the further difficulty of applying them to the vine in cultivation. One thing seems very certain, that in order to render the sulpho-carbonates practically efficacious in killing the insect, it is necessary to use water as the vehicle by which they may be brought to all the underground parts of the plant, and that the best time of the year for their application is the winter or early spring, when the earth is still moist and the quantity of water necessary to be brought on to the ground by artificial means is consequently less. Mixed with lime in the proportion of two to one, these sulpho-carbonates give a powder which can be spread over the ground before the heavy rains, that is, between October and March, and which will probably prove itself very efficacious.

The conclusion at which M. Monillefert arrives at the end of his reports is that the efficacy of the sulpho-carbonates is proved, and all that is necessary is to bring to perfection their employment in agriculture, which can only be accomplished by the intelligence and practical knowledge of the vine grower who is well able to discover the economic processes of culture which are conducive to their successful application.

He ends by saying that science has accomplished her mission, and it remains for agriculture to fulfil its part, in the eradication of the phylloxera from the vineyards of France.

## THE APIARY.

### Bibulous Bees.

We have always admired the way "the little busy bee improves each shining hour," but there is one thing about the industrious creature that is not generally known. An immense honey production has grown up in Los Angeles and San Diego counties in the past two or three years. Every canyon and coigne of vantage in both counties has its bee farm. Col. Chalmers Scott informs us that the bees in San Diego county have developed a great fondness for orange blossoms and grapes. It was the fashion, formerly, to make 4,000 or 5,000 gallons of wine at Guajome every year, but, since the bees have made their appearance, the vineyard at that point has failed to yield. The grape forms as of yore, but the juice is sucked out by the bees, thus anticipating the wine-press. They dip into the orange blossoms also, and the consequence is that the fruit is dwarfed. Of course in Los Angeles county we have enough grapes and orange blossoms to make the depredations of the insect a very trifling matter. Besides, the bee ranches are located at such a distance from our vineyards and orange groves that any injury they could possibly inflict upon them is a very trifling matter.

Some ill-feeling has grown up between the bee-men and sheep-men of San Diego county, from a cause which develops an interesting trait on the part of the bees. As is generally known, a great portion of the feed of bees in Southern California is the blossom of the white sage. It makes a white and agreeable honey. But when sheep have once pastured amongst the white sage the bees will have nothing more to do with it.

It is quite likely that, at the next session of the Legislature, there will be an effort both upon the part of the bee-men and the sheep-men to obtain some legislation from their respective standpoints. If the bees multiply at the rate which has characterized them for the past three years, the controversies which will arise about them may rival the fierce collisions of the fence and no-fence men. We have thus far had the sweet, and we shall shortly be treated to the sting.—*Los Angeles Herald*.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, Amos Adams.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will hereafter be held on the second and fourth Tuesdays of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHARD,  
Master Golden Gate Grange, S. F.

## GRANGE DIRECTORY.

### California State Grange.

#### OFFICERS FOR 1875-7.

Master—J. V. WEBSTER, Brooklyn, Alameda Co.  
Overseer—T. A. GAREY, Los Angeles, Los Angeles Co.  
Lecturer—B. PILKINGTON, Santa Cruz, Santa Cruz Co.  
Steward—NELSON CARR, Bennett Valley, Sonoma Co.  
Asst. Steward—M. WOODHAMS, La Honda, San Mateo Co.  
Chaplain—J. M. HAMILTON, Guenos, Lake Co.  
Secretary—J. B. CARLINGTON, Denver, Solano Co.  
Treasurer—AMOS ADAMS, Franklin, Sacramento Co.  
Gate Keeper—J. B. SAUL, Napa, Napa Co.  
Ceres—MRS. MARY E. IVINS, Cambria, S. Luis Obispo Co.  
Pomona—MRS. S. C. BAXTER, San Francisco, S. F. Co.  
Flora—MRS. MARY G. BANGS, Modesto, Stanislaus Co.  
Lady Assistant Steward—MRS. HANNAH L. CARR, Bennett Valley, Sonoma Co.

\*P. O. Address for official business, San Francisco.

#### Executive Committee.

J. V. WEBSTER, Chairman, Brooklyn, Alameda Co.  
A. D. LOGAN, Princeton, Colusa Co.  
H. M. LEONARD, Santa Clara, Santa Clara Co.  
J. M. THOMPSON, Sausalito, Napa Co.  
W. S. MANLOVE, Sacramento, Sacramento Co.  
WM. SIMS, Berkeley, Yolo Co.  
C. H. COOLEY, Cloverdale, Sonoma Co.

#### General Deputies.

San Francisco, California, T. H. Merry, No. 13, City Hall.  
J. W. A. Wright.

#### County Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	Thos. Heller.	Haywards.
Alameda.	Alfred T. Dewey.	Oakland.
Amador.	H. Vanderpool.	Plymouth.
Butte.	Ed. Hallett.	Chico.
Butte.	W. M. Thorp.	Chico.
Colusa.	Jacob Meyers.	Grand Island.
Contra Costa.	Nathaniel Jones.	Lafayette.
El Dorado.	J. Christie.	Sutter Mill.
Humboldt.	H. W. Arbogast.	Arcata.
Humboldt.	Jackson Sawyer.	Table Bluff.
Lake.	H. A. Oliver.	Lakeport.
Lake.	J. H. Renfro.	Kelseyville.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Mariposa.	H. F. Taft.	Nicasio.
Mendocino.	John Mewhinny.	Pomo.
Mendocino.	W. D. White.	Ukiah.
Merced.	J. L. Crittenden.	Special Deputy.
Merced.	H. B. Jolly.	Merced.
Modoc.	C. L. Sullivan.	Willow Ranch.
Nevada.	H. L. Hatch.	Indian Springs.
Placer.	H. L. Soule.	Lincoln.
Sacramento.	W. S. Manlove.	Sacramento.
Sau Benito.	J. D. Fowler.	Hollister.
San Bernardino.	George Lord.	San Bernardino.
San Diego.	Chas. O. Tucker.	Ballena.
San Joaquin.	W. L. Overhiser.	Stockton.
San Joaquin.	W. W. Kerney.	Lodi.
San Luis Obispo.	A. J. Mothershead.	Morro.
San Luis Obispo.	C. H. Ivins.	Cambria.
San Mateo.	M. Woodhams.	La Honda.
San Mateo.	I. C. Steele.	Pescadero.
Santa Barbara.	O. L. Abbott.	Santa Barbara.
Santa Clara.	J. A. Wilcox.	Santa Clara.
Siskiyou.	J. S. Matheus.	Fort Jones.
Solano.	R. C. Haile.	Suisun.
Solano.	J. C. Merryfield.	Dixon.
Sonoma.	B. B. Capell.	Healdsburg.
Sonoma.	G. W. Davis.	Santa Rosa.
Sonoma.	W. W. Chapman.	Petaluma.
Sutter.	C. Olney.	Yuba City.
Tulare.	W. Underwood.	Lemoore.
Ventura.	E. B. Higgins.	Saticoy.
Yolo.	Wm. Sims.	Winters.
State of Nevada.	A. J. Hatch.	Reno.
Douglas.	J. L. Lister.	Genoa.
Emery.	Kimber Clevier.	Mason Valley.
Humboldt.	B. F. Riley.	Paradise Valley.
Elko.	J. A. Thicker.	Elko.

Farmers desiring to organize Granges can apply to J. V. Webster, (W. Master), Brooklyn, Alameda Co., Amos Adams, (W. Secy.), 40 California street, S. F., or to the nearest Deputy to their locality.

### California Subordinate Granges.

[This list contains the names of Masters and Secretaries so far as reported to us, elected to serve during the year 1877. Secretaries and others will greatly oblige us by making needful corrections.]

EXPLANATIONS.—The P. O. address is given only where it is different from the name of the Grange.

GRANGE AND P. O.	MASTER.	SECY.
ALAMEDA COUNTY.		
EDEN, Hayward.	L. PERHAM.	JOSIE SHARAI
SUNOL.	B. F. COOPER.	S. W. MILLARD
TEMESCAL, Oakland.	T. YOLLAND.	J. S. COLLINS
SOLANO COUNTY.		
JACKSON VALLEY.	W. H. PROUTY.	J. C. HAMRICK
PLYMOUTH.	C. PERRY.	S. C. WHEELER
NORTH COUNTY.		
NORD.	J. B. CLARK.	MRS. C. A. COLRY
CALAVERAS COUNTY.		
CALAVERAS, Jenny Lind.	C. MORRILL.	B. THOMPSON
COLUSA COUNTY.		
ANTELOPE VALLEY.	H. A. LOGAN.	M. PETERSON
COLUSA.	J. R. TOTMAN.	R. JONES
GRAND ISLAND.	H. D. STROTHER.	J. C. WILKINS
CONTRA COSTA COUNTY.		
ALHAMBRA, Martinez.	J. STRENTZEL.	MRS. M. LANDER
ANTIOCH.	M. A. WALTON.	MRS. J. C. SMITH
DANVILLE.	D. N. SHERWOOD.	C. E. HOWARD
PACHECO.	ALEX. BOSS.	W. McDONALD
POINT OF TIMBER.	S. N. WILLS.	G. W. T. CARTER
WALNUT CREEK.	M. L. GRAY.	MRS. M. S. HUNTON
DEL NORTE COUNTY.		
NORTH STAR, Smith River.	J. L. LARK.	F. C. BAILEY
ELK VAL, Crested City.	J. B. NICKEL.	MRS. G. W. EMERY
EL DORADO COUNTY.		
CLARKSVILLE.	W. WOODWARD.	ISAAC MALTBY
EL DORADO.	C. T. FOSTER.	JOHN BRYAN
PILOT HILL.	P. D. BROWN.	W. TAYLOR
PLACERVILLE.	W. WHITE.	F. M. DICKERHOFF
SUTTER MILL, Colusa.	W. H. VALENTINE.	H. MATHER
FRESNO COUNTY.		
ADAMS.	T. P. NELSON.	T. H. WYATT
RAISINA.	B. MARKS.	A. ROWELL
RIVERDALE.	J. H. THOMAS.	MRS. E. V. THOMPSON
RISING STAR, Panoche.	J. N. CANFIELD.	G. E. HICKLEY
ELK RIVER, Eureka.	GEO. SHAW.	D. A. DEMERRITT
FERNDALE.	F. Y. BOYNTON.	E. G. DAMON
KIWELATTAH, Arcata.	W. NIXON.	MARY SINCLAIR
TABLE BLUFF.	E. B. LONG.	J. H. STILL
BISHOP CREEK.	INYO COUNTY.	GEO. COLLINS
LAKE COUNTY.		
LINN VALLEY, Glenville.	J. PARCUE.	C. LINDSAY
GUENOC.	J. W. CONNELLY.	W. WHITTINGTON

KELSEYVILLE.	MRS. ANNIE J. HARRIS.	T. ORMISTON
LOWER LAKE.	J. A. HARRIS.	H. WINCHESTER
UPPER LAKE.	J. W. DOTY.	M. SHEPARD
LOS ANGELES COUNTY.		
DAVIS CREEK.	RICHARD LEE.	C. W. MOORE
LASSEN, Susanville.	J. CARLSON.	
LAUREL VALLEY.	J. C. PRESTON.	II. CLEVELAND
ENTERPRISE, L. A.	F. B. CLARK.	E. S. BUTTERWORTH
FAIRVIEW, Anaheim.	DAVID EYRE.	J. M. QUINN
WESTMINSTER.	G. C. MACK.	A. T. TAYLOR
MARIN COUNTY.		
NICASIO.	C. L. ESTY.	H. F. TAFT
TOALES.	O. H. BIELL.	R. H. PRINCE
MENDOCINO COUNTY.		
CAHTO.	J. H. CLARKE.	J. H. BRADEN
LITTLE LAKE.	P. MUIR.	W. BLOSSER
POMO.	E. PEMBERTON.	E. V. JONES
POTTER VALLEY.	EDDIE MRS. A. H. SLINGERLAND	
ROUND VALLEY, Covelo.	W. PULLEN.	P. HANDY
UKIAH.	A. O. CARPENTER.	W. D. WHITE
MERCED COUNTY.		
BADGER FLAT.	W. J. STOCKTON.	MRS. W. F. CLARKE
COTTONWOOD.	J. L. CRITTENDEN.	J. J. TRUE
MODOC COUNTY.		
MODOC.	W. DODSON.	
SURPRISE VALLEY.	L. A. HAMMERLY.	A. E. BOYCE
MONTEREY COUNTY.		
SALINAS.	W. QUENTEL.	CLARA WESTLAKE
NAPA COUNTY.		
NAPA.	N. A. EVERE.	II. W. HASKELL
POPE VALLEY.	C. A. BOYCE.	SALLIE BAYNE
ST. HELENA.	J. LEWELLING.	C. A. STOREY
NEVADA COUNTY.		
GRASS VALLEY.	S. L. LEWIS.	A. HENDERSON
INDIAN SPRINGS.	II. L. HATCH.	MRS. E. M. NORTON
MAGNOLIA, Grass Valley.	E. M. DEXTON.	P. A. WOMACK
PLACER COUNTY.		
NEWCASTLE.	R. M. NIXON.	MAGGIE GREELEY
ROSEVILLE.	J. MCCLUNG.	N. MERTEZ
INDIAN VAL.	Taylor's G. W. BOYD.	R. A. THOMPSON
SACRAMENTO COUNTY.		
AMERICAN RIVER.	E. G. NORTON.	SR. MIRA KILGORE
COURTLAND.	O. R. BUNYON.	
ENTERPRISE, Brighton.	A. M. PLUMMER.	A. A. NORBYKE
FLORIN.	L. II. FASSETT.	J. T. AMOS
FRANKLIN.	W. JOHNSTON.	MRS. S. G. BRADFORD
GEORGIANA, Rio Vista.	H. F. SMITH.	P. H. GARDINER
SACRAMENTO.	GEO. RICH.	C. A. HULL
SAN BENITO COUNTY.		
HOLLISTER.	E. NARON.	M. POMEROY
SAN BERNARDINO COUNTY.		
RINCON, Chino.	II. G. BROOK.	JOHN TAYLOR
RIVERSIDE.	E. HART.	JOHN HALL
SAN BERNARDINO.	J. D. PRATT.	J. D. OSTERHOFF
SAN DIEGO COUNTY.		
NATIONAL RANCH.	F. T. BLACKNER.	F. M. KIMBALL
SAN FRANCISCO COUNTY.		
GOLDEN GATE.	S. F. J. D. BLANCHARD.	MRS. J. R. READ
SAN JOAQUIN COUNTY.		
COLLEGEVILLE.	W. H. SNOW.	L. R. CHALMERS
ELIOTT.	J. L. MOORE.	II. H. WEST
RUSTIC, Lathrop.	H. MOORE.	II. E. DUNN
LODI.	C. T. ELLIOTT.	A. W. GOVE
STOCKTON.	C. GRATTAN.	T. J. STEPHENS
WASHINGTON.	W. S. SOLLARS.	W. P. STAMPER
WEST'S JOAQUIN, Ellis.	J. C. ALLEN.	H. B. NEEDHAM
WOODBRIDGE.	ELIZA FISKE.	J. D. HUFFMAN
SAN LUIS OBISPO COUNTY.		
CAMBERIA.	C. H. IVINS.	R. RIDGON
MORRO.	A. J. MOTHERSEAD.	H. Y. STANLEY
OLD CREEK.	C. H. SMITH.	A. L. TOLLE
SAN MATEO COUNTY.		
LA HONDA.	C. B. SEARS.	II. WILBUR
PESCADERO.	ED. FEFELLE.	E. LEIGHTON
SANTA BARBARA COUNTY.		
CONFIDENCE, Guadalupe.	S. D. TRIPLETT.	J. T. AUSTIN
LOMPOC.	J. W. WEBB.	S. STEELE
SANTA MARIA.	J. J. HOLLOWAY.	M. D. MILLER
SANTA CLARA COUNTY.		
SANTA CLARA.	I. A. WILCOX.	A. B. HUNTER
SAN JOSE.	CHAS. JONES.	H. G. KEESLING
SANTA CRUZ COUNTY.		
SANTA CRUZ.	J. W. MORGAN.	T. PILKINGTON
SOLANO COUNTY.		
BINGHAMPTON.	A. BENNETT.	J. B. JAMESON
DENVERTON.	R. H. BARKWAY.	JOHN BIRD
ELMIRA.	A. LARK.	R. W. FROST
MONTEZUMA, Collinsville.	F. T. HOOPER.	C. K. MARSHAL
SUSUN & ROCKVILLE.	H. T. TRIDALE.	A. P. HATCH
VACAVILLE.	J. M. ELLIOTT.	A. T. COBURN
SONOMA COUNTY.		
BENNETT VAL.	S. ROSA.	G. N. WHITTAKER
CLOVERDALE.	C. H. COOLEY.	MRS. H. P. TUCKER
HEALDSBURG.	C. M. BOWORTH.	W. N. GLADDEN
PETALUMA.	W. W. CHAPMAN.	F. PARKER
SANTA ROSA.	S. T. COULTER.	E. W. DAVIS
SONOMA.	L. Goss.	D. C. YOUNG
TWO ROCK.	A. WILKEY.	J. C. PURVINE
STANISLAUS COUNTY.		
CERES.	J. SERVICE.	MRS. L. J. BROUSE
OAKDALE.	S. P. BAILEY.	C. B. INGALLS
STANISLAUS.	V. E. BANGS.	THEO. TURNER
TURLOCK.	J. T. DUNN.	MRS. S. H. JEFFERDS
WATERFORD.	JOHN FAGAN.	W. C. COLLINS
SUTTER COUNTY.		
NORTH BUTTE.	B. R. SPILMAN.	OTIS CLARK
SOUTH SUTTER.	P. GROVE.	E. ROBERTS.
YUBA CITY.	J. HARRY.	ANNIE OHLEYER
FARMING'N.	A. J. CRITTENDEN.	MRS. S. S. MCCAMMELL
TULARE COUNTY.		
CHRISTMAS, Vialla.	C. H. ROBINSON.	T. J. MCQUIDDY
DEER CREEK, Farwell.	W. G. FINEBARKER.	F. G. JEFFERSON
FRANKLIN, Grange W. L.	MORTON.	MRS. M. A. MORTON
KEYSTONE.	E. AXEL.	
LAKE.	R. B. HERY.	M. M. RHODES
MT. WHITNEY.	G. W. DUNCAN.	A. T. THOMPSON
TULARE.	A. P. MERRITT.	J. H. HART
WOODVILLE.	O. K. JONES.	J. N. HERNON
TUOLUMNE COUNTY.		
SONORA.	R. F. WILLIAMS.	J. W. PURDY
VENTURA COUNTY.		
OJAI, Northhoff.	J. HOBART.	EVA FISHER
YOLO COUNTY.		
BUCKEYE, Winters.	J. II. WILGUS.	MRS. E. A. MOODY
CACHE CREEK.	S. B. HOLLEN.	J. G. FREDERICK
WEST GRAFTON.	G. SHARPENACK.	T. G. BOWER, JR.

### Nevada Subordinate Granges.

[Under the Jurisdiction of California.]

ALFALFA, Reno. J. A. SMITH. E. C. MCKENNY  
ELKO. J. W. TINKER. J. S. MAYHEW  
PARADISE VALLEY. A. NICHOLS. MRS. S. A. NICHOLS

#### Consolidations.

Marysville, No. 146, with Wheatland, No. 260.  
Susan City, No. 9, with Rockville, No. 107.  
Pajaro, No. 93, with Watsonville, No. 124.

#### Election of Officers.

SURPRISE VALLEY GRANGE, No. 265, Modoc Co.—Thos. H. Garrett, M.; W. E. Cole, O.; J. S. Linscott, L.; George Wimer, S.; E. L. Wood, A. S.; S. Daniels, C.; Wm. Brown, T.; John Bucher, Sec'y; E. Wilkerson, G. K.; Sister Linscott, Ceres; Sister Wimer, Pomona; Sister Storey, Flora; Sister Cole, L. A. S.

NEW GRANGES.—Since making my quarterly report, January 1st, 1877, the following new Granges have been organized: Cedarville Grange, Modoc county, Wm. Dodson, M.; Davis Creek Grange, Lassen county, Richard Lee, M.; Courtland Grange, Sacramento county, Edmund Brown, M.; Social Grange, Sacramento county, Benjamin Bailey, M.—Sec'y Adams in California Patron.

THE Executive Committee of the State Grange will meet at the Secretary's office on Tuesday, April 3d, 1877.

### "The Granger Cases."

Last week we made reference to the decisions of the United States Supreme Court affirming the points held by the Patrons of Husbandry in their contest with the railroads. The California Patron has the following concerning the matter:

This very action of these railroad companies had more to do with the organization of the Order of Patrons of Husbandry, and its extraordinary growth in the West, than any other cause. The farmers realized the fact that they had to fight the monopolists with their own weapons, or, in other words, had to form among themselves a combination equally strong, binding and lasting.

Though not a political organization, yet the emergency led the farmers to unite in electing legislators favorable to their interests, and these legislators were either more honest than our own, or at least not so easily bought off; consequently laws were enacted regulating fares and freights on railroad lines. The courts were invoked to enforce these laws, and here again the Grangers had to come to the front, money was needed and raised, eminent counsel were employed by both sides, and it was here that Senator Matt Carpenter displayed his great legal tact and learning, and his argument on behalf of the farmers, or rather on the affirmative side of the question, that the Legislatures of the several States had the right under the Constitution to enact laws regulating fares and freights on the lines of railroads within the limits of their States; his argument in those cases will stand as a monument to his memory when marble or granite reared o'er his tomb shall have crumbled into dust.

Beaten in the lower Courts, the railroad companies took an appeal to the Supreme Court of the United States, and that august tribunal, on the first day of the present month, rendered its decision affirming the right of the Legislature of a State to enact laws regulating the fares and freights on railroad lines within their limits. Chief Justice Waite delivered the opinion of the Court. All the members concurred therein, except Justice Field, who dissented, upon what grounds we have not been able to learn. Let us be charitable and credit him with honest convictions, although his antecedents and interests have been in sympathy with the ring.

The farmers of the United States, and indeed all producers, owe a debt of more than mere gratitude to our brother Grangers for the earnest and determined manner in which they have pushed these important cases to a successful termination, and it only remains with themselves to reap the result of this great victory. The farmers hold the balance of power, and if they use it properly they will see to it that no man is elected to the Legislature who is not pledged to reform these railroad abuses, and whose honesty is so far beyond doubt that he will not allow his vote to be made the subject of traffic.

#### The Decisions.

In order that our readers may have the text of the leading decisions on the railway question we quote as follows from the report in Eastern papers:

#### The Potter Law of Wisconsin.

The Supreme Court rendered the following decision: *Pick et al. vs. the Chicago & Northwestern Railroad Company et al.*, and *Lawrence et al. vs. Paul and others*, and the Chicago & Northwestern Railroad Company's appeals from the Circuit Court for the Western District of Wisconsin. These suits present the single question of the power of the Legislature of the State of Wisconsin to provide by law for the maximum of the charge to be made by the Chicago & Northwestern Railroad Company for fare and freight upon the transportation of persons and property carried within the State, or taken up outside and brought within it, or taken up inside and carried out. The decision is that, until Congress acts in reference to the relations of inter-State commerce, it is competent for the State to regulate the fares of railroads so far as they are of domestic concern. This company, it is said, has domestic relations with the State and incidentally these relations may reach beyond the State. Until Congress undertakes to legislate for those who are without, the State of Wisconsin may provide for those within, even though it may indirectly affect those without. Affirmed.

The Chief Justice delivered the opinion.

#### The Iowa Law.

The Chicago, Burlington & Quincy Railroad Company vs. Attorney-General and State Treasurer of Iowa, an appeal from the Iowa circuit. In this case, it is said, the railroad companies are carriers for hire. They are incorporated powers in order that they may the better serve the public in that capacity. They are, therefore, engaged in public employment, affecting public interests, and under the decision in the case of *Munn & Scott vs. The People of Illinois* (the principal case), subject to legislative control as to their rates of fare and freight unless protected by their charters. In the absence of legislative regulation on the subject of fares the courts must decide for it, as they do for private persons when controversies arise—what is reasonable, but when the legislature steps in, and prescribes the maximum of the charge, it operates on the corporation the same as it does upon individuals engaged in similar business. A uniform rate of charges for all railroad com-

panies might operate unjustly upon some. It was proper, therefore, to provide in some way for the adaptation of the rates to the circumstances of the different roads, and the Legislature, in the exercise of its discretion, has seen fit to do this by a system of classification, and whether this was the best that could be done is not for the court to decide. Affirmed.

The Chief Justice delivered the opinion.

### From the Granges.

#### Washington Grange.

EDITORS PRESS:—Sometime in the early part of last month I had the pleasure of being one of the participants in the ceremonies pertaining to the installation of officers and harvest feast of Washington Grange.

Worthy Sire and Past Master W. B. Stamper acted as installing officer, performing the duties in a very impressive and acceptable manner. Bro. Vanant resigned the Master's gavel into the experienced hands of Past Master Tolland, who was elected for the present term.



## AGRICULTURAL NOTES.

## California.

## CONTRA COSTA.

**GOOD RAIN IN SAN RAMON.**—*Gazette*, March 11: We had a brief shower on Monday afternoon that measured about four-hundredths of an inch, but on the San Ramon it rained through the night and up to 8 or 9 o'clock Tuesday morning to the measure of somewhere about an inch, as we are informed; at Walnut creek about half that measure is reported. Our total rainfall at this point is 7.13 inches, and in the San Ramon district it must have been above 10 inches and perhaps as much as 12 inches.

## FRESNO.

**A GOOD COW.**—*Expositor*, Mar. 7: Many farmers seem to be ignorant of the benefit of keeping a good cow. Such an animal will afford nearly half the living of a small family. An instance of the value of keeping a cow is afforded at the Central California colony. Mrs. D. K. Fuller last week made 12 pounds of butter from one cow, besides having all the milk requisite for the use of the family. The cow was raised on green alfalfa raised on their premises, therefore but little cost attended her keeping. At the present price of butter it may be safely estimated that the cow yielded \$4.50 worth of butter, a pretty fair revenue for the labor and cost.

**TO GRAFT GRAPEVINES.**—Now is the time to graft grapevines, just when the leaves are beginning to start on the vines to be grafted. Cut your grafts into lengths of from two to four buds each. Dig the earth away from the roots of the vine to be grafted eight or ten inches deep; saw off the top, or main root, of the vine five or six inches below the surface of the ground; split the end of the roots left in the ground; whittle the butt end of your graft to the form of a wedge and insert it in the cleft or split in the root, in such a manner that the interstice between bark and wood shall join evenly together on the side of the graft and the root. Fill up the hole, pack the fine, soft earth, with your hands, carefully around the grafted place. Leave a single bud of the graft just above the surface of the ground.—W. A. SANDERS.

**RAIN.**—We learn that a heavy rainfall occurred in the Sierra mountains and foothills on last Thursday and Thursday night, and in the high mountains considerable snow fell. This will insure good feed in the mountains this summer.

**SHEEP.**—We understand that many of our wool growers are unable to shear their sheep, owing to the scarcity of feed. At present it looks as if fully one-half of the sheep in the valley would be lost this season. Those, however, who succeed in saving their herds, will get a good price for wool and sheep, as soon as feed comes again.

**HOGS.**—Hogs are about the only thing the people of this valley had to export this season, but even that article is scarce. Nearly all the hogs are now shipped, and it will be extremely doubtful if there will be any more porkers fit for market before next winter, and, consequently, hog meat will be high this fall.

## KERN.

**LIVERMORE RANCH.**—*EDITORS PRESS*: We have had rain here several times within the last month, so that the feed is starting on the plains. The wild feed on the ranch is splendid, as it has all been irrigated. The cows are doing fine on the wild feed and the alfalfa is coming on nicely. The crops are all doing finely.—W. H. CARPENTER.

## LOS ANGELES.

**THE DROUTH.**—*Herald*, March 10: The drouth will not do the damage which persons unacquainted with our superb irrigating facilities would suppose. We shall raise a large crop in this county this year, and we shall benefit by high prices. As a matter of fact, for this reason, we shall have more money this year than last, when everything was so abundant all through California that prices were not remunerative. We have, of course, some disappointed mesa farmers, and we regret this heartily, but an impetus will be given to the development of our irrigating resources which will far more than counterbalance the temporary evil.

## NAPA.

**SHIPPING CUTTINGS.**—*St. Helena Star*, March 3: John Mavity is pruning trees extensively over the neighborhood. He has shipped 2,000 grape cuttings to western Texas lately, by mail. The postage was \$13.50. They were of the smallest possible size, to save weight, and went from 75 to 125 to a bundle under the maximum four-pounds weight which might be mailed. A part, which have been heard from, arrived in good order. The ends were waxed over to prevent the sap from escaping. They were of the best foreign varieties. They were sent on an order from a man Mr. Mavity never heard of before, but who has promptly sent the money for all expenses.

**THE MANUFACTURE OF VINEGAR.**—Something less than a year ago Mr. Van Bever commenced the manufacture of wine vinegar in this city, and so successful has he been in producing a superior quality of that article that he finds the demand for it rapidly increasing. He manufactures on an average 1,200 gallons per week, for which he finds a ready market in San Francisco. He has made some shipments East, and finds a favorable reception for the California made article, though he is compelled there to

compete with the imported French wine vinegar. In the past 10 or 11 months Mr. Van Bever has shipped some 40,000 gallons of vinegar and also 80,000 gallons of wine to San Francisco and the East.

## NEVADA.

**EDITORS PRESS:**—The prospects so far for a good fruit crop in the mountains never looked better; every time the weather clears up, no frost of any consequence. The hay never did look so splendid. The rainfall this season up to date, at my rain gauge, has been 24.14 inches, as follows: September, 0.40 inches; October, 9.60; November, 1.05; December, none; January, 9.83; February, 1.01; March, up to 7th, 2.25; total, 24.14 inches.—F. G., Nevada City.

## SACRAMENTO.

**SEASON'S RAIN.**—*Record-Union*, March 10: We have had about nine inches of rain as an average over the agricultural portion of the State. This is less than the rainfall for any previous season since 1850 with two exceptions. In the very dry season of 1863-4 we had 7.86 inches, and the season of 1870-71 we had 8.74. The average rainfall for all the seasons since 1849 is a little less than 20 inches. We need at least five or six inches more rain to secure good crops. This is in accordance with all past experience. There are two circumstances, however, in favor of the present season's crops which have not occurred in previous seasons of drouth and crop failure. One is the fact that grain was sown earlier last fall than ever before, and the next is that the winter has been an exceptionally favorable one to keep the grain growing. The ground has been just wet enough to keep it warm and favorable for the roots to grow unusually rapid, and at this time of the year we have seldom or never seen the crops so well advanced and looking so uniformly well. Without any more rain the summer-fallowed grain generally will, in all probability, make a good crop. The grain sown on winter-plowed ground looks also very well—is well advanced and of good color, but unless we have yet from five to six inches of rainfall we do not expect this grain will hold out to make half a crop. The lands along our river bottom that were overflowed by the melting of the snow so late last spring are especially favored now. Many of these lands were covered with water last spring till as late as June, and have not dried out yet, and will produce good crops with no more rain. More of these lands are in cultivation in barley than for years before. The alfalfa on many of them was killed out last winter and spring, and they have been seeded again with alfalfa sown with barley. The State can stand a drouth now much better than at any previous date, as the cultivation is much more extended, embracing a greater quantity of lands that will not be seriously affected, both in the mountains and the low tule lands.

## SAN DIEGO.

**TREE PLANTING.**—*Union*, March 8: The rate at which tree planting is going on in the Cajon valley is really surprising. There will be some splendid orchards out there. Major Chase, Frank Miller, Uri Hill, O. N. Sanford, R. G. Clark and others are making continual improvements on their places. Sanford is setting out 700 more fruit trees. Hill is fencing his place and planting a large orchard of 700 or 800 trees. Major Chase has five men at work setting out trees on his beautiful place. Miller is planting a fine orchard of apple, peach and pear trees, and Mr. Clark is adding largely to the fruit trees on his place.

**MORE RAIN.**—Yesterday, March 7th, it began again. Not much just in town; but it came down pretty well all the afternoon in the interior of the county. At Las Flores it began raining at four o'clock and continued to fall steadily up to the time we heard from there—at seven o'clock. It has been raining also steadily in the eastern part of the county according to a telegram from Campo. In town a fine mist began to fall about five o'clock, which changed to a light rain at nine, and is still raining as we write, at midnight.

## SAN JOAQUIN.

**A TULE CUTTER.**—*Independent*, March 8: The peculiarities of the tule soil and the difficulties encountered in its cultivation are stimulating our mechanics to the production of various appliances to facilitate the farming of these lands. The tule plow, which is now successfully used, was the result of numerous experiments, but plowing in different kinds of soil has developed the fact that much of the ground is too soft to allow the horses to walk in the furrow without miring down. To remedy this and to avoid the necessity of plowing, Mr. Matteson, of the firm of Matteson & Williamson, has invented a cutting machine, consisting of 20 knives set four inches apart in a triangular frame. The knives are of diamond-shaped steel, and can be reversed to use the four cutting sides. The machine will cut seven or eight inches deep, and by drawing it over the ground twice, after the manner of cross-plowing, it is expected that the tule roots will be cut up into four-inch blocks and considerably torn apart. Seed will then be sown and thoroughly harrowed over. The thin, sharp knives slicing through the ground will be easily drawn by a team, and it is thought the operation with that of harrowing will accomplish as good results as the plowing and be much easier done, for the first year at least. The machine is being constructed for H. D. C. Barnhardt.

## SAN LUIS OBISPO.

**GUM TWIGS FOR MICE.**—*Tribune*, March 3: Mr. E. M. Day, of this place, who is one of the

proprietors of the San Luis and Cambria stage line, had occasion about two months ago to overhaul a large lot of barley which he had in store for the stage stock of the company. He found the sacks badly cut by mice and a large quantity of the grain destroyed. He went to work and repaired the damages to the sacks and cleared up and resacked the good barley and thoroughly cleaned out the granary, and then cut a lot of eucalyptus branches which he strewed upon the floor under the sacks and put between the layers as he again repiled it. On Wednesday last he informed us that since the application of the gum branches there has not been a mouse around the grain and there is no sign of them in the granary. Knowing Mr. Day as we do, we give full credence to this statement and look upon the discovery as of vast importance to the farming community and those dealing in grain.

## SANTA BARBARA.

**GUADALUPE.**—*Telegraph*, March 3: The outlook is very favorable for those farmers who have their seed in the ground. With the rains and the fogs that are sure yet to come, we consider that they are certain to raise fine paying crops. Those, however, who have unfortunately neglected to plow and sow up to the present, will, unless our March rains are heavy, not do much.

## SANTA CLARA.

**DECOY GOPHERS.**—*Echo*, March 3: I. A. Wilcox employs his boys to destroy the gophers on his grounds, rewarding them for their trouble, and their ingenuity has led them to a variety of modes of capture, of which one of the most successful is to catch and tame a full-grown gopher, secure him with a string and lead him to the gopher holes. The animal is of a combative nature and quick to attack his kind. He is thus easily decoyed out of his hole and summarily disposed of.

## SOLANO.

**SUISUN VALLEY.**—*EDITORS PRESS:*—The prospects for a crop in Suisun valley were never better than now. The rainfall at Suisun City for the season, measured by E. Goodfair, was 11.94, March 3d, seven o'clock A. M.; while in the upper part of the valley it has been upwards of 25 inches, by Mr. Kimble's gauge. The farmers are very good-natured on account of the hope that is in them. Some of the volunteer barley showed its beard two weeks ago. Peaches and almonds are going out, while pears, plums and cherries are coming in bloom. This has been with us truly an extraordinary winter: just enough frost at a time when it could do no harm; just enough sun and warmth to put everything a little ahead of the season; just enough rain to supply our needs. In fact, just enough of everything. All reports from different parts of this county are similar in regard to the expectancy of good crops the coming harvest.—A. T. HATCH, Cordelia, March 7th, 1877.

## SONOMA.

**PROSPECTS.**—*Petaluma Argus*, Mar. 9: Agricultural prospects in this county continue to be very encouraging. The season is so far advanced and crops are so forward that there is now scarcely a possibility that we will not have a large growth of grain and grass. This will be the case even if we do not have any more rain during the season. There are large fields in this vicinity throughout which a nearly average swath, at the usual harvest time, could be cut to-day. An overgrowth, with consequent lodging, and possibly rust, is what our farmers now most fear.

**ABOUT BUTTER.**—The present season has been far more favorable for butter-making in this district than seasons usually are. Prices are and have been low, but the large quantity made per cow is more than a compensation for this. On account of low prices many of our dairymen have commenced packing this year much earlier than usual. We estimate the quantity of butter shipped from this city per week, at present, at about 600 boxes of 100 pounds each. At an average of 25 cents per pound this would amount to \$15,000 per week, or about \$65,000 per month. Petaluma butter has a wide-spread reputation, and frequent shipments have been made to the Eastern States.

**BOTANICAL GARDEN.**—*Sonoma Democrat*, Mar. 10: Two gentlemen, one of them a botanist and florist of much experience, talk of starting a botanical garden at Santa Rosa. They will occupy about 10 acres of land, and intend to raise all the rare plants they can procure from Europe, Mexico and South America, besides all those peculiar to California and the Eastern States. This will add a very attractive feature to the many attractions of Santa Rosa. No doubt it will bring visitors from all parts of the State, and tourists from the East to Santa Rosa, if it is carried out on the scale proposed.

**ITEMS.**—A grand horse and colt exhibition will take place at Agricultural park on Saturday, March 21st. Theo. Skillman has planted green trees along the highway adjoining his lands for a distance of half a mile. About 25,000 sacks of potatoes, which at ordinary prices at this season of the year would bring \$30,000 or \$35,000, are now stored at Valley Ford and Tomales. Pet. Hinshaw has about 7,000 sacks stored near Bloomfield.

## STANISLAUS.

**OUTLOOK.**—*News*, March 8: Within the past week a few light showers have fallen in some parts of the county. The eastern foothill region has been most generally favored. In the western and central parts of the county the rainfall was comparatively next to nothing. We have had several cloudy days, wind and

every other appearance favorable, still there was no rain. At present our people are greatly discouraged. Grain, however, that has been well put in, is still living, and much of it showing considerable vigor. We must, however, have rain soon, and soaking ones at that, to carry us over the first usual heated spells of April and May. As yet we have had but about three inches of rainfall; true, it has been most judiciously distributed, or else vegetation would already have been dead. March usually is one of our wet months. Thus far it has not realized the anticipations and hopes of our people. Grass is already suffering and our sheep men are anxious about pasturage.

## SUTTER.

**CROP PROSPECTS.**—*Banner*, March 10: The general report of our farmers is that the prospect was never better for splendid crops. And this means something in this region. Sutter county's wheat prospects must be rated well up in the count. In one warehouse in the county there was stored of last year's crop over 5,000 tons, and this was but a small proportion of the total yield of the county. Next crop will be fully up to the last, if no larger. All the shipments of wheat down the Feather river, which the Sacramento papers are in the habit of reporting as coming from Marysville, never so that point, but are shipped from Yuba City and points further down the river in Sutter county. It is time Sutter was given credit for what belongs to her at least.

## TEHAMA.

**GOOD CROPS.**—*Tocsin*, March 7: Feed is very abundant and cattle, sheep, hogs, and horses are sleek and well-to-do. We have been blessed with plenty of rain, and our prospects are far above what they were last year this time, so far as our observation and the reports of the farmers in this vicinity go. J. B. Gemmill, one of the successful farmers of the Toomes grant, says he never saw finer spring weather than we are now enjoying. He reports all grain looking well in and around our agricultural district. J. Baylis, from the famous Glenn ranch, of Colusa county, and also from the Gerks ranch of this county, was in Red Bluff on Monday evening last, and said the prospects in Colusa county were never better than now. The winter-sown grain covers the ground so that it cannot be seen, and summer-fallowed and volunteer is very nearly knee high. He says, from Briggs station to Red Bluff, there are over 50,000 acres of grain looking better than for many years. R. H. Blossom, of the Antelope ranch (Fruitt's grant), was in town Saturday last, and reported the grain on his farm as doing splendid. He is sanguine of a good crop.

## TUOLUMNE.

**EDITORS PRESS:**—The heart of the farmer now rejoiceth. Rain in gentle showers has fallen on the foothills, and a portion of the great plains, sufficiently to keep vegetation in active and healthy growth. Mrs. Brooks recently exhibited a specimen of barley taken from a field, which shows the same forward growth as the specimen mentioned in the *RURAL*, which measured three feet and odd inches. Some of the stalks fully headed out. This one field is said to be the most forward in the neighborhood. But it is written that "the widow and fatherless is under a special providence." If so, Sister Brooks deserves the good fortune of having a good crop, if the loss of a good husband deserves recognition from the powers that be. The weather is all we could desire for growing purposes. Other enterprises may require a more bountiful supply of water; but nature's God ever doeth all things well, if we could only have faith. The crops in and about Sonoma never did look better than at present, at this season of the year. If frosts keep away we will have an extra crop of fruit. It is a marvel to witness the amount of boxes of apples sent below by the large and small. One hundred and eighty boxes were shipped by John Curtin from his own garden to fill an order from Visalia, a good market having sprung up in that southern city. And yet we will find those who fold their hands in idleness, because of hard times, and lack of a market for their productions. That one shipment will realize enough to provide for a family for six months, and that was only an item compared to what has been and what can be done. It only requires the muscle and the will to do; homes can be made in these foothills, where the common necessities of life can be provided, sharing the enjoyment of a climate which is incomparable. As a lady friend wrote me from one of the Eastern cities, "I wish I could spend a winter free from snow and ice and the jingle of sleigh-bells." Three months' steady noise of bells was too much for a musical ear. Even the chimes from melody haunted temple becomes a nuisance where the infliction is too often repeated. Give us the quiet and glory of the foothill region of California, in preference to all else.—JOHN TAYLOR.

## VENTURA.

**DITCH.**—*Free Press*, March 10: The work of cleaning out the old irrigating ditch on the east side of the Santa Clara river is being pushed rapidly, and it is thought it will be ready for the first head of water within the next ten days. With very little labor this ditch could be made to carry the whole of the large volume of water now running to waste in the river, which would thoroughly irrigate in the neighborhood of 8,000 acres. The memory of the extraordinary heavy crops which were raised by the aid of irrigation in 1870, and the good prices which prevailed, should be sufficient inducement for farmers to put forth every effort to obtain a supply of water for irrigation purposes.





## Lines

Sent by a farmer's daughter to her lover, who wished to know her circumstances in life:

No glittering gold, or home, or land,  
Nor gems from Eastern sea;  
Affection pure and love sincere,  
Are all I have for thee.

I covet neither wealth nor fame;  
I plainly tell to thee:  
A one loved object's all my wish,  
Tis all I wish to be.

## Nature.

As a fond mother, when the day is o'er,  
Leads by the hand her little child to bed,  
Half willing, half reluctant to be led,  
And leave his broken playthings on the floor,  
Still gazing at them through the open door,  
Nor wholly reassured and comforted  
By promises of others in their stead,  
Which, though more splendid, may not please him  
more;  
So Nature deals with us, and takes away  
Our playthings one by one, and by the hand  
Leads us to rest so gently that we go  
Scarce knowing if we wish to go or stay,  
Being too full of sleep to understand  
How far the unknown transcends what we know.

—Longfellow.

## Maggie Ryan.

"But just let me stay until morning, ma'am. It is cold, dreary and dark along the road, and, indeed, I've no place to go but Widow Yarrow's and that's miles away."

So spoke a sad, worn-looking woman, standing on the threshold of a well-to-do farmer's house, just as the last rays of light were fading from the evening sky.

The person she spoke to, a large woman in a bright, flowered dress and white apron—the mistress of the house—turned away pettishly.

"You came at night, Maggie, it seems to me, and you can go at night. You don't suit. I never saw such shiftless ways in my life. And Jane Smith is here, and I've only one bed for the servant and I can't expect a tidy girl like Jane to sleep with—well, with strangers. I've paid you for your three days, and goodness knows you've worried me out of my senses since you've been here, and I can't keep you another night; and the earlier you go the sooner you'll get there, wherever it is."

"Well, that's true, anyway. Then, ma'am," replied the woman, "and you are mistress in your own house; but God knows it's not a dog I'd be drivin' out at night." Then she tied her little pittance in the corner of a pocket-handkerchief and walked away out of the gate and up the road, not looking back once. Her heart was heavy as lead, and she was angry at a world that had been a very hard one to her.

"Three years since Pat went away," she said to herself, "and never a word from him. He's dead, no doubt; and it's the last kind word I've heard. I wasn't shiftless and good for nothing to him. 'Maggie,' he'd often say, 'I'd change you for nobody's wife.' Och, he was a man; and as good to me when I was faded and worn out with the hard livin' and rarin' and losin' the childer, as he was when I was a purty girl, with cheeks like roses, and he was a boy courtin' me. Och, Pat, where did you go at all? You died in a ditch like a dog, maybe; for all these hard-hearted gentlefolk care, we all might."

She turned and shook her fist back at the house she had just left, only a bit of the roof visible over the rising ground now.

"My heart was aching for the childer and for Pat," she said; "but you could have no patience if a pertatie was burnt, or a towel not that smooth. You sent me out with the night falling. Bad luck to ye and to all your like."

Then she plodded on again; but the woman she had left was not as bad as she had fancied her. In her thrift and tidiness she could not understand this untidy, careless being. She knew nothing of the misery at her heart, or the sorrow that made her forget the pots and pails. She was actually half afraid of her and anxious to get her out of her house. She had felt it a great mistake to hire a tramp from the road, as it were, and she had paid her and was conscious of no cruelty.

The daylight fled apace; the moon, risen long ago, became visible—a faint streak of new moon that set in a little while—only the stars were left—and Maggie, wandering on the road with her bundle under her arm—a bundle of rags and odds and ends tumbled together in an old flannel petticoat—began to lose her knowledge of it. Here and there she saw lights in a window, but they were no promise of hospitality to her. If she could get to the Widow Yarrow's, that personage, who took the laborers to board, would let her lodge while she could pay; but where was the widow's cottage—to the right or to the left? She could not tell in the darkness whether she had taken the proper turning. Hard by was a rushing sound, as of water. Danger there, perhaps. The railroad was somewhere at hand, and though Maggie felt that the

world was a poor place, she did not feel ready to meet death yet.

"I'll drop down in the grass somewhere," said the poor woman. "And God between me and harm. If I could find a bit of hay now, 'twould be a comfort."

She stretched forward, peering through the darkness, and her foot struck some loose branches that lay upon the ground, with a cracking sound.

"What's that?" said a voice very near her in a sharp whisper.

"It's an imp of a squirrel," said another voice. "Go on with your work, Jim. The mail train will be along in 15 minutes. Up with that rail. Hi! We'll have them this time."

"Hold your tongue, fool," said the first voice. "You're half drunk. I tell you I thought it was a step."

And now Maggie, who had snuk flat upon the ground, knew all. Those who whispered near her were train wreckers.

"I'll make no noise," said she. "It's none of my business."

But lying in the grass, the sharp strokes of steel on steel smote her ear; she could not forget them. And suddenly it came upon her that it was neither more nor less than murder that she was waiting there to see—that in lying quiet while it was done she helped to do it.

"God forgive me!" said poor Maggie. "I'll not do it; but what am I to do? How will I stop them? It's my own death; I'll bring about nothing else!"

And just then the sound of a steam whistle far away caught her ear. The train was coming.

"Ready for them," said the voice she had heard before. "Come into the bushes."

She heard them tramp away and arose to her feet and looked about her. There was no house in sight and no help near. Suddenly a thought struck her. She had matches in her pocket and her dress was a thin calico—it would burn like tinder. In a moment more she had torn it off and had the matches in her hand. As she struck a light she heard a pistol click.

"They see me," she said, and held the match against the old calico, and as it caught flourished it over her head. She felt a bullet whiz by her shoulder; another struck her, but now the glare was bright and the train was close at hand. She rushed toward it, waving her burning dress. Thank God! they saw her. The train slackened its pace—it stopped. Men with lanterns in their hands sprang from it and hurried towards her. And the old dress, burnt to tinder, dropped to the ground and she sank beside it, the blood flowing from a wound in her arm.

"They've killed me, I believe," she said faintly as a man bent over her. "I can't show you the place but it's—beyond there—the rails—they've ripped them up, the villains!" Then she fainted.

When she came to herself she was by the roadside, and lights fell over her, and she heard people talking of the hairbreadth escape they had had and of her bravery.

"You risked death to save us," said one woman. "You shall be rewarded. My little children were with me."

"And I am going to meet my wife," said a gentleman. "She will not let me forget you if I have so ungrateful a heart. You shall be well cared for now, and when you are well you shall never know want."

"Indeed, then," said another voice—one that sounded familiar to her—"indeed, I am not rich, but I'd have been loath to be killed to-night. I'm just on the road to what I've been seeking two years. I found out yesterday where my missus is, and I'm goin' to her—she breakin' her heart for me. I haven't much; but there's a couple o' pounds if you'll take 'em, good woman, and God's blessin', too, for the sake of Maggie Ryan, that you've saved from bein' a widow."

And a strong hand folded over her weak one, and would have left money in it, but she caught it tight.

"It's Pat Ryan!" she cried; "came back at last. Don't you know Maggie, Pat?"

And two great arms folded her close; and the poor soul who had tramped the road, desolate and forsaken, an hour before, was happy as angels in heaven.

It might not be "great good luck" to you to be a flagman's wife, and live in a little cottage on the roadside, but Maggie thinks it so.

"And oh, Pat!" she often says, "how little did I think when Satan was in my heart, and I was willing to lie still and let happen what might to the heartless gentlefolks, what I was doing to myself and to you; and after all, it's kind hearts they had, and gave you the ill-gotten place, and me the shanty, and the cow, and all. Good luck to them."—*Worlth*.

We must not hope to be mowers  
And to gather the ripe golden ears,  
Unless we have first been sowers  
And watered the furrows with tears.

—Alice Cary.

In all Buddhist temples a tall and broad-leaved lily stands directly on the front of the altar. Its idea is as beautiful as its workmanship. It represents that just as the pure white flower may grow out of mire and filth and blossom into loveliness, so may the heart of man raise itself above the wickedness and corruption of the world unto a state of spotless purity.

DR. JOHNSON used to say that the habit of looking at the best side of things was worth more than a thousand pounds a year.

## Home Comfort.

I am asked how many things can be added to the comforts of the home and the house by study, taste, economy and industry, making life pleasanter and happier with little additional cost.

The first great object to be attained in a family is perfect government—not by scolding, fault-finding, sourness and sullenness, but by winning respect and supremacy; by the influence of a womanly and loving heart; by dealing with all the members of the family with a heart full, and face glowing with love and cheerfulness. There is a hallowed and sanctified look which every wife and mother should possess at all times, inspiring all about her with a spirit of rich indwelling happiness. This is one of the graces that costs nothing but self-discipline and earnest supplication for divine aid to endow the wife and mother for the position appointed her in life.

2. The old and the young have a love for beauty in arrangement and harmony in combination. Not only the associates, but the surroundings, form part of the education of our children, and they partake in manner and morals of that with which they constantly come in contact. If associates are rough, illiterate and immoral, so may we expect the crop from the seed we are sowing. If there be no harmony, grace or beauty about our house, farm or lawn, the child, not used to the lovely and the beautiful, will grow up gross, coarse and ugly.

We must therefore study to have all the surroundings of our house and home in harmony with refined taste, the mind vieing with nature to make the lovely landscape live and breathe forth its inspiration. Our houses, though small and humble, can be made by the deft hand of woman sweet, lovely and attractive.

It needs not highly carved furniture, nor Kidderminster carpets to give our home an air of comfort, nor its occupants the spirit of contentment. But things must be in their appropriate place, and such things as add to real comfort can and should be produced by home industry and ingenuity. By loving example, and by implanting in them a desire to please the one they know is their best friend, the boys will be as careful of the house and as particular to keep it in order as the lady. But it cannot be expected the boys will be patterns of propriety if the father wades into the house with reeking boots, or destroys furniture and the walls of the house by awkward positions of his chair or feet. The heads of the family should go hand in hand in all good enterprises, without which true happiness comes to no house or home. In fact, the man who opposes or thwarts a woman in any way in her efforts to make the home pleasant and agreeable to all her household, deserves not a good wife, noble sons and lovely daughters. Sometimes a woman becomes too particular about her house and reserves its pleasant places for visitors. There should be about the house no place too good for the head of the family and the boys. Treat them with the glowing fruits of a loving heart and they will cling with love and affection about a home where there is so much sunshine.

There are many things which can be made out of odds and ends, which not only ornament, but add to the real comforts of life. For instance, a domestic lounge, sweet and clean in a cool corner in summer, or warm place in winter, for the rest or repose of one of the family when weary or unwell, is an article of great domestic comfort in a family, costing but little, adding much to the sum of human happiness. Bare floors are cold, noisy and cheerless. Toil and industry will make a covering for them from old coats, pants and superannuated garments. Neat and tasty ones, not costly, will make the house look like what the children see elsewhere. Door mats and thousands of little ornaments to walls, chairs, stools and tables are now-a-days made with taste and cunning, which give an air of comfort to the house, as well as being useful and convenient. Like the nest of the bee or bird, the house of a woman should be made a paradise by her hard work.

It is necessary to instill into the heads and hearts of boys and girls the importance of education, and of storing their minds with science, history and art. For this purpose they must be supplied with the means of obtaining this information. This can only be done cheaply in rural districts by wisely organized action, so that the burden will be light and trifling on every one, in view of the great amount of good. But there must also be the hours of freedom and amusement, and in this matter the older, and even the heads of the family should take a part. No one should become a slave to drudgery, with downcast looks, or too much attached to the world to enjoy an hour of pure or social enjoyment. This is not entirely a world of graves, of shadows, or of mourning, but one of sunshine in the heart, and where the most of this there is joy and comfort in the house and home. Life's burdens and trials will flee before such benign influences, and the home will be blessed and happy.—*Mrs. C. F. Clarkson.*

THE lady residents of large cities in America have adopted, lately, a very sensible style of heavy-soled shoes which is a protection against both damp and cold. Somber colors in dress have also replaced the butterfly-appearance of some years ago. Dress reform is gradual, but sure.

## A Woman Still.

A young woman, with dragged dress and a flushed face, with her hair loose over her shoulders and a hard look in her eyes, followed a burly officer into the Central station just as the clock was on the stroke of midnight.

"What's the matter here?" queried the Lieutenant, as the ill-mated couple came trooping in.

"Same old charge," said the officer; "she's been raising Cain around the hay market."

"You bet your boots I have," said the girl, with a hoarse laugh that showed there was whisky behind it. "I just give 'em as good as they sent."

They were leading her into the recording-room, when she stopped at the door opening into the Captain's office.

"Whose kid is that," she asked.

"That? Oh, one that was picked up on the street—lost by somebody."

"Lost, is he? Well, I've found him. Let me alone, will you?"

She pulled away from the officer, and in a moment was on the lounge with the child in her arms, the painted cheeks pressed close to the tear stains left on the little fellow's face when he had cried himself to sleep. Her hair hung in a veil before them, and hid the guilty and innocent alike from sight.

"I had one like you once," she murmured, after the hush of a moment, "but he died. That was so long ago that I thought I had forgotten it—there has been so much happening since—so much I wish to God had never happened!"

A moment longer and she looked up—as sober as a mother by the hearthstone. "May I take him in the cell with me?" she asked in a low and gentle voice.

They said she might, and the poor, forsaken woman sat down on the stone bench with the sleeping child held close to her bosom. The tears that fell from her eyes were as balm to her bruised heart and the little one lifted her soul to purer heights than it had known for many, many weary days in the past.—*Clareland Leader.*

## A Correction.

[Written for the Press by "NEW ENGLAND."]

In looking over the article on "Work Dresses," in the RURAL PRESS of December 2d, I noticed that it needed a correction. The direction given is, "baste the front lying upon the cloth, and slant out from the under-arm seam to the edge of the cloth, leaving a straight edge below." On the contrary, the front should have a good slant to the lower edge; but the selvage of the back will prevent it from stretching, just as, in gored dress-skirts, the straight edge is joined to the gored edge and hangs well. Take a straight line from the under-arm seam at the waist line, to the lower edge of the wrapper, and have the slant beyond this line as wide at the lower edge as half the length from the waist line in front. For instance, if the length from the waist is 40 inches on the front edge, the fullness should be about 20 inches beyond the line, and from two to four inches longer.

This way of cutting makes a very graceful train; and a wrapper looks very dressy when the back is cut long enough to allow for three or four pleats to commence, perhaps, four inches from the waist. In this case the back should be looped with three tapes (one in the center and one on either side), catching the cloth twice upon each tape. I called upon a friend the other morning, who wore a wrapper of soft cloth with a very long train. She said her husband had stepped upon it and torn the looping, but never mind, it does look so nice (only when we take a practical view of it.)

NO OCCUPATION—A GRAVE MISTAKE.—We recently had a letter from an ambitious young man. He had been unfortunate in some respects, but life lay before him, and he was ambitious; he experienced, however, a double misfortune in this world, in which there is so much to do, from not knowing how to do anything. "My father," he wrote, "did not think it worth while for me to learn any trade or business." He had been thrown on his own resources, and, although now a man in stature and years, he was a mere infant in his capacity to earn a living. How awkward! What a misfortune! Yet such cases frequently come under our observation; and they lead us to look upon the culpability as very great, of any parent who brings up a son without having him practically and thoroughly instructed in some way of earning an honest living. Every man should have some profession or trade; should know how to do something. Then, whether he steadfastly pursues it or not, he at least has an occupation to which, in an emergency, he may resort, for the support of himself and others who may be dependent upon him. A practical know-nothing is greatly to be pitied in this practical world.—*New York Ledger.*

HOPE is the ruddy morning of joy, recollection is its golden tinge; but the latter is wont to sink amid the dews and dusky shades of twilight; and the bright blue day which the former promises, breaks indeed, but in another world, and with another sun.—*Richter.*

THE husks of emptiness rustle in every wind; the full corn in the ear holds up its golden fruit noiselessly to the Lord of the harvest.—*Whittier.*



### "The Nature of Music."

At the Royal Institution of Great Britain, Mr. Ernst Paner gave the first of two lectures "On the Nature of Music," with pianoforte illustrations. The following is a summary: The language, or rather the expression and life of music, the substantial tone or sound, approaches nearest to our common language; yet it is so different from it that it sometimes becomes impossible to translate the musical language of feeling into the ordinary language in which we express our ideas. Thus the musical language of feeling cannot be translated into words, according to abstract or systematic rules. Feeling is generally warmer and more substantial than the idea, which, on the other hand, is brighter and specifically more intellectual. The language of feeling when expressed in music is intelligible to all, and forms a kind of universal language. In the human heart there exists a certain material region, a sensuous phase of the dream-world, a lower region of the soul's life, when our intellect has not yet risen into the realms of clear and conscious thought; just this dreamy phase is the world of music; the sounds of music are but the spontaneous expression of our innermost feelings. Just as the word is the expressed idea—or speaking is thinking loud—so is the tone the uttered expression of feeling, and singing is feeling aloud. It is therefore no wonder that music impresses all human beings in so great a degree, in so irresistible a manner. The mathematical and harmonious rules, which manifest themselves as music, when produced in an objective form, are founded in the composer's individual feeling; everything intellectual that we can produce from our inner life is the true mirror of that life. The whole world is replete with sounds and voices; and beautiful is Campanelli's idea: "If there were an instrument for the ear by which we could enlarge the faculty of hearing, as the faculty of sight is increased by the microscope and telescope, we should become acquainted with an entire polyphonic tone world, inasmuch as all motion produces waves of sound." And this entire world of sound, in which nature speaks in separate strains, is contained in its completeness within the human breast. The human heart possesses the faculty to feel, beside the working of its own little world, the beat of the pulse of universal nature. The two chief forms of music are the vocal and the instrumental. In vocal music our art appears as a companion of the language of speech—in instrumental music it shows itself as the exponent of the soul's emotions in unrestrained and unfettered independence. It should be the aim of music, when wedded to poetry, to enhance, beautify and enrich the latter, or as Gluck says: "The office of music is to warm and enliven the expression of the idea of the poem." Music presents a far wider field than any of the other arts, and, owing to its popularity, it has done more than any other to advance the progress of civilization.

**WINDOW CURTAINS.**—Window curtains made of unbleached muslin have come to be really fashionable. Even a lady's drawing-room, if it is a simple and useful room not too elegantly furnished, receives a pretty and tasteful finish with these curtains. House-furnishing establishments are already receiving orders for them, but we would inform our lady readers that they, with a little ingenuity and plenty of time, can manufacture them for themselves with much less cost. For windows of ordinary width, muslin one yard and a quarter wide is required, and three yards and a half in length. The trimming may be of flannel or cotton flannel (the latter is much the cheaper), and in several different colors, or only one color. This is put on in bands and the edges receive a finishing touch with the addition of the feather stitch embroidered in a pretty contrasting color. The tops of the curtains are fastened to wood or metal rings, and these strung on poles which serve in place of cornices.

**FUNERAL HONORS.**—Manners and customs savoring of genuine sentiment, exhibit themselves now and then among the inhabitants of European cities, worthy of imitation. When a funeral cortege is seen in the streets of Italy, no matter how humble, every one takes off their hats while it passes. The French salute a passing funeral with the most marked respect. Russia pays greater honors, as when a funeral passes before a military post the soldiers turn out and present arms. On this subject there is a story told of the late Czar Nicholas. One day his carriage overtook a hearse, and he was surprised to observe it was not followed by a single mourner, not even a dog. The emperor descended from his *droski*, and took up his position behind the hearse; being noticed, one citizen followed suit, then 20, then hundreds. Seeing the cortege to be at last respectable, the Czar re-entered his vehicle and returned to the palace.

**MEMORIAL.**—A. S. Barnes & Co., of New York, have just completed arrangements for the publication of the Memoirs of P. P. Bliss, the sweet singer, and victim of Ashtabula. It is prepared by his friend and companion, Major D. W. Whittle, of Chicago, with an introduction by D. L. Moody, the revivalist.

The work that has been done by dull and plodding people in this world can never be estimated.—*Anon.*

A NATION cannot afford to do a mean thing. *Charles Sumner.*



### Young Folks' Column.

#### Advice to Boys.

If I were a boy again, I would practice *perseverance* oftener, and never give a thing up because it was hard or inconvenient to do it. If we want light, we must conquer darkness. When I think of mathematics, I blush at the recollection of how often I "caved in," years ago. There is no trait more valuable than a determination to persevere when the right thing is to be accomplished. We are all inclined to give up too easily in trying or unpleasant situations, and the point I would establish with myself, if the choice were again within my grasp, would be never to relinquish my hold on a possible success, if mortal strength or brains in my case were adequate to the occasion. That was a capital lesson which Professor Faraday taught one of his students in the lecture-room, after some chemical experiments. The lights had been put out in the hall, and by accident some small article dropped on the floor from the Professor's hand. The professor lingered behind, endeavoring to pick it up. "Never mind," said the student. "It is of no consequence to-night, sir, whether we find it or no." "That is true," replied the professor; "but it is of grave consequence to me, as a principle, that I am not foiled in my determination to find it." Perseverance can sometimes equal genius in its results. "There are only two creatures," says the Eastern proverb, "who can surmount the pyramids—the eagle and the snail."

If I were a boy again, I would school myself into a habit of attention oftener. I would let nothing come between me and the subject in hand. I would remember that an expert on the ice never tries to skate in two directions at once. One of our great mistakes, while we are young, is that we do not attend strictly to what we are about just then, at that particular moment. We do not bend our energies close enough to what we are doing or learning. We wander into a half-interest only, and so never acquire fully what is needful for us to become master of. The practice of being habitually attentive is one easily obtained, if we begin early enough. I often hear grown-up people say: "I couldn't fix my attention on the sermon, or book, although I wished to do so." And the reason is, a habit of attention was never formed in youth. Let me tell you a sad instance of neglected power of concentration. A friend asked me once to lend him an interesting book, something that would enchain his attention; for he said he was losing the power to read. After a few days he brought back the volume, saying it was no doubt a work of great value and beauty; but that the will to enjoy it had gone from him forever, for other matters would intrude themselves on the page he was trying to understand and enjoy, and rows of figures constantly marshaled themselves on the margin, adding themselves up at the bottom of the leaf.

If I were to live my life over again, I would pay more attention to the cultivation of *memory*. I would strengthen that faculty by every possible means and on every possible occasion. It takes a little hard work at first to remember things accurately; but memory soon helps itself and gives very little trouble. It only needs early cultivation to become a *power*. Everybody can acquire it. When I was a youth, a classmate of mine came to me with a long face and told me that he was in danger of being supplanted in the regard of a young person of the gentler sex by a smart fellow, belonging to another school, who was daily in the habit of calling on the lady and repeating to her from memory whole poems of considerable length. "What would you do?" sighed the lad to me. "Do?" said I; "I would beat him on his own ground and at once commit to memory the whole of 'Paradise Lost,' book by book, and every time the intruder left Amelia's house I would rush in and fire away! Depend upon it," I said, "she is quite taken by surprise with the skillful memory of her new acquaintance; and you must beat him with surpassing feats of the same quality." "Oh! but," said my friend, "I have, as you know, a very poor memory!" "The more reason now for cultivating that department of your intellect," I rejoined. "If you give way to idle repining and do nothing, that fellow will soon be firmly seated in your place. I should not wonder if he were now at work on Thomson's 'Seasons,' for his infamous purpose. Delay no longer; but attack John Milton after supper to-night, and win the prize above all competition!" Ezekiel began in good earnest, and before the summer was over he had memorized the whole of "Paradise Lost," rehearsed it to Amelia, and gained the victory.—*J. T. Fields.*

### GOOD HEALTH.

#### Treatment for an Ulcerated Tooth.

Dr. Geo. L. Parmelee, of Harvard University, writes to the *Journal of Chemistry*, telling the cause of ulcerated teeth and the treatment therefor. If a longitudinal section be made of a tooth, a cavity nearly corresponding in shape to the external contour of the tooth will be found. This cavity is prolonged into the root, or roots, if there be more than one, and opens by minute orifice at the extremity of each. This is called the pulp cavity or chamber, while those portions extending into the roots are distinguished by the name of pulp canals. This pulp cavity is occupied by a highly vascular and nervous tissue, the dental pulp, which is continuous through the opening at the end of the root, with the vessels and nerves which supply the teeth and adjacent parts.

When from any cause the pulp of a tooth dies, what happens? The pulp being dead, of course decomposes; and if allowed to remain in the tooth, the gases arising from this decomposition must find a means of exit. If a cavity of decay exists, freely open, the gases arising from the dead pulp will escape through the cavity, and no trouble results. But should this cavity be closed, either by the impaction of food, a filling, or any other cause, the gases, finding no other vent, are forced through the minute orifice at the end of the root, where the vessels entered which supplied it with life, irritating the root membrane of the tooth and the surrounding parts. This irritation causes inflammation, and as this progresses pus is formed.

The first indication we have of this variety of toothache, is a slight soreness on shutting the teeth together, or on striking the affected tooth. Soon the soreness increases, the tooth feels as if it was more prominent than the others, and one has a desire to be continually feeling of it, to see how things are progressing. The pain is dull, throbbing, and, owing to the parts being confined by hard, bony walls, severely intense, the whole jaw sympathizing.

As it is often necessary to destroy these pulps, what should be done to guard against toothache of this variety? After the life of a pulp has been destroyed, by the application of medicine to it, or any other cause, it should be hardened and withdrawn from its cavity—which is not a painful operation—the parts thoroughly disinfected, and the cavity carefully filled. If teeth are treated in this way, the chances of trouble are greatly lessened, and they may be retained as useful organs for many years and perhaps for a lifetime. What shall we do if this trouble does arise? Consult a competent dentist, not one who has picked up a little knowledge of teeth, and is a mere extractor and plucker of these organs, but one who has been thoroughly and scientifically educated for his calling, and he will know what to do. In case for any reason this is impossible, you may be able to relieve yourself.

In the first place do not delay in hope that the tooth may feel better, but attend to it at once. Remove if you can all foreign matter from the cavity, thoroughly washing it with tepid water, and get an opening into the pulp chamber. This alone will often cure it. Paint the gum freely all around the tooth with strong tincture of iodine, first drying off the moisture from the gum. Hold ice-cold water or lumps of ice continually in the mouth, but should you start on this cold water method of treatment you must keep it up for several hours, or it will be worse than useless. Hot foot-baths and saline cathartics. Let the tooth alone, do not keep feeling of it, thus keeping up the irritation which you are trying to allay. Remember that this form of treatment is not applicable to an exposed living pulp, but only in cases where this organ is dead. Cold water applied to an inflamed living pulp would only increase your agony.

Should you find that you cannot arrest the inflammation after a sufficient trial, you will have to take the other course, and that is, to hasten suppuration by warm applications *directly to the part*. For this purpose nothing is better than a split fig, roasted and laid on the gum. Warm fluids held in the mouth will sometimes afford relief. But it is wiser to go at once to a competent dentist, as serious trouble often arises from this form of disease. Never, on any consideration, apply poisons to the outside of the face, for should the abscess point and break there, a permanent and unsightly scar would be the result.

In closing I would say, that as "an ounce of prevention is worth a pound of cure," it would be much better to attend to your teeth in time, before the pulps become exposed, and save your teeth and yourself all this pain and trouble. You will never find any artificial teeth that will be the source of as much comfort as your own natural organs properly taken care of.

**AGE.**—The probabilities of living to be 100 years old are, according to the statistics of Dr. Farr, 223 to 1,000,000. That is to say, computing the present average number of deaths on the basis of the recent official tables of mortality in England, out of every 1,000,000 now living, 223 live to be 100 years old, and the last one of the million will die in his 108th year.

### DOMESTIC ECONOMY.

#### A Vegetable Catechism.

A writer in *Demorest's Monthly* says: Why should haricot beans never be put into cold water to soak, as is often recommended? Because all the nutritious portion of the bean is extracted by the process. They should be washed in warm water, then in cold, be tied loosely in a cloth, be put into boiling water with a spoonful of dripping and a little salt in it, and be kept boiling for four hours. They are then excellent if served with gravy and not with melted butter. They serve as garnish round roast mutton or beef, and are excellent eating served whole or as a puree. To make the latter, when the beans are done throw them instantly into cold water, when the skins will slip off. Rub the beans through the colander and mix a lump of butter with them. A little stock, or milk, or cream, is excellent mixed in.

Why should plenty of fast-boiling water be used in boiling vegetables, potatoes excepted? Because the greater the body of boiling water the greater the heat. If only a little water be used, the whole affair soon cools, and the vegetables become tough, so much so that no length of time in boiling them will render them otherwise. Broccoli sprouts in April, if properly cooked by boiling them for eight minutes in boiling water, will be tender as marrow; but if not properly done, hours will not cook them.

Why should onions be always cut in round and very thin rings? Because the fiber is thus cut across, and in so cutting them, or whether for frying or making sauce, they are rendered very tender when cooked. With turnips and carrots it is just the same; neither of the three should be split or cut in any other way.

Why should parsley never be boiled with soda—only in boiling water and salt? Because parsley, having no oil in it, would be spoiled with soda, and all flavor would be extracted.

#### Making Tea.

A writer in the *New York World* says: A grave mistake among the tea-makers of this country is that they make tea too strong, and thereby lose the full tea flavor. Professional tea-tasters who desire the full flavor of the leaf use but a single pinch to a cup of boiling water, in place of the heaping teaspoonful generally employed. In China and Russia, where tea is prepared to perfection, it is made weak, boiling water being poured upon a few leaves, the decoction covered for a few minutes; and the beverage drunk hot and clear.

While it is positively essential to a good cup of tea that the leaves be steeped in water boiling at the time it is poured over them (not simply at a boiling point), tea should never be boiled, or the true aroma which exists in the volatile essential oil will be thrown off by evaporation, leaving as flavoring only the bitter principle of tannic acid extracted by the excessive heat of ebullition. The old idea, that black tea must be boiled, not steeped, was long ago abandoned by professional tea-makers and tea-tasters, experience having taught that the leaves require the same preparation as those of the green kinds to produce the most desirable drink. A lump of loaf-sugar put into the teapot with the tea will cause it to infuse in one-half the time otherwise required. When fresh tea is desired, always empty out the soaked leaves of a previous drawing, and rinse the teapot thoroughly with boiling water before a second quantity is put in to steep.

**BEEF-TEA.**—Dr. Christian says that "every one will be struck with the readiness with which certain classes of patients will often take diluted meat-juice and beef-tea repeatedly, when they refuse all other kinds of food." This is particularly remarkable in "cases of gastric fever, in which," he says, "little or nothing else besides beef-tea or diluted meat-juice" has been taken for weeks or even months, "and yet a pint of beef-tea contains scarcely one-fourth of an ounce of anything but water." The result is so striking that he asks, "What is its mode of action? Not simply nutritive; one-fourth of an ounce of the most nutritive material cannot nearly replace the daily wear and tear of the tissues in any circumstances. Possibly," he says, "it belongs to a new denomination of remedies." It has been observed that a small quantity of beef-tea, added to other articles of nutrition, augments their power out of all proportion to the additional amount of solid matter. The reason why jelly should be innoxious and beef-tea nutritious to the sick is a secret yet undiscovered, but it clearly shows that careful observation of the sick is the only clue to the best dietary.

**CLARIFIED HONEY.**—Clarified honey is obtained by E. Dannenberg, of unexceptionable quality, by diluting the crude honey with half its weight of water, boiling for 15 or 30 minutes, according to the quantity operated upon, the scum being carefully removed, and then adding five or six times sufficient cold water to interrupt the boiling for not over half a minute. After boiling for another 15 minutes, the hot honey is strained and evaporated. Thus prepared the author has kept the honey unaltered for over two years.





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. B. EWER. O. H. STRONO. J. L. BOONE.  
PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25.....80.....\$ 2.00.....\$ 5.00  
Half inch (1 square).....\$1.00.....\$3.00.....7.50.....24.00  
One inch.....2.00.....5.00.....14.00.....40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, March 17, 1877.

### TABLE OF CONTENTS.

GENERAL EDITORIALS. California Pearls Abroad; Another Variety of Diospyros Kaki; The Dhoura or Egyptian Corn; Berry Boxes and Fruit Baskets, 161. The Week; Investment in California; Turning Squirrels to Profit; The West Side Canal, 168. Ancient Ruins in Colorado and Utah, 169.  
ILLUSTRATIONS.—Japanese Persimmon—Flat Variety, 161. Ancient Ruins in Colorado and Utah, 167.  
CORRESPONDENCE. Potato Growing; Hints, 162.  
FLORICULTURE.—Floral Nomenclature, 162.  
THE STABLE.—The English Box System, 162.  
POULTRY YARD.—Value of Pure Bred Poultry to Farmers; "Douglas Mixture"; Poultry Diseases, 162.  
THE DAIRY.—Packing Butter and Cheese, 162.  
THE SWINE YARD.—The Berkshire Association, 163.  
ARBORICULTURE.—The Walnut, 163.  
THE VINEYARD.—The French and the Phylloxera, 163.  
THE APIARY.—Bibulous Bees, 163.  
PATRONS OF HUSBANDRY.—Grange Directory; The Grange Cases; From the Granges, 164.  
AGRICULTURAL NOTES from the various counties in California, 165.  
HOME CIRCLE. Lines (Poetry); Nature (Poetry); Maggie Ryan; Home Comfort; A Woman Still; A Correction; "The Nature of Music"; Window Curtains; Funeral Honors; Memorial, 166-7.  
YOUNG FOLKS' COLUMN.—Advice to Boys, 167.  
GOOD HEALTH.—Treatment for an Ulcerated Tooth, 167.  
DOMESTIC ECONOMY. A Vegetable Catechism; Making Tea; Beef Tea; Clarified Honey, 167.  
HORTICULTURE. Pine-Apple Growing in Florida; Selling Dried Fruit in the East, 170.  
SHEEP AND WOOL.—Preparing Wool for Market, 170.  
QUERIES AND REPLIES.—Squirrel Poisoning; The Market for Oranges; Almond and Apricot Stocks, 168.  
GENERAL NEWS ITEMS on page 172 and other pages.  
MISCELLANEOUS.—Hotel Cars; Using Coal; Delective Apothecaries' Weights, 170.

### NEW ADVERTISEMENTS.

Union Box Factory, S. F.; Golden Patent; New York Watch Co., Springfield, Mass.; New Patent Harvester, W. & Co., S. F.; Windmills, C. P. Hoag, S. F.; Straw-burning Engines, E. L. Ransome, S. F.; Dairy Tenants Wanted, E. J. Wickson, S. F.

### The Week.

Around the bay and in the northern central counties we have had a week of splendid growing weather. Several mornings the sleepers have been awakened by the spring showers, and at some points half an inch of rain has shown the shower to be a thing of real value. The growing grain in several counties is being rushed forward so that the owners fear lodgement, but complaints of this kind are generally made with a smile of gratitude that growth is not denied. Reports from the southern counties are various, but generally dark and anticipating general losses. In several of them there have been light showers which freshen the feed a little, but there is nothing upon which to base an expectation of water enough for a crop except on lands which lie within the reach of irrigation. The slaughtering of sheep in the lower country is said to number its tens of thousands, and the poor stock generally kept upon the hill ranges will doubtless pass almost entirely away. On the other hand there will be feed enough on the low grounds to maintain the improved stock, and when the time of abundance comes again there will be a better class of animals under the shears. This is not a very great compensation for the amounts of loss, but it will be at least a little gain.

This is a brief review of the state of affairs. One part of our commonwealth is in the fullness of hope and the other in the darkness of doubt. We trust that those whose days will be darkest will find abundant recompense in the better fortune which may be theirs when rolls another year.

### Investment in California.

According to our own advices and the knowledge which we obtain from our interior exchanges, we are assured that there will be a very gratifying investment in California real estate during the coming spring time, on the part of our Eastern friends and comers from abroad. At the East the two great exciting events, the Centennial and the presidential election, will not this year restrain those contemplating change of residence. A writer of unusual severity has frozen into resolutions the desires for the luxury of our climate which have been growing during the late years in many minds. The depression in business of all kinds at the East, though now happily showing signs of dissolution, still has force enough to induce men to escape from it if they are able. These things, coupled with the general desirability which nearly all outsiders justly look upon as the characteristic of a California home, will tend to gain for us this year the coming of that class of citizens whom we most desire, men who come with hands and hearts for enterprises and pockets heavy enough to materialize their projects.

Although the prospects of the season as they are now discernible will not enable some of our counties to produce those marks of prosperity which new comers most desire, still there are other parts of the State which are now full to overflowing with good cheer and which hold within their possibilities thousands of happy homes beyond those which now dot the landscapes. To these localities this year's gains will come; and as we think of the miles of grain fields in them in which no fault can be found unless it be that growth is too rank and rapid; of the townships of pastures from which comes butter more than a pound per day to the cow; of the vineyards and orchards which will be peerless in their rich and early fruitage, we can but think that these favored regions will richly merit the consideration which they will receive from the new friends they will make this season. While we speak in words justly glowing of those parts of our State which will receive the weight of this year's harvest blessings, we do not forget the parts to which hardship will come. We remember them with the keenest sympathy; and trust even the depth of their present darkness may give them at least the light of experience, which will show them the way to triumph over doubt in the future, by the certainty of preparation.

As we write of the tendency to investment in California we are reminded that one great barrier, which has held much Eastern capital aloof from us during the last decade, and longer, is now so reduced that it is an obstacle exceedingly small. We refer to the price of gold as compared with the greenback currency. This difference in the purchasing medium has restrained many from purchasing homes in this State. They had the disposition, but they could not submit to have the heads cut from their dollars by the money brokers. No one will ever know just how much this influence has militated against us, but the extent is considerable. Had it not been for this we have no doubt at all that the heavy immigration of 1874-5-6 would have been increased by thousands of men who would have come with the capital to work farms and start manufactories, and thus the great labor influx of those years would have been attended by a flow of capital to employ it and the return of many a discouraged laborer would have been obviated. The proof that the difference in the medium of exchange is now small, as compared with former years, may be seen in the reports of the price of gold in New York. It is also evident in the rumors which are sent abroad by the commercial newspapers of New York, that the black-hearted Gold Board, which has excited the country by its gold gambling, and more than once paralyzed industry by its "Black Friday" panics, is contemplating disincorporation from the fact that its occupation is nearly gone, and the opportunities for its scheming reduced to too narrow limits. These facts, coupled with the declared intent of the country to replace currency upon a specie basis, prove not only that the country is coming upon California ground in its financial ideas, but will open the way for coming upon California soil to many who have both the means and the inclination.

The mind startles itself when it begins to picture the possibilities for growth and progress in trade and production which this coast possesses. Our metropolis is pressing over the third line of hills toward the Pacific, and at the same time turns from its third hundred thousand of population into the coming hundreds of thousands. Our trade belts the world and has for a special possession the Asiatic and Oceanic millions. Our agriculture is just entering upon its true life, when system and economy shall rule, and the finer and more precious products shall replace the coarse and bulky; when England shall pay us more for 10 pounds of fruit or honey than for a cental of grain; when Australia and Ohio shall no longer sell wool at 60 cents to our 20 cents; when we shall turn back upon Europe her shower of raisins and floods of wine, and when the increased expenditure for preparing such productions shall support in comfort ten times our present agricultural laboring population. Such may be the result in many parts of our wide domain, when land and law monopolies shall be pushed aside, and when agricultural enterprise, now biding, shall bear its perfect

fruit. Beyond this lies our field for manufacturing and for placing the stamp of utility upon the varied materials which we possess. When to the cost of production we shall add the manufacturer's profits, a population of skilled laborers will live upon them, and thus advance our agriculturists by increasing tenfold the home consumption of the products of the fields. All these things lie within easy reach of this coast, and when we remember that we have but lately turned the first quarter of a century of our permanent growth, it is plain to see that the doubling of our growth hitherto will realize all we have described, perhaps ere the bright California baby, now in his cradle, casts his maiden vote.

It is easy to make friends with California. Her greetings, like her skies, are warm and winning. She asks but manly attributes and power to give them play and her rewards, like her future, will be great. We are glad to note that the passing months are bringing her nearer to those who admire her from afar, and that by the rules of value which exchanges regulate, the offerings which they will bring this year to establish themselves on her domain will have a power to purchase here nearer to that at which they were obtained in the States whence our new friends shall come.

### The West Side Canal.

The West Side canal has passed the first stage of existence; that is, the preliminary surveys have been completed and, according to law, a report has been made to the Governor stating that the commission find the project feasible, and marking out the course which it is recommended that the canal should take through the country. According to the act which authorized the work, the next step is that a vote shall be taken on the first Tuesday in May as to whether the owners of land to be benefited will tax themselves to prosecute the work.

The names of the Commissioners appointed by the Governor to find a feasible scheme of irrigation, are J. R. McDonald, F. Williams and H. De Veuve. The engineer of the Commission, Wm. H. Hall. Gen. B. S. Alexander, of the United States Engineer Corps, acted as consulting engineer. The Commission borrowed \$25,000 for necessary expenses, which, if the tax should be voted, will be paid out of the first sale of the bonds. Otherwise the Governor will recommend to the next Legislature the propriety of an act to pay the citizens what they kindly lent. Their proposed scheme can be thus synopsisized: A canal is to be built throughout the district, commencing at the northern boundary of Tulare lake and running through the district, emptying into the bay at Fuller's point, near Antioch. At the point of beginning an excavation will be made 15 miles long and from seven to 15 feet deep. The fall or grade of the canal will be fixed at not more than four and a half or less than three and a half inches per mile. The velocity of the water will be from one to one and a half miles per hour. The canal will be sufficient to irrigate 340,000 acres. Entire length of canal, 185½ miles. This canal will be divided into 14 divisions, and will cost \$4,305,786.

SWAMP LANDS IN OREGON.—A dispatch from Salem, Oregon, brings important tidings of a judicial decision. It says: For some time past there has been a feeling of uneasiness existing in real estate circles concerning the action of the courts of the county in reference to swamp lands, and below is a synopsis of a decision made to-day by Judge R. P. Boise, one of the Justices of the Supreme Court for the Third Judicial District of Oregon: In 1870 M. H. Owen filed several hundred thousand acres of swamp lands in different parts of the State, a large amount of which was claimed to be in the grants by Congress to the several road companies organized in the State during the past fifteen years. For the purpose of testing the question, Mr. Owen selected a quarter section of land in Lake county, in this State, to which the Oregon Central Military Wagon Road Company had a deed from the General Government, and tendered to the Board of Swamp Land Commissioners the twenty per cent. required by law, and demanded a certificate. This was refused by the Board on the ground that the State had parted with its title to the land in 1864. Mr. Owen then applied to Judge Boise for a writ of mandamus to compel the Board to issue to him a certificate for the land. The matter came on for hearing to-day, when Judge Boise, after hearing the arguments, decided: First—That the Act of March 12th, 1860, extending the Swamp Land Grant to Oregon and Minnesota, was a grant in present. Second—That the State had never parted with its interest to the road company. Third—That the Board of Swamp Land Commissioners must receive the tender and issue the certificate to Mr. Owen. It is understood that the company claiming the lands will lose upwards of 100,000 acres of land which is very valuable, and this case is considered a test as to the other roads claiming to hold swamp lands.

WILL T. Johnson of Modesto please inform us what the money is for that he sent us by Wells, Fargo & Co. about Sept. 30th, 1876?

ATTENTION is called to the timely advertisement of the "New Patent Harvest Sharpener" in another column.

### QUERIES AND REPLIES.

#### Squirrel Poisoning.

EDITORS PRESS:—Can you give us information through the columns of the RURAL PRESS of the most efficacious method of exterminating squirrels? Myself and some of my neighbors have been using the "Patent squirrel and gopher exterminator," viz., prepared wheat, spreading it according to the directions, but without any apparent decrease in number of pests. Our squirrels do not seem to relish the poisonous wheat, for we observe that very little of it is eaten.—E. A. ARWOOD, San Luis Obispo, Cal.

Wheat is generally the material used to carry the poison to the squirrel, and our querists must be more depraved than others if they do not eat it. We have given several preparations used by our readers for poisoning the wheat, and it might be worth while for our querist to try his squirrels with some other dose if the prepared article does not meet their case. We have a recipe which was given us some time ago by the Hon. R. G. Sneath, President of the Merchants' Exchange Bank, and which Mr. Sneath has found very effective on his lands. He takes two pounds of gum arabic to a common paulful of warm water and lets it soak over night so as to have the gum completely dissolved, and to the liquid he adds a few drops of rhodium. To one paulful of wheat he uses three-fourths of a quart of the mucilage and one pound of soft white sugar and one ounce of strychnine. A few days after placing the wheat in the holes, go around and stop them up and put in more wheat at every time they dig a fresh hole. The first squirrel that comes out may gather up all the grain in his pouch so that the others will get none. They are very greedy animals.

If any of our readers have found poisoned wheat ineffective as our querist has, and have succeeded with some other material or device, we hope they will let us hear from them.

#### The Market for Oranges.

EDITORS PRESS:—Would you be kind enough to give me what information you can concerning orange culture in Los Angeles county? I am desirous of going at that business in a short time, and would be thankful indeed for any information you would be kind enough to give me concerning principally the state of the market for this product. The New York Tribune has been kind enough to refer me to you.—H. MILLER, New York city.

According to all indications the orange growing business in Los Angeles is very prosperous. The trees have grown well and the planting of them has been extensive. There have been a few drawbacks in the shape of insects and fungus attacks but no more, if indeed as great, as in all orange growing countries. We shall send our querist some back issues of the PRESS in which we have given information concerning the culture of the fruit, prepared for us by some of the most successful growers.

The query is directed especially to the market for the fruit. This is brisk and satisfactory where due care is taken in the selection of the fruit. Our oranges come upon the market just at a time when the trade is free from importations from neighboring orange growing countries, and therefore has free field for profitable sale. Although the production is large and it has been found that many counties are fitted for the growth of the fruit, there is no apparent danger of an over-production. The price which is quoted to-day is from \$12.50 to \$35. per thousand. This is the price in San Francisco, which is the central market.

#### Almond and Apricot Stocks.

EDITORS PRESS:—Mr. Robt. Lyon's letter in RURAL PRESS of March 10th, relates an experience similar to my own, where almonds had been grafted on apricot stocks. In the winter of 1872-73 I purchased 300 almond trees of Mr. K., of Oakland, among which I found 13 to be on apricot roots. The result is, of the 13 only two are now living. The wood of the almond cion not having united with the wood of the apricot root and the connection of the two barks being only on one side, it took very little wind or other force to sever all union. The two now living are not one-fourth the size of the average of the others, which are on peach roots, set at the same time and receiving the same care, which proves to me that almonds and apricots are far from reliable when grafted one on the other.—A. T. HATCH, Suisun valley, Solano county, Cal.

FISHES FOR CALIFORNIA.—A dispatch to the Call says: Senator Sargent succeeded at the last session in procuring an adequate appropriation for continuing the work of propagation of food fishes, and has secured a promise from Prof. Baird, the Commissioner, that a larger number of shad and white fish will be sent to stock California rivers than last year, when 500,000 white fish and 120,000 young shad were sent. Some new varieties of carp, obtained from Germany, will also be sent to California. The beneficial operations of the Fish Commission are already widely apparent on this side of the continent. Salmon and shad are appearing in great numbers where for many years they have been strangers, and by the consequent reduction of prices these wholesome articles of food are being rapidly brought within the reach of all classes.

THE losses of American ships has been so great this winter, that the ship-yards of New England are looking forward to a busy year, especially those which build wooden vessels of the best class.

ON FILE.—"Ladies as Lawyers," C. I. H. N.; "Letters to Boys and Girls," J.



## California Pears Abroad.

The success which our "shipping pears" are attaining in the fruit markets of the world is a most encouraging point in our progress. In the last issue of the *Boston Cultivator* we read as follows: "During the past month samples of Easter Beurre pear have been received in London from California in good condition, and larger consignments were expected. Heretofore the larger proportion of choice winter pears have been obtained from France, Belgium and the Channel islands, and thousands of pounds are paid annually for pears alone. Henceforth the Continental growers will have to compete with the growers of California, where land is cheap, and the long season is so fine for late pears, and the capacity of the fruit for traveling is better, owing to the drier and more sunny climate than that of Southern Europe. It certainly is astonishing that fine pears can be transported five or six thousand miles, arrive in fine order, and be sold at a price to compete with those raised within one or two hundred miles of the market. Among the wonders of California products, this of the late winter pears is one of the most remarkable, for they can only be raised in the most favorable positions, and with great skill, on the Continent, while in California they need no more attention than the ordinary varieties. Our own Boston markets are now supplied with fine specimens, which cannot be produced in this country except in California."

## Fox's Seedling Pears.

The Albany Country Gentleman has the following favorable notice of some seedlings of our friend, B. S. Fox, of San Jose. It says: This remarkable collection of new seedlings seems destined to attract much attention from fruit growers. The two most successful originators of varieties in this country, F. & L. Clapp, of Dorchester, Mass., and B. S. Fox, of San Jose, California, like Dr. Kirtland with cherries, Ricketts and Rogers with grapes, and Seth Boyden with strawberries, have certainly made important contributions to the pomological lists of this country. Through the kindness of Messrs. Ellwanger & Barry, of Rochester, we have been favored with fine specimens of several sorts of these pears, grown in California. Another year has enabled us to witness the excellence of the sort named the Wilder, after the life-long President of the American Pomological Society. This sort, which we have now examined in different seasons, possesses qualities which must give it a high position for value, if as good at the East as in its native State. The fruit is large, obtuse pyriform (it might be termed dial-shaped), with a rich yellow, slightly rough and somewhat russeted skin; the stem and calyx are both slightly sunk; the flesh is buttery and melting, and possesses the desirable quality for a winter pear of much juiciness; it has an exceedingly sweet and excellent flavor, and in the pomological scale would be termed at least "very good," if not the "best." When grown at the East it may be diminished in size, but would probably retain its flavor, while its keeping qualities would give it additional value. J. Saul, of Washington, D. C., stated at the Chicago meeting that he had kept specimens of this pear till the 19th of April.

Another variety, named Barry, is a large russeted, oblong pear, which is probably equally good as a keeper, but perhaps hardly up to the Wilder in flavor. Its oblong-pyriform shape and the rich cinnamon russet with which it is covered give it a peculiar and striking appearance. The flesh is buttery and melting, rich, and would be rated as "very good."

The seedling marked No. 68, is a large, blunt-obovate pear, yellow, with some tinge of green; the flesh is buttery and melting and partly breaking in texture; juicy, sweet, "very good."

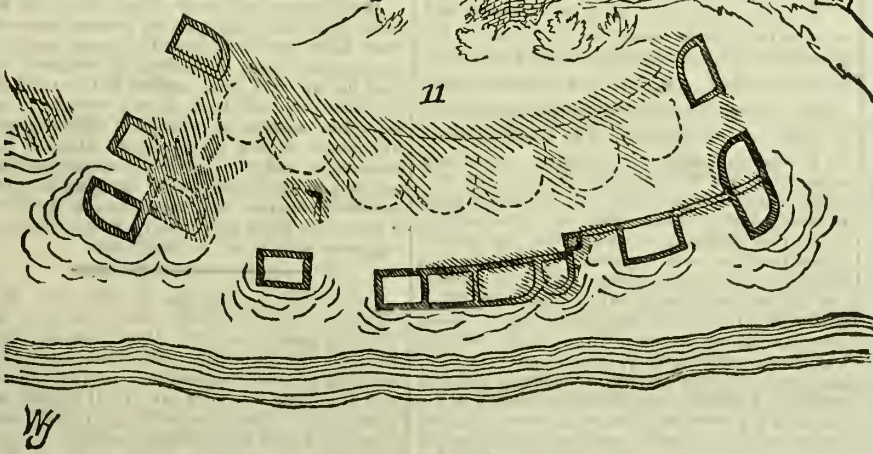
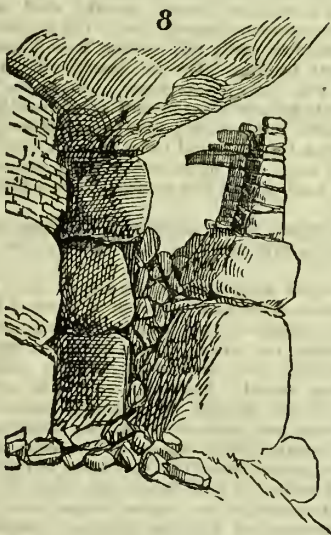
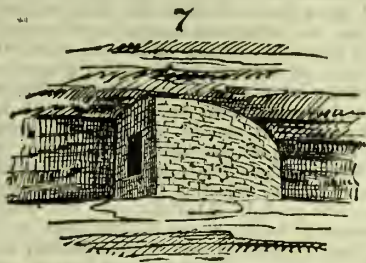
No. 108 is large, roundish-obovate, with elevated knobs at base and apex, strongly ribbed at those knobs, and the rest of the surface nearly even and regular; it is yellow, half breaking, sweet, good or very good. In form it reminds one of an orange quince.

When it is borne in mind that this collection of seedlings embraces some 60 or 70 sorts, which were thought worthy of notice by numbers, it evidently merits much attention by pomologists. From what we have seen of the changes produced in Eastern and European pears grown in California, we may feel some confidence that a portion of these will not deteriorate in quality when tried in the Eastern States, although they may be lessened in size. They will certainly afford some valuable sorts for cultivation in that State, especially for winter shipping, as many of the pears sent East this winter, of sorts which ripen earlier, have been entirely ruined in the transit.

R. B. BLOWERS'S DRIER.—Mr. Blowers, of Woodland, well known as one of the California raisin kings, gave us the pleasure on Monday of an examination of the drawings which represent his new drier for fruits, etc., of which a short notice appeared in last week's Press. We were exceedingly gratified with the compactness of the contrivance, and the ingenious manner in which the philosophy of air currents is employed to secure the greatest effectiveness and economy of work and heat. We regard Mr. Blowers's plan of such great and general importance, that we have prevailed upon him to prepare for us an accurate description of his invention and its possibilities. We hope to publish it soon.

## Ancient Ruins in Colorado and Utah.

In our last issue we gave a brief account of the ruins which exist in southwestern Colorado, with sketches showing the general features of these ruins. Some of those examined by the Hayden survey party were in a very good state of preservation, but the majority were merely piles of debris with a few scattered stones and broken pieces of pottery to show that they were formerly inhabited. The Mesa Verde, or green table land, as the name implies, extends north and south about 20 and east and west about 40 miles. It is of a grayish-yellow cretaceous sandstone, with a very nearly horizontal bedding, so that the escarpment is about equal on all sides, ranging from 600 to 1,000 feet in height. Side canyons penetrate the mesa and ramify it in every direction, always presenting a perpendicular face, so that it is only at very rare intervals that the top can be reached; but once up



ANCIENT RUINS IN COLORADO AND UTAH.

there excellent grazing can be found, with thick groves of cedar and pine.

Entering the canyon at its upper end the party struck into the old Indian trail which comes over from the head of the Rio Dolores. Grouped along in clusters and singly were indications of former habitations, very nearly obliterated and consisting mostly, in the first four or five miles, of the same mound-like forms noticed in other localities, and accompanied always by the scattered broken pottery.

At those places where the trail ran high up near the more precipitous portion of the bluff, were found remnants of stone walls, inclosing spaces of from five to twelve feet in length, in the cave-like crevices running along the seams. They were pretty well demolished, the stones undressed and imbedded in mortar. In many places little niches or crevices in the rock had been walled up into cupboard-like inclosures about the size of a hushel basket. There is no doubt that ruins exist throughout the entire canon far above and out of the way of ordinary observation. All those that were found by the party were built of the same material as the cliffs themselves, with but few, and then only the smallest, apertures toward the canon; the surface being dressed very smooth and showing no lines of masonry, it was only upon the very closest inspection that the house could be separated from the cliff. Cedar and pines also grow thickly along the ledges upon which they are built, hiding completely anything behind them.

In another part of the canyon, on the high bluff to the right hand, were found some of the most curious and unique little habitations yet seen. While going along under this bluff, fully 1,000 feet in height, and admiring its bold outlines and beautiful coloring, one of the party, sharper-eyed than the rest, descried away up near the top, perfect little houses sandwiched in among the crevices of the horizontal strata of the rock of which the bluff is composed. While Mr. Jackson was busy photographing, two of the party started up to scale the height and inspect this lofty abode. By penetrating a side canyon some little way, a gradual slope was found, that carried them to the summit of the bluff. Now, the trouble was to get down to the houses, and this was accomplished only by crawling along a ledge of about 20 inches in width and not tall enough for more than a creeping position. In momentary peril of life, for the least mistake would precipitate him down the whole of the dizzy height, the adventurous seeker after knowledge crept along the

the remaining wall, and thrown over at a considerable angle, yet it remains perfectly firm and unshaken.

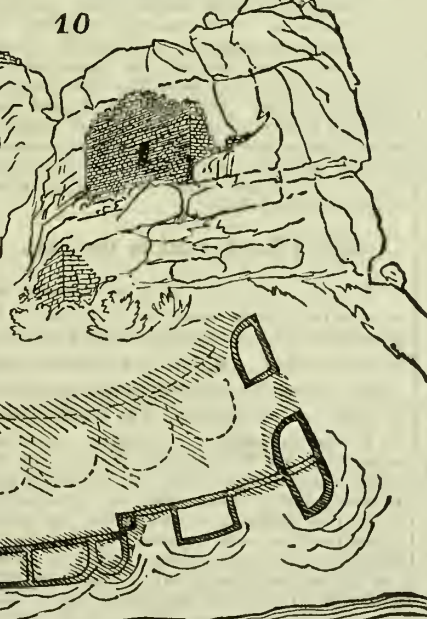
The party examined a very extensive group of ruins about "Aztec springs," lying out upon the northeastern flank of "el Late" and close upon the divide between the waters of the Mancos and the McElmo. The town about the springs is nearly a square mile in extent, the larger and more enduring building in the center, while all about are scattered and grouped the remnants of smaller structures comprising the suburbs. About four miles from these ruins is a stream called the McElmo, which flows westwardly into the San Juan, but is for the greater portion of the year but a deep, dry gulch. A short distance above, and upon the top of the mesa, which in this place is only about twenty-five feet above the valley, was found quite a large tower about fifty feet in diameter. Immediately surrounding this tower is a great mass, of which it is the center, of scattered heaps of stone debris, arranged in rectangular order, each little square with a depressed center, suggesting large subdivided buildings similar to the great community-dwellings of the Pueblos and Moquis. This group covers a space of about one hundred yards square; while adjoining it on the mesa is group after group on the same general plan, great central tower and smaller surrounding buildings. They cover the whole length and breadth of the land; and turn which way they would, the members of the party stumbled over the old mounds and into the cellars, as one might call them, of these truly aborigines. The same painted, glazed and ornamented ware of which we have spoken accompanies each settlement, and they were continually picking up new designs and forms.

Starting down the canyon, which gradually deepened as the table-land rose above them, the party found upon each hand very old and faint vestiges of the homes of a forgotten people, but could give them no more attention than merely noting their existence. A few miles further on the party came upon the tower shown in Fig. 9, standing upon the summit of a great square block of sandstone, some 40 feet in height, detached from the bluff back of it. The building upon its summit is square, with apertures upon its two faces, like windows, looking east and north and very much ruined, but still standing in some places about 15 feet above the rock upon which it is built. At the base of the rock is a wall running around it, a small portion only remaining, the rest thrown down and covered with the debris from the house above.

Here they crossed the boundary line into Utah, and then, two or three miles further, they came upon a very interesting group. The valley at this place widens out considerably, and in the center stands a solitary butte of dark-red sandstone, upon a perfectly bare and smooth floor of the same, dipping down to the center of the valley at a slight inclination. The butte, a remnant of a former mesa, worn down by time to its present dimensions, is about 100 feet in height and 300 in length. Running about its base, in irregular lines, are remains of walls, but whether for defense or habitation would be hard now to determine. At the back of the rock, a view of which is had in Fig. 10, are the remains of two quite considerable walls, one above the other; the lower portion—one corner only of a square building, all traces of the remaining portions having entirely disappeared—seemed to serve as a sort of approach to the larger building above, the top of which came up nearly to the summit of the rock. The stones of which it is built are very uniform in size, angle and finish. The only access to the top of the rock was through the window of this house. On top are some evidences of mason work, covering it from one end to the other. All the irregular gaps and crevices have been walled up, probably to make an even surface. But few of the stones remain in position; in one or two places, three or four courses; all the rest are thrown down and scattered.

While passing the mouth of a side canyon a tall, black-looking tower caught the eye of one of the party, perched upon the very brink of the mesa, overlooking the valley. On reaching this tower they found that it was evidently an outpost or watch-tower guarding the approach to a large settlement upon or beyond the mesa lying above it. The party then struck out for another group of ruins some eight or ten miles further west. Fig. 11 is a sketch of a ground plan of the "city," showing its general arrangement. The McElmo, shown in the sketch, sweeps the foot of a rocky sandstone ledge, some 40 or 50 feet in height, upon which is built the highest and best preserved portion of the settlement. Its semi-circular sweep conforms to the ledge, each little house of the outer circle being built close upon its edge. Below the level of these upper houses some 10 or 12 feet, and within the semi-circular sweep, are seven distinctly marked depressions, each separated from the other by rocky debris, the lower or first series probably of small community houses. Upon either flank, and founded upon rocks, are buildings similar in size and in other respects to the large ones on the line above. The stones of which the entire group are built are dressed to nearly uniform size and laid in mortar. A peculiar feature is in the round corners, one at least appearing upon nearly every house. They are turned with considerable care and skill, being true curves solidly bound together.

The rinderpest has appeared near Grimshy, Lincolnshire, England, and the foot and mouth disease at Cheshire, Somersetshire and Flintshire.





## HORTICULTURE.

### Pine-Apple Growing in Florida.

Our pine-apple growers will be interested in reading of the researches, methods and results attained by the investigation of the subject in Florida. Benjamin Hall writes for the *Florida Agriculturist* an article from which we quote:

The ananas or pine-apple (*Bromelia ananas*, L.) genus is rich in species, furnishing some 45 distinct varieties of fruit, and will admit of being multiplied indefinitely when propagated from seed and crowns of its fruit. This tropical plant varies in height from 18 to 50 inches. Its leaves are thick, long, and narrow, varying in length from nine to 30 inches. Its fruit is always conical, and varies in size, usually from two to 17 pounds, according to the variety, soil, and culture. It also varies in color, flavor, and consistency. Some varieties are of a purple and scarlet color, while others are black, yellow, green, and white. According to Von Martius, this plant is indigenous to the northern part of South America, and according to Humboldt grows wild in the forests of the Orinoco. From this region it was transplanted to Asia and Africa. Its American name is Nana, and it is without a Sanscrit name. In 1592 it was carried to Bengal, and from Peru by way of the Pacific ocean to China. In 1599 it was naturalized in Java, and was taken thence to Europe. It is probable that it has been cultivated in its native land from time immemorial, as it scarcely bears seed any longer. Columbus became acquainted with this plant on his second voyage, in 1493, on the island of Guadalupe, but it was not till the beginning of the 16th century that some of its fruit was brought to Europe, where it was elevated to the first rank among all known fruits on account of its pleasant taste. At the present time it ranks third. The mangosteen (*Garcinia mangostana*, L.), native to the Molucca islands and the Malay peninsula, occupies the first rank among all the known fruits of the earth; is of the size of a small orange, and resembles the common pomegranate in color, with a juicy pulp having the whiteness and solubility of snow, with a refreshing, delicate, delicious flavor, partaking of the compound taste of the peach, raspberry, strawberry, and pine-apple. The second is the most delicious of the 13 known varieties of the sugar-apple (*Anona tripetala*, Ait.), and known in Venezuela (the region of its nativity) as the cherimoyer, is of the size of a large orange, with white and sweet pulp. Geronimo Benzoni states, in his history, published in 1568, that no fruit on God's earth could be more agreeable. Christopher Acosta, in his history, published in 1578, calls the plant ananas, and states that it was carried from Santa Cruz to the West Indies, and thence to the East Indies and China. The first experiments in the cultivation of this plant in Europe proved a failure; since attributed to the want of a proper knowledge of its peculiarities and mode of cultivation. Many varieties of this plant have been developed, which vary in form, size, color, consistency, and flavor of the fruit. Three of these existed at the time of the discovery of America, and a fourth was soon afterwards met with. It appears questionable whether these are not distinct species. There is to be met with at the present time in the East Indies a white variety, which has run wild, and still contains seed in its fruit. This variety, including the black I met with, run wild in the open forests of the Antilles, but did not observe seed in its fruit. The ananas, even at the present time, appears to succeed best in Northern Brazil (the region of its nativity). This plant is

#### Propagated in Florida

Exclusively from its suckers, which do not issue from the parent plant till after the formation of its fruit, and extend from the surface of the ground to the top of the stem, at the base of its fruit, varying in number from nine to 20. When the fruit is gathered break off all the slips for planting, and from this stump there will then grow usually from two to five more slips, only two of which must be allowed to grow. If the stem, after the slips are removed, is cut at the surface of the ground, and planted two inches in depth, in a horizontal position, sprouts will issue from its leaf joints, which will develop into suckers. The pine-apple should be planted on new, rich land, underlaid with clay, rather low than otherwise. To produce this delicious fruit in its greatest perfection, the soil should be highly fertilized with any strong manure, like stable, hard-wood ashes, or guano. This plant, being a coarse feeder, will assimilate most any kind of fertilizing substance adapted to any species of vegetation. To prepare the slips for planting, the butt-ends should be cut off, and the lower leaves removed. A hole is then made with a sharp-pointed stick, called dibble, in the prepared ground, and the slip inserted from two to six inches, according to the size of the slip. In consequence of the inclination this plant has to spread its leaves the slips should be planted two feet apart each way. In 18 months from the time the slips take root, the fruit will be sufficiently matured to cut. If planted on sandy soil, exposed to the action of the winds, it will require mulching to keep the sand and vegetable matter from blowing and lodging in the bud and leaf joints of the plant, which, if not

washed out by the process of pouring water into the bud, will ultimately destroy the plant. The best material that I have as yet applied, and seen applied for mulching, is the grass obtained from bodies of salt water, and moss from the trees of the forests. The most inferior and worthless is the leaves of the pine trees. Weeds, growing among these plants, should not be hoed, but pulled up—disturbing the surface soil as little as possible. This plant, in autumn, is subject to an occasional attack of a species of caterpillar that eats the bud of the plant, without destroying or materially injuring it. Out of the

#### Large Number of Varieties

Of this genus, but few are generally cultivated. In the West Indies the most highly prized are the Queen, Antigua, Sugar-loaf, Ripley, Moscow, and Prince Albert; the Spanish and Black Jamaica are less cultivated. The largest fruited are the Trinidad and the Enville. The fruit of both of these varieties has a large, hard core or spine, enveloped in a coarse pulp, which is deficient in that peculiar richness and sweetness that characterizes the better varieties. The most ornamental is the Prince Albert, a somewhat new variety, with fruit, the skin of which is of a bright scarlet color. In the Florida the Spanish and Sugar-loaf varieties are the most widely distributed. The Spanish, though inferior in quality to many other kinds, is the most favored market variety; not only the large size of its fruit, but its superior consistency of pulp admirably adapts it for shipping purposes. The Sugar-loaf for home consumption is almost unequalled; its peculiar richness of flavor, its tender flesh, together with its large size, are sufficient to render it a desirable variety for the table. This season I fruited several crowns of this variety planted six years since; from one was obtained a superior fruit in flavor and sweetness, and entirely deficient in core. This plant, when grown in locations where frosts are liable to occur, should be protected; often a slight frost falling on its leaves injures this plant materially. In shipping pines packed in crates or baskets, they should be packed bottom up. To keep them for home consumption, after picking, they should be hung up in the same way. Slips from the roots of the parent plant produce fruit the first year from planting; those from the stem in 18 months, and from the crown from two to six years, according to variety and culture. Fruit grown from slips obtained from roots or stem, are true to their original varieties; or, in other words, reproduce themselves. To propagate from seed (which somewhat resembles those of the sapodilla in appearance), requires a much longer time, generally under favorable circumstances, 12 years. By this means of propagation, and from the crowns of the fruit, new varieties are produced. In Florida, the time for gathering this fruit for market is usually from June to August, and embraces three cuttings. No fruit of vegetable growth is characterized by a greater predominance of saccharine juice than this. In Peru, a vinous and palatable drink is made from this fruit, and called chicha.

#### Selling Dried Fruit in the East.

We look with favor upon all measures and notes of progress in connection with opening the great markets of the Eastern States to our California dried fruit. We are not particular what system of drying is adopted, so that the product is good and marketable. The latest evidence we have of the progress of Eastern sales is in a letter from W. H. Schnyler, Secretary of the Alden Company in Chicago, in which he says: In these times of hard sales for almost everything, it is gratifying to note that the sale of Alden products, and especially your California Alden goods, peaches, plums, pears, etc., maintain a price and demand fully equal to any other products. I received some time ago a small consignment of samples from your Jackson (Amador county) factory, which were very nice, and put up in very attractive packages and full weight. I placed some of these packages in the hands of my traveling man, who received quite liberal orders. I have received consignments of six or eight tons of your California Alden goods, and sold out some of the products of special kinds entirely upon the day of their arrival. Plums at 25 to 30 cents; peaches, peeled, 35 cents; unpeeled, 18 to 20 cents; pears, assorted, 20 to 22 cents, etc. I have no doubt I could easily dispose of all your surplus California Alden goods if the factories or their agents would only send them now. The two pound package is very popular with the trade, and your goods are No. 1 and if properly pushed the demand can be made equal to or greater than the supply, however much increased.

I would suggest your factories make a small pool, each contributing a few cases as samples, etc., to be used in advertising the goods in the Mississippi valley and Northwest, east of the Rocky mountains, by sending agents to select some one good wholesale house in each large city to take charge of the goods in that market. Let that house canvass its territory thoroughly like canvassers do and keep up correspondence with factories and general headquarters in San Francisco, Chicago and New York, which should issue monthly circulars to factories and wholesale houses in the Alden line, giving review of the trade and prospects as to demand and supply. Let the commission be sufficient to pay a good house for thorough work and all factories unite on such. The canned goods trade has developed from comparatively nothing a few years

ago to enormous proportions, only because it has been pushed in some such manner. Alden products are better in the main than canned goods and much cheaper and cost not a fifth as much for transportation. If your California Alden factories will adopt such measures they will soon have their products household necessities all over this country east of the Rocky mountains, and can raise and convert into Alden products fruits ad libitum.

The above lesson, although read especially to the Alden factories, may be just as applicable to all kinds of first-class California dried fruits, however prepared.

## SHEEP AND WOOL.

### Preparing Wool for Market.

The *Price Current* says: We would call the attention of wool growers to a few points affecting interests of both seller and buyer. It is quite a common practice among sheep farmers to gather whatever may be on the shearing flooring—whole fleeces, broken wool, tags and dung locks—and throw them all into the bale together. Now this is a thing that should be deprecated, for the buyer, on cutting open and examining the bales, is inclined to be rather prejudiced against the lot of wool on account of the broken wool and tags and locks being mixed with the whole fleeces. It should be generally understood that wool in merchantable condition implies wool in whole fleeces only, and everything else is subject to rejection by the buyer when the wool is graded. Also that only the proper proportion of buck's fleeces is admissible, say at most, one to every 50, and all over that are subject to rejection, and will be rated at half price or less. In baling wool it is not advisable to cram in as much as it is possible to put into the bale, as all but first-class judges are led to believe that it is a very heavy, shrinky wool, and offer a price proportionately low. The best way is to pack a bale fairly full, so that it will stand up without bending. On the other hand, many farmers who have a very heavy description of wool seek to hide this fact by only partially filling the bale, but this is a dodge easily seen through, for when a bale is found to buckle up and is loose and saggy, the buyer immediately suspects that the wool-grower has a reason for not filling the bale.

With regard to the matters of marking and shipping, a few remarks may not be out of place:

We would suggest that the farmer put his own initials on the sacks, as well as those of the agent or consignee, and if there is more than one quality, put a designating mark on each, thus avoiding confusion where so many different lots are stored. Each sack should be numbered and the weight and number carefully noted down and forwarded to the consignee. As to shipping little can be said, except that the wool grower should be particular to inform his agent when the wool is shipped, for if it remains unclaimed in the railroad depot over 24 hours after arrival here the railroad company will impose a heavy storage upon it.

With regard to sacks, many have the mistaken idea that they gain by putting their wool into light and consequently poor sacks. A three-pound sack is necessarily made of very thin burlap, and often arrives in this market in bad condition, not being strong enough to sustain the weight of average California wool. Whenever a sack is badly torn a tare of three pounds per sack is deducted, whereas good sacks are only subject to a tare of two pounds. It is, therefore, obvious that the farmer is positively a gainer by using good, heavy sacks, besides being more satisfactory to the buyer.

USING COAL.—A writer in the *Coal Trade Circular* says: Too much coal over the grate bars is a positive waste. Waste steam, blown off under the grate bars (with closed doors to the ash pan) produces astonishing results, cleaning and producing a livelier fire. If all engines were arranged to exhaust under the grate box, much economy would be produced thereby. A water pan under the grate bars, at the bottom of the ash pan, is useful also, and if the reader will put in practice these suggestions, their adaptability will become apparent. It is a fact that but few engineers understand how to burn coal so as to get the best results. It is the greatest amount of caloric produced with the least waste of heat up the chimney in the consumption of coal which is the desideratum, for draft made by the application of waste steam under the grate bars is equal to as much coal as will produce the degree of heat in the exhaust steam. It is strange that the philosophic utility of single organic laws are not more generally diffused among engineers and firemen. On locomotive engines, when the engineer desires a quick fire, steam is turned on under the bars, producing the results demonstrated. A word to the wise is sufficient.

DEFECTIVE APOTHECARIES' WEIGHTS.—The *Medical Record* recently called attention to the fact that in many cases the weights used by apothecaries in dispensing medicines are exceedingly inaccurate. It is reported that out of four establishments visited, in three of them the weights were found to be either above or below the standard. If such a defect really exists, it is one of vital importance to the pharmacist as well as to the physician, and some steps should at once be taken to rectify such an error.

## HOTEL CARS.

### Another Grand Improvement to be made by the "Pioneer" Line

#### Description of the Superb Cars now being Constructed.

For some time we have heard hints of a line of hotel cars for the Omaha and California line of the Chicago & Northwestern Railway. When asked about their cars, the officers have uniformly evaded a direct reply. Our "reportorial instincts" taught us to investigate for ourselves. We have done so, and are now enabled to state positively that such a line will be started in the early spring, and that the cars are now being built. The fact will no longer be a secret after this day's paper gets before the public.

Four of the most magnificent hotel cars that have been built anywhere are now being constructed by the Pullman Palace Car Company expressly for this line. These cars will be 66 feet long, 10 feet wide and 10 feet high, with 12 sections, one drawing-room (with table room for six persons), and one state-room, besides the kitchen, china closet, dressing-room, etc. The interior will be finished with black and white walnut, mahogany, French ash and curled maple, the place of the usual head-lining being filled in with foreign polished woods; the panels between the windows will be of California laurel and other California woods; the lamp fixtures, window fastenings, door hardware, etc., will be of triple-plated silver. The upholstery of the seats is to be of rich but plain reps, corresponding and harmonizing with the wood finish of the sides and roof of the cars. Between each set of seats is space for a table that will accommodate four persons comfortably, but as a rule are not expected to seat more than two persons. The glass and chinaware for the tables are now being made at Dresden, Germany, from patterns selected from the Royal Dresden exhibit that was at the Centennial exposition and so greatly admired. Each piece of silverware, glassware and chinaware will have the monogram of the Chicago & Northwestern road marked thereon. The kitchens of the cars will be so arranged that no fumes from the cooking viands can reach the occupants of the berths. On each car will be a steward, two cooks, three waiters and a chambermaid to wait upon lady patrons. It is the intention of the company to furnish the best meals that money can buy, and choice wines and cigars will be attainable by those desiring those luxuries.

These hotel cars will leave Chicago on the California Express, and run through to the Missouri river. On the west-bound train, dinner, supper and breakfast will be served. The east-bound hotel cars will leave Omaha on the Atlantic Express each day, in the afternoon. On this train supper, breakfast and dinner will be served. Thus passengers bound in either direction will be enabled to have all their meals en route and yet not leave their palatial traveling parlor.

The only objection that has been raised against the use of hotel cars has been connected with the odors of the kitchen. As we said before, this, in these cars, will be entirely obviated; no person, no matter how particular he or she may be, will have cause to make any objections on this score. In the dining car you merely get your meals, and as soon as you are through eating you are shoved out and started for the coach or sleeper, so as to make room for some other traveler who desires your place. While in these hotel cars your berth will be secured through, you will own it absolutely for the length of your trip, and it will be your own for lounging, sitting, sleeping and eating purposes, as much as your own seat in your own house. As it is not generally known, dining cars are never run over the entire length of any route; they are taken on and set off of the train at stated meal times, while these hotel cars will be made a part of the train and run through in the same way as the regular sleeping car.

On the admirable steel rail that is now laid on the Chicago and Northwestern Railway, these elegant, 16-wheeled hotel cars will ride as easy and with as little noise or oscillation as a balloon that floats serenely through the air; and we believe that it will be found to be a result that thousands will flock to this "Pioneer Line," who have hitherto gone by some other route.

With these and other improvements the people of Cedar Rapids are very largely interested and we believe will join with us in congratulating the progressive management of this great line in this its most advanced step; and unite with us in saying, the Chicago & Northwestern Railway has become the foremost road in all the West.

These hotel cars will be placed in service about March 1st, 1877.—*Republican*, Dec. 24th, 1876.

SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

A WORD FROM FLORIDA.—The *Semi-Tropical*, of Jacksonville, Florida, says: "The *Pacific Rural Press* is ably conducted, and a valuable representative of the industrial interests of California."



# PATENT AGENTS.

Office—224 Sansome St., San Francisco.

PATENTS obtained promptly; Caveats filed expeditiously; Patent reissues taken out; Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Soliciting Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons, and our success and business are constantly increasing.

The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

DEWEY & CO., Patent Solicitors.

San Francisco, 1877.

# CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

## WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address

Rev. DAVID McCLURE, Principal,  
OAKLAND, CAL.

## ARITHMETIC MADE EASY.

ROPP'S

## EASY CALCULATOR

Is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can instantaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months.

The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Crib, a Time, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightning calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided.

The work is nicely printed on fine tinted paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY & CO., San Francisco.

# BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Poultry.

### PLYMOUTH ROCKS.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. I offer for sale a few sittings; price, \$12 per sitting of thirteen eggs. Eggs always fresh and well packed. Orders accompanied by the money will be filled in the order in which they are received. Send money by postoffice order, registered letter or by express.

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

### WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock. Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

I. P. LORD, BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

RENO, NEVADA.  
Eggs from the following varieties at \$1.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*

### LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.

### B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,  
Ceres, Stanislaus County, Cal

# PACIFIC RURAL PRESS.

A first-class 16-page Agricultural Home Journal, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Subscription, \$4 a year.

DEWEY & CO., Publishers.  
No. 221 Sansome Street, SAN FRANCISCO

# Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm Pumping, Railroad and Power

## WINDMILLS, Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity. We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted. Send for Illustrated Circulars and information to

## HORTON & KENNEDY,

Managers for California and Pacific Coast, General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## MATTESON & WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

## Stock Notices.

## PUBLIC SALE

## SHORT HORN CATTLE,

TO BE SOLD

On Thursday, April 5th, 1877,

AT THE

Fair Grounds, near San Jose,

CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US

TO CLOSE UP OUR PARTNERSHIP AFFAIRS;

WE SHALL THEREFORE SELL, AT PUBLIC

SALE, THE ENTIRE AVENUE RANCH

HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Masson Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to Breeders, and all parties wishing to purchase high bred Short Horns.

*State Catalogues furnished on application.*

CYRUS JONES & CO.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

## A JOINT AUCTION SALE

—OF—

## Blooded and Graded Stock.

—ALSO—

## A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville,

Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

### ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

### LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

### PACIFIC,

By Red Cloud, out of Reta, two years old. (Herd book No. 24,249.)

### PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of Imported Cows.

Also, four head of Thoroughbred Cows and Heifers. Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows.

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers. Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums under \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

## THE BENNER RANCH

Will also be sold at Public Auction, consisting of 500 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

## SALE POSITIVE, IN GOLD COIN.

## Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,  
HENRY PRESTON,  
DAVID S. BENNER

Feb. 24th, 1877.

# Fraud! Fraud!!

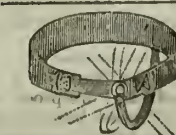
## COLLINS & CO'S CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Colls are stamped with our trade mark!

## COLLINS & CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

## COLLINS & CO., 212 Water Street, New York.



## RUPTURE CURED

Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, night and day, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.

Send for Illustrated Circular and Price List. MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, San Francisco.



How to Select a Saw.

Messrs. Henry Diston & Sons, of Philadelphia, lately issued a pamphlet which contains the following practical suggestions respecting the selection of a saw: "In selecting a saw get one with a name on it which has some reputation. If a man desires to purchase a first-class watch he selects a maker who has attained a reputation. This remark applies with equal force in the choice of a saw. The first point to be observed in the selection of a hand-saw is to see that it 'hangs' right. Grasp it by the handle and hold it in position for working. Then try if the handle fits the hand properly. These are points of great importance. A handle ought to be symmetrical and as handsome as a beautiful picture. Many handles are made out of green wood; they soon shrink and become loose, the screws standing above the wood. An unseasoned handle is liable to warp and throw the saw out of true. The next thing in order is to try the blade by springing it. Then see that it bends regular and even from point to butt in proportion as the width of the saw varies. If the blade be too heavy in comparison to the teeth, the saw will never give satisfaction, because it will require twice the labor to use it. The thinner you can get a stiff saw the better. It makes less kerf and takes less muscle to drive it. A narrow true saw is better than a wide true saw; there is less danger of dragging or creating friction. You will get a smaller portion of saw-blade, but you will save \$100 worth of muscle and manual labor before the saw is worn out. Always try a saw before you buy it. See that it is well set and sharpened, and has a good crowning breast; place it at a distance from you, and get a proper light to strike on it, and you can see if there be any imperfection in grinding or hammering. We set our saws on a stake or small anvil with one blow of a hammer. This is a severe test, and no tooth ought to break afterward in setting, nor will it, if the mechanic adopts the proper method. The saw that is easily filed and set is easily made dull. We have frequent complaints about hard saws, but they are not as hard as we would make them if we dared; but we shall never be able to introduce a harder saw until the mechanic is educated to a more correct method of setting his saw. The principal point is that he tries to get part of the set out of the body of the plate when the whole of the set must be got out of the tooth. As soon as he goes below the root of the tooth to get his set he distorts and strains the saw-plate. This will cause a full tempered cast steel blade to crack, and the saw will eventually break at this point.

General News Items.

CAPTAIN BOYTON has accomplished the feat of swimming from Naples to Capri. He was followed by several steamers bearing the American flag, and landed in presence of Victor Emanuel.

THE first of the series of eight promenade vocal and instrumental concerts at the Mechanics' Pavilion, will take place on Saturday evening, March 24th. The orchestra will consist of 35 musicians under the direction of Mr. R. Herold.

THE *Times's* Belgrade dispatch says: Reports reach Belgrade through trustworthy channels relative to immense armaments in the interior of Russia. It is asserted that 1,000,000 men will be in arms by the 16th of March. It is supposed that Russia has other purposes besides an attack on Turkey.

ADVICES from Peru confirm the report that Henry Meiggs has closed a contract with the Peruvian government for completing the Oroya railway and opening the Cerro de Pasco mines. The contract for introducing Chinese laborers into Peru is also confirmed, but it is doubtful if it can be carried out by the contractors.

A TELEGRAM from St. Petersburg says: "The past winter was the severest for many years. The thermometer on Sunday was nearly 20° below zero. A report comes from Pesth, in Austro-Hungary, that the railways are blocked and traffic stopped, and the snow is from three to twelve feet deep in the streets."

OBJECTIONS to the will of Commodore Vanderbilt have been filed by his son, Cornelius J. Vanderbilt. They aver that the document offered for probate is not the last will of the deceased; that it was not executed either by the testator or by witnesses at his request; that the deceased was not in sound mind when the document purported to have been signed; that it was procured by the fraud and undue influence of Wm. H. Vanderbilt; and that by a desire to concentrate his fortune in the person of Wm. H. Vanderbilt, the deceased had become incapacitated from making a fair will and disregarded his own children.

PROTECTION FOR SAFES CONTAINING VALUABLES.—In order that ordinary fire-proof safes should be in a measure rendered burglar-proof, the Louis Reutzel Manufacturing Company, of Meissen, has constructed a wire covering which is placed in an electrical circuit with an alarm bell. If any of the wires forming the cover be cut, which must necessarily happen before the safe can be opened by an intruder, the circuit is broken and the alarm bell is sounded. The device is likewise applicable to doors and windows.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

TEA-KETTLES.—A. J. Lowell, Alvarado. This invention relates to certain improvements in tea-kettles, some of which improvements are also useful in the manufacture of other articles of tinware. The top of the tea-kettle is made perfectly flat, and instead of making the opening through which the kettle is filled in the center of the top, it is made at one side of the center, so that the flat top is braced on its under side to give it strength. These braces are made of tin by first forming a strip or piece of tin into a square tube and then soldering it to the under side of the top. The cover or lid is made with a depression in the center, across which is a wire. By making the top flat it can be used for setting dishes of cooked victuals upon in order to keep them warm. Two handles are provided which can be separated and turned down. A detachable shelf is arranged to be attached to one side of the kettle on a plane with its top. One edge of this shelf is supported on the edge of the top, while its opposite edge is supported by an angular brace. This platform is also useful for supporting any article which it is desired to keep warm. This inventor has also devised a protection for the inside angle which is formed by the junction of the sides and bottoms of tin vessels, where they are most liable to rust, and a protecting base or continuous foot for them to rest upon, the object of which is to prevent the bottoms from wearing through by friction. Tin tea-kettles are worn out soonest at the corner of the bottom, directly below the spout, owing to their being frequently tipped forward. To protect this point a patch is placed over this edge to receive the wear. These improvements enable the inventor to produce a superior tea-kettle or article of tinware.

IMPROVEMENT IN CHURNS.—Elias Groat, Napa. This invention relates to certain improvements on a churn, for which several patents have been granted to the same inventor. The churn described in these other patents consisted essentially of a box, case or vessel having two parallel horizontal shafts extending longitudinally across it near its top. Each of these shafts is provided with two or more depending beaters, which were so arranged that the beaters of one shaft alternated with those of the other. A rocking motion was then imparted to the two shafts, so as to cause the beaters to be reciprocated alternately past each other inside of the box, case or other vessel, thus producing the necessary agitation. Experience has demonstrated that the device for communicating this alternate rocking motion to the horizontal shafts must not be connected with the framework or case of the churn, as the working strain which results from the short up and down strokes of the operating lever is too severe on the points of the framework. The inventor has therefore devised a cheap and simple mechanism for operating these shafts directly from their projecting ends, so that the strain will not be communicated to the case or framework. He has also invented an improved manner of constructing the end of the box from which the journals or shafts project, the object of which improvement is to allow the shafts and beaters to be easily removed when it is desired to clean the box.

PLUMBERS' TRAP.—Louis Schonberg, S. F. This is an improvement in waste-pipe traps for plumbers' use, and it consists in enlarging the pipe on one side of the "S" bend and reducing it on the opposite side. The object of this construction is, first, to prevent siphoning, and secondly, to avoid the formation of shoulders or projections on the inside of the pipe. This is another step in advance toward preventing the access of sewer gas into dwellings, and we shall shortly give an engraving of the device, so that it will be better understood than by a mere verbal description.

NOR an American vessel of any description cleared for ports in England, Ireland or Scotland from New York, during the month of February.

A BOOK to sheep-growers will be sent free by addressing James Moore & Co., San Francisco.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

INFORMATION is wanted at this office of the whereabouts of Wm. John Lawrie, formerly newspaper agent. Last heard from Jan. 27th, 1877, in Petaluma.

THOROUGHbred FOWLS, BRONZE TURKEYS, Pekin Ducks, Embden Geese,

SAFE ARRIVAL OF FOWLS GUARANTEED Eggs Shipped to Any part of the Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address, M. EYRE, Napa, Cal. Also, Thoroughbred Southdown Sheep.

GREAT

IMPROVEMENTS

ARE NOW

BEING INTRODUCED IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application.

"My Guide to the Vegetable and Flower Garden will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

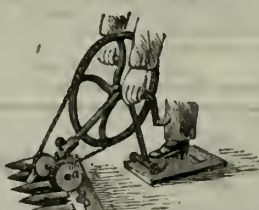
419 and 421 Sansome Street, S. F.

Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it

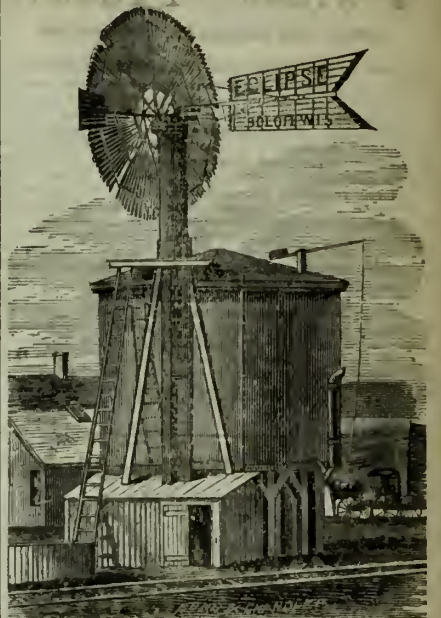
MORE ANON

NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the R-aper for convenient use when required. The knives can be sharpened without taking them out or unhitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, as regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc. Address, WIESTER & CO., 17 New Montgomery St., San Francisco.

Time and Storm



Will furnish the true test for Agricultural Machinery. Many untried rattle-traps are being offered the farmer. Common prudence would suggest an investigation into their record. The ECLIPSE WINDMILL has been tested ten years as a self-governing windmill. Over 4,000 in use by American farmers. Grand Medal of Honor awarded it at the Centennial over sixteen other competitors. Bronze Medal at Australia. Ninety-six First Premiums. Send for circulars on Pumps and Mills.

CHAS. P. HOAG,

118 Beale Street, San Francisco.

FOR SALE.

ENGLISH PATENT

Straw-Burning Engines.

At the Vienna Exhibition, the Diploma of Honor, Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, Manufacturers of

HEAD & SOHEMOITH'S

PATENT ENGINES

For

Burning Straw, Reeds, Corn-Stalks, etc.

These engines for burning straw and other vegetable products have been tested for some time in Russia, on the banks of the Danube, in Egypt and India, and have been found to effect a

GREAT SAVING OF FUEL,

Enabling steam power to be introduced into countries where it was formerly impossible to use it.

The Expansion Engines

Of this firm ARE CELEBRATED FOR THEIR SMALL CONSUMPTION OF FUEL and do not burn more than about three to three and a half pounds of coal per indicated horse-power per hour. This Engine was on exhibition at the Mechanics' Fair last fall in San Francisco. It is the

Only Fire-Box Straw-Burning Engine on the Coast,

And is without doubt the BEST PORTABLE ENGINE ON THE COAST; Extra Government Safety Valve; Boiler Fitted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, March 14th, 1877.

The city trade is generally dull, and merchants in most lines, especially in provisions, groceries and other food supplies, report a business generally one-third less than at this time last year. A meeting of merchants was held in this city this afternoon. The idea was chiefly to protect themselves against fraudulent failures, and for this purpose a standing committee was appointed to investigate all reported failures to see whether compromise was necessary. At this meeting we are informed that the general state of trade was somewhat discussed. The present dullness was thought to be owing to the fact that crop prospects being rather dark in some parts of the State merchants had adopted a conservative course, and, being slow to take credits without security, had restricted their trade thereby. Money is reported plenty in the city, but country merchant credit is looked upon with distrust by many parties.

The Grain trade has been marked by a firm feeling and a slight advance over last week's prices for some kinds. The English market has taken a step or two forward to regain lost ground, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	10s	3d@10s	6d	10s	7d@10s	10d
Friday.....	10s	3d@10s	6d	10s	7d@10s	10d
Saturday.....	10s	4d@10s	8d	10s	8d@11s	—
Monday.....	10s	4d@10s	8d	10s	8d@11s	—
Tuesday.....	10s	5d@10s	9d	10s	9d@11s	1d
Wednesday.....	10s	5d@10s	9d	10s	9d@11s	1d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875.....	8s	11d@9s	3d	9s	3d@9s	10d
1876.....	9s	10d@10s	—	10s	2d@10s	8d
1877.....	10s	5d@10s	9d	10s	9d@11s	1d

## The Foreign Review.

LONDON, March 12th.—The *Mark Lane Express*, in its weekly review of the corn trade, says: The supply of English Wheat at Mark Lane continues small, and most samples have been in a very inferior condition. Prices therefore have been irregular and slightly lower for all but the finest lots. Imports into London have again been very light of foreign Wheat. No fresh arrivals of California have been reported, and the return was chiefly remarkable for the insignificant quantity of Wheat from Atlantic ports. Germany has been exporting Wheat to the United Kingdom, but with the Continental demand springing up it is unlikely that our imports will be greatly increased by shipments from this source, especially as last year's harvest on the continent was generally deficient. The importation of East India Wheat continues steady. Sales are made without difficulty, as this class of Grain has not lost ground in the opinion of millers. Operations have been chiefly confined to retail, and though a quietude prevailed prices are little altered. Russian Wheat has been in fair request. Some transactions for spring shipments from St. Petersburg have been effected for the Continent. Some quantity of inferior American Wheat has recently been taken off our market also for Continental account. Politics have ceased to exercise an appreciable effect upon our principal European markets. There have been numerous arrivals of California cargoes into various ports of the United Kingdom, principally comprising heavy shipments made from San Francisco in October. As we anticipated, they have been readily absorbed, Liverpool taking the lion's share and the Continent the remainder. It is worthy of note that this increase of supply has been attended by a healthy trade and improvement in Liverpool. These arrivals will considerably reduce the quantity on passage, and this will probably excite inquiry as to the sources from which our requirements later on are to be made up.

## Freights and Charters.

Freights, says the *Commercial News*, have continued extremely dull during the past week, the state of the English market having prevented engagements, even at the low rate which ships would accept. Rates are difficult to give with any accuracy. As will be seen below, a small first-class iron ship has accepted £2 5s to Cork, U. K. By comparison, this would make large wooden ships worth £2 for same destination. We have now but 13,200 register tons loading Wheat. The disengaged list, on the contrary, is large, amounting to 20,401 tons, and liable to be increased at any moment by the arrival of many ships now due. Outside business has remained inactive, only two engagements having been made. Latest charters reported: Br ship Duke of Athol, 943 tons, Wheat to Cork, U. K., £2 5s; Continent, £2 10s. Br ship S. Vaughan, 940 tons, Wheat to Liverpool, £2; Cork, U. K., £2 2s 6d; Continent, £2 7s 6d. Ship Eliza McNeil, 1,584 tons, Wheat to Cork, U. K., £2.

## New York Grain Market.

New York, March 12th.—Buyers and sellers of Wheat continue at cross-purposes, and trade continues extremely dull, transactions of the week scarcely reaching a quarter of a million bushels, including sales of speculative shipments and turns. Some No. 2 Chicago has been turned over at \$1.35@1.41 for inferior to prime; No. 2 Milwaukee, \$1.42; No. 3 Chicago, \$1.34, and No. 1 Minnesota, \$1.45—all in store; and Winter Wheat \$1.45@1.60. Flour has shown a declining tendency, with trade slow. Some Spring Wheat extras, costing \$5.50@5.60, have been sold for shipment to London, the inducement being the low rate of freight, 1s per blr for 1,500 blrs. The shipping margins on both Flour and Wheat continue heavily adverse, and yet exports have not wholly ceased. Corn has declined, leading to a fair export movement at 55¢@56¢. Barley is down to 50¢@51¢ for ordinary to best, a good article being available at about 80¢@85¢. Spring seeding has commenced in some parts of the West.

## Wheat in Australia.

By the arrival of the steamer Australia, we have Sydney advices to February 9th. The *Herald* reports as follows on American goods:

For the first time in several years we have to note the arrival of two entire cargoes of California Breadstuffs. They have come to a better market than could have been expected when brought. A portion of the Wheat was sold to arrive at 6s 1d. The Flour to hand this year has been chiefly of inferior quality, and has been sold lately at from 12s 10s to 13s 10s. Morgan, Conner & Glyde's Adelaide Grain Circular reports the Wheat crop as turning out lighter than was anticipated. The latest reports were to the effect that the yield would not exceed five bushels per acre, which would leave an exportable surplus of 55,000 tons, which, added to the stock remaining from the two previous harvests, would give a total available surplus for export of 79,200 tons, or in round numbers 80,000. The circular adds that New South Wales, Victoria, Queensland, New Caledonia, New Zealand, Mauritius, Java and Africa will require more than 80,000 tons. The deficiency of the crop is better appreciated

when the exportable surplus is compared with the quantity exported in 1876, which reached 213,465 tons. These figures would seem to indicate that there is a probability of California Breadstuffs being wanted in that direction this year.

## The S. F. Hop Trade.

The *Alta* gives some figures on the Hop trade in this city which will be of interest to all growers: Since July 1st, 1876, the receipts of California Hops at this port have been as follows:

	Bales.
July.....	191
August.....	338
September.....	2,574
October.....	2,218
November.....	1,090
December.....	139
January.....	99
February.....	155

Total.....6,723  
Allowing 200 lbs to the bale the above receipts are equal to 1,344,600 lbs. Oregon and Washington Territory have also sent us considerable supplies. The monthly exports from San Francisco have been as follows:

	By Sea.	Overland.	Total.
	Pounds.	Pounds.	Pounds.
July.....	19,595	—	19,595
August.....	8,351	108,227	116,578
September.....	19,235	242,341	261,576
October.....	1,845	321,000	322,845
November.....	496	511,080	511,576
December.....	8,296	216,120	224,416
January.....	22,501	54,000	76,501
February.....	10,179	—	10,179

Totals.....90,558 1,452,768 1,543,326  
The railroad returns for February have not yet come to hand. Since the 1st instant the shipments by sea have been 21,749 pounds.

## Eastern Wool Markets.

New York, March 12th.—The Wool market has shown more activity in fine grades, which being scarce command full prices. Other kinds are depressed, and fall California is about 2c lower, spring do remaining steady. Sales of 40,000 lbs fall, part at 15c, but all known to be at reduced prices; 10,000 lbs slightly burry spring, 25¢@26¢; 7,000 lbs Oregon; 27¢@33c. Prices realized at the London sales are about the same as at the opening, with nothing coming here.

PHILADELPHIA, March 13th.—Wool is firm and in fair demand. Colorado washed, 20¢@28c; unwashed, 16¢@25c; extra and merino pulled, 36¢@42c; No. 1 and super pulled, 30¢@36c; Texas fine and medium, 20¢@25c; coarse, 16¢@20c; California fine and medium, 25¢@33c; coarse, 18¢@22c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Feb. 21.	WEEK Feb. 28.	WEEK March 7.	WEEK Mar. 14.
Flour, quarter sacks..	15,772	61,242	69,220	13,171
Wheat, cents.....	87,537	111,835	236,948	60,291
Barley, cents.....	8,537	6,487	10,416	8,750
Beans, sacks.....	1,465	1,049	1,726	1,021
Corn, cents.....	1,024	2,324	3,860	7,653
Oats, cents.....	3,368	7,648	1,285	1,116
Potatoes, sacks.....	11,081	10,026	9,754	15,132
Onions, sacks.....	680	1,149	1,503	931
Wool, bales.....	148	98	246	885
Hops, bales.....	—	45	167	35
Hay, bales.....	766	686	955	1,168

Barley—Barley is doing a little better, as it is feared that the drought will restrict production. The top price for Feed and Brewing is now \$1.35; the Feed price being in silver and Brewing in gold. We note sales: 720 sks Bay Feed, \$1.35 per ctl, silver; 150 sks Bay Feed, \$1.30 per ctl, silver; 100 do do, \$1.32½ per ctl, silver; 100 do do, \$1.35 do, and 200 sks do, \$1.25 per ctl, gold; 150 sks Feed, \$1.30 silver; 200 sks do do, \$1.32½, silver; 130 sks Feed \$1.30, silver; 200 do do, \$1.25, gold; 1,000 sks Coast Feed, \$1.30 per ctl, and 500 do do, \$1.32½ per ctl, silver; 500 sks choice Feed, \$1.32½; 1,000 do good do, \$1.30, both lots silver; 300 sks Coast Feed, \$1.22½, gold.

Beans—Prices for Beans are unchanged. From an article in the Philadelphia *Commercial List* it appears possible that perhaps something can be done in the Eastern shipment of Lima Beans, as those used there are imported. This paper says:  
But few people are aware of the enormous consumption of imported Lima Beans by our first families and better class of citizens. As an evidence of this, Messrs. Koons, Schwarz & Co.'s sales have amounted to the unprecedentedly large quantity of 4,650 bushels in the past 90 days, and the demand still continues; all goes to our city consumers. These Beans are grown upon the famous old island of Madagascar, on the east coast of Africa, the soil of which is rich beyond comparison, and peculiar in its formation, imparting a strength, flavor and luxurious richness to the Bean that makes it sought after by our citizens beyond anything in this line that has been in our market for many years, and its cheapness as an article of food commends itself to all classes.

Buckwheat—The price remains at \$1.80 per ctl, silver.  
Corn—Corn is in good demand. The advance price has largely increased receipts and rates are a little lower. We note sales during the week as follows: 200 sks large Yellow, \$1.42; 200 do large White, \$1.42½; 175 sks large Yellow at \$1.50; 150 sks small Yellow at \$1.50, and 60 do do, at \$1.55; 500 sks large Yellow at \$1.42.

Dairy Produce—Butter is in heavy receipt and the price still lingers down. A better condition as regards short feed in some regions. Cheese is unchanged.  
Eggs—Eggs have taken another drop, now selling at 22¢@23c.  
Feed—A day or two after our last report Hay took a sharp upward movement and sales of the best Wheat have been made as high as \$17.50@18.00 per ton. Other Feeds are stationary. We note sales of Hay during the week as follows: 10 tons of choice Wheat at \$17.50, and 10 tons of poor Wheat at \$16; 46 tons Wild Oat and Barley at \$16; 20 do good Volunteer at \$15; 43 tons good Wheat at \$17; 12 tons choice Wheat and Oat, \$16.50; 46 tons good Wheat at \$16.50; 20 do Volunteer at \$12.50; 16 do fair Wild Oat and Wheat at \$15; 52 tons choice Wheat at \$16; 11 do fair Wild Oat at \$13; 61 tons good Wheat and Oat at \$16; 100 bales good Wheat and Wild Oat mixed at \$16.50 per ton.

Fruit—Strawberries have been received by the case, and the price has fallen to 40¢@50¢ per lb. Oranges and Apples have made an advance, as may be seen by our prices below.  
Hops—Buyers are still insisting upon concessions in

price and we do not hear of transactions. The steamer City of Sydney, hence for Australia on the 8d inst., carried 7,000 lbs to Australia and 14,329 lbs to New Zealand. The New York market, for the week ending March 2d, is reported by Emmet Wells as follows:

The only transaction of importance in Hops this week is the shipment of 1,000 bales to London. The present low price seems to offer no inducement to either speculators or brewers, and we must rest content with the small export demand, at least for the present. The heavy body of snow throughout the Hop district has protected the roots during the past winter, and the vine is expected to make an early and vigorous start.

Oats—Oats have ranged a little higher than last week. We note sales: 200 sks good Feed, \$2 per ctl, gold; 125 sks ordinary Coast Feed, \$1.70, half silver. The best Feed is quotable at \$2.20 per ctl.

Onions—Onions have been received in large amount and are lower. We note sales of 100 sks fair at 75c; 30 do choice Union City, \$1 per ctl; 36 sks choice Union City, \$1; 40 do good do, 75c per ctl.

Potatoes—Arrivals of Potatoes have been increased and last week's top price is not now attainable. We note sales: 800 sks good to choice Tomatoes, 52¢@52½; 400 sks good to choice Tomatoes, 65¢@75c; 100 do good River, 35c; 200 sks good to choice Petaluma, 65¢@75c. Large quantities of inferior fair are selling down to 25¢@40c per ctl.

Provisions—Fresh Beef sustains a temporary advance, in contrast to other Meats which have a downward tendency. Mutton remains at bedrock price. Lamb is cheaper, owing to the increased supply. Pork is lower for the same reason, and because of the dull trade in cured goods. The Provision trade is dull at former prices, with a lower shade in imported Hams.

Poultry—Poultry maintains last week's advance steadily, except Turkeys, which have declined. Full prices may be found below. Game is unchanged, except that Quail are doing 25c better per dozen.

Rye—There have been sales of 132 sks good Washington Territory at \$2 per ctl, silver.

Vegetables—The only changes of the week may be found in Green Peas and Rhubarb. Green Peas were poor in quality and were received in large amount. Asparagus cheapened at the same time and there was a break in Peas which stopped the growers picking. The result has been an advance, which is quoted to-day 7¢@9c, according to quality. This will probably only endure until receipts are increased. Rhubarb is cheaper.

Wheat—The Wheat market has been firm during the week, and though the demand has been moderate, transactions warrant a slight advance in our quotations. We note sales: 400 sks fair Shipping, \$2.05; 700 do do, \$2.07½; 400 sks Shipping, \$2.05, and 700 do do, \$2.07½; 200 sks fair Milling, \$2; 400 sks choice Milling \$2.12½ per ctl; 1,200 cts good Shipping, \$2.02½; 400 sks choice Milling, \$2.12½; 1,200 do good Shipping, \$2.02½; 400 sks good Shipping, \$2.05; 1,200 sks choice Shipping, in two lots, \$2.05; 3,500 do good Milling, \$2.10; 1,500 do extra choice, deliverable at Oakland, \$2.15 per ctl.

Wool—Spring Wool continues to arrive but sales are as yet but few. We are informed of sales of short free Spring Wool at 17¢@20c per lb; and base a temporary quotation upon them. Next week we may be able to get fuller data. We note sales of 45,000 lbs Fall at 10½c.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., March 14, 1877.

## BEANS.

Bayo, cts.....	3.00 @ 3.50	Cal. Walnuts.....	8 @ 10
Petter.....	1.50 @ 2.00	Almonds, bd sbl lb	7 @ —
Ped.....	2.25 @ 2.35	Soft sh. l.....	15 @ 17
Pink.....	2.75 @ 3.00	Brazil.....	14 @ 16
Sm'l White.....	2.00 @ —	Pecans.....	17 @ 18
Lima.....	2.75 @ —	Peanuts.....	4 @ 6
		Filberts.....	15 @ 16

## BROOM CORN.

Common, lb.....	2 @ 2½	Union City, cts.....	75 @ 1.00
Choice.....	3 @ 4	Stockton.....	75 @ 85

## CHICORY.

California.....	4 @ 4½	Petaluma, cts.....	40 @ 62½
German.....	6½ @ 7	Salt Lake.....	1.50 @ —

## COTTON.

Cotton, lb.....	15 @ 18	Humboldt.....	30 @ 62½
		Early Cove.....	75 @ 85

## DAIRY PRODUCE, ETC.

Cal. Fresh Roll, lb	22 @ 25	Hens, doz.....	8.00 @ 9.50
Point Reyes.....	25 @ —	Roosters.....	6.00 @ 6.50
Pickle Roll.....	22 @ 25	Broilers.....	4.50 @ 7.00

## CHEESE.

Cheese, Cal. lb.....	12½ @ 15	Dressed.....	18 @ 20
Old.....	— @ —	Quail, doz.....	1.25 @ 1.50
Eastern.....	12½ @ 15	Snipe, doz.....	2.00 @ 2.25
N. Y. State.....	15 @ 18	Rabbits.....	1.00 @ 1.25
		Hare.....	1.50 @ 2.50

## CATTLE.

Cal. Fresh, doz.....	22 @ 23	Cal. Bacon, Lb lb	14 @ 15
Ducks.....	23 @ —	Medium.....	13½ @ 14
Oregon.....	— @ —	Heavy.....	13 @ 14
Eastern.....	— @ —	Lard.....	13 @ 14

## FEED.

Brn, ton.....	15.00 @ 16.00	Cal. Smoked Beef	10 @ 10½
Corn Meal.....	34.00 @ 35.00	Canary.....	— @ —
Hay.....	10.00 @ 17.50	Eastern.....	— @ —
Middlings.....	27.50 @ —	Hams, Cal.....	13½ @ 14
Oil Cake Meal.....	32.50 @ —	Armour.....	15 @ 15½
Straw, bale.....	75 @ —	Dupes.....	15½ @ 16

## FLOUR.

Extra, bbl.....	6.50 @ 7.00	Alfalfa, Cal.....	16 @ 19
Superfine.....	4.75 @ 5.50	Superfine.....	10 @ 15½
Graham.....	5.50 @ 6.00	Clover, Red.....	22 @ 25

## FRESH MEAT.

Beef, 1st qual'y, lb	6 @ 7	White.....	50 @ 55
Second.....	4 @ 5	Cotton.....	6 @ 10
Third.....	3 @ 4	Flaxseed.....	3½ @ —
Mutton.....	7 @ 9	Hemp.....	5 @ —
Spring Lamb.....	3 @ 4	Italian Rye Grass	35 @ —
Pork, undressed.....	6 @ 6½	Millet.....	10 @ 12
Dressed.....	8½ @ 9	Mustard, White.....	10 @ —
Veal.....	5½ @ 6	Brown.....	3½ @ 4
Milk Calves.....	7 @ 8	Rape.....	3 @ 4

## GRAIN, ETC.

Barley, feed, cts.....	30 @ 35	Ky. Blue Grass.....	30 @ —
Brewing.....	30 @ 35	Red V Grass.....	25 @ —
Chaff.....	1.25 @ 1.40	Oat Hay.....	30 @ 35

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., March 14, 1877.

Eng Standard Wheat, 9 @ 9½	Pacific Glue Co's	Neatfoot, No 1.1 00 @ 90
Neville & Co's	Castor, No 1.....	1.25 @ 1.30
Hand Sewed, 22x36.....	Baker's A A.....	1.25 @ 1.30
24x30.....	Oliver, Plague.....	5.25 @ 5.75
24x30.....	Possel.....	4.75 @ —
Machine Swd, 22x36.....	Psm, lb.....	9 @ —
Flour Sacks, halves.....	Liused, Raw.....	77½ @ —
Quarters.....	Boiled.....	82½ @ —
Eighths.....	Cocoanut.....	80 @ —
Hessian, 60 inch.....	China nut, cs.....	63 @ 70
45 inch.....	Sprn.....	1.60 @ 1.65
40 inch.....	Coast Whiskies.....	60 @ 65
Wool Sacks, 3½ lb.....	Polar, refined.....	60 @ —
4 lb.....	Lard.....	1.10 @ 1.15
Standard Gunies.....	Oleophine.....	35 @ —
Beau Bags.....	Devoc's Brill.....	34 @ 35

Grant's.....	16 @ 16½	Unparal.....	32½ @ 33
Mitchell.....	18 @ 20	Barrel kerosene.....	30 @ —
		Downer Ker.....	50 @ —
		Elaine.....	43 @ 50

## CANNED GOODS.

Assorted Pie Fruits.....	2.75 @ 3.00	White Lard.....	13 @ 10½
Table do.....	3.75 @ 4.25	Pure White.....	13 @ —
Jams and Jellies.....	4.25 @ —	Putty.....	4 @ 5

Pickles, 1½ gal.....	3.50 @ —	Chalk.....	14 @ —
Sardines, q box.....	1.65 @ 1.90	Psris White.....	2½ @ —
Hf Boxes.....	3.00 @ —	Oebre.....	3½ @ —

## COAL-Jobbing.

At Diablo.....	5 15 @ 7 15	Light Red.....	3 00 @ 3 50
Lehigh.....	22 00 @ —	Metallic Roof.....	1 30 @ 1 60
Liverpool.....	8 50 @ 9 00		
West Hartley.....	14 00 @ —		
Scotch.....	7 50 @ 9 00		
Serauton.....	13 00 @ 16 00		

**RICE.**

China No. 1, lb....	5½ @ 6½
Hawaiian.....	6 @ 6½



## Nurserymen.

Four Grand Prize Medals  
AWARDED OUR EXHIBIT  
AT THE CENTENNIAL.

Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—128 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, **B. K. BLISS & SONS,**  
34 Barclay street (P. O. box 5,712), New York.

TREES,  
TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

**W. R. STRONG & CO.,**  
Nos. 6, 8 and 10 J Street, Sacramento.

200,000

## Australian Gum Trees For Sale,

—AT—

**STRATTON'S GUM TREE FOREST NURSERY,**  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$6 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

**JAS. T. STRATTON,**  
East Oakland, Alameda County, Cal.

THE DINGEE & CONARD CO'S  
BEAUTIFUL EVER-BLOOMING  
ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.  
**JOSEPH SEXTON,** Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

## LOS GATOS NURSERIES,

**S. NEWHALL, Prop'r,** - - - San Jose, Cal.  
A large and general assortment of  
Fruit and Ornamental Trees,  
Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stately fruit trees a specialty. Address,  
**S. NEWHALL,** - - - San Jose, Cal.

## PETALUMA NURSERIES.

Established - - - - - 1860.  
We offer this season a large and well-selected stock of Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general assortment of Evergreen Trees and Shrubs. We have 1,000,000 Gums from \$5 per M up, according to size. We have also an overstock of Pinus insignis, Monterey Cypress, Pure White Pampas Plants, large plumes, Large Araucaria Excelsa, American Elm, Black Walnuts and Blackberry Roots, at very low rates. Price List sent on application. Address,  
**WM. SEXTON, Petaluma, Cal.**

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
**W. A. T. STRATTON,**  
Petaluma, Cal.

FRUIT AND ORNAMENTAL  
TREES,

Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

**THOS. MEHERIN,**  
516 Battery Street,  
P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

**SEEDS**

Our Combined CATALOGUE for 1877

**EVERYTHING FOR THE GARDEN**

Numbering 175 pages, with Colored Plate, SENT FREE

To our customers of past years, and to all purchasers of our books, either Gardening for Profit, Practical Floriculture, or Gardening for Pleasure, (Price \$1.50 each, prepaid, by mail.)

To others, on receipt of 25c.

Plain Plant or Seed Catalogues, without plate, free to all.

*Peter Henderson & Co.*  
Seedsmen, Market Gardeners and Florists,  
35 Cortlandt St., New York.

**PLANTS**

**500 CHOICE VARIETIES OF** PLANTS  
for house and garden culture, sent by mail, free of postage. Send stamp for Illustrated Cat. Address **L. B. CASE, Richmond, Ind.**

**Trees, Plants,** Catalogue Gratis, Address, **F. K. PHENIX, Bloomington Nursery, Ill.**

## Seedsmen.

A New and Delicious Fruit.

## THE DIOSPYROS KAKI,

Known as the DATE PLUM, or

## THE JAPAN PERSIMMON,

BEAUTIFUL IN COLOR,  
DELICIOUS IN FLAVOR,  
MAGNIFICENT IN SIZE.

Average Weight, One-half to One Pound Each.

Four Varieties, Warranted Genuine, and will Bear in from One to Three Years.

Grafted and Reliable Stock Only.

PERFECTLY ADAPTED TO CALIFORNIA, AND NOW GROWING IN SANTA BARBARA, SAN FRANCISCO AND SONOMA COUNTIES.

"Its introduction will be a boon to our country."  
**J. M. RODGERS, Admiral U. S. N.**  
"A magnificent fruit."  
**J. C. WATSON, Commander U. S. Navy.**  
"Worthy to be ranked with the peach and pear of California."  
**P. V. VEEDER, D. D.,**  
Tokio, Japan.

Fruit on exhibition, and Trees, Clons and Seeds for sale by **REV. H. LOOMIS,** at **R. J. TRUMBULL'S** Seed Store, 421 Sansome street, San Francisco. Send for circular.

BULBS SEEDS TREES  
SEVIN VINCENT & CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of  
Vegetable, Field, Grass, Flower and Tree Seeds,  
Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable.  $\$ \#$  Trade price list on application.

\* \* \* We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**  
607 Sansome street, S. F.  
P. O. Box 1023.

**SPANISH CHUFA** Address  
**SEED FOR SALE.** **L. L. BEQUETTE,**  
Downey City, Los Angeles County, Cal.

## JAPANESE PERSIMMON.

Just received and For Sale, a choice selection of Trees, 3 and 4 years old, of this new, rare, and Valuable Fruit.

SOME OF THIS STOCK HAS BEEN GROWN BY SHINN & CO., NURSERYMEN, NILES, ALAMEDA CO., CALIFORNIA, FROM SELECTIONS OF THE CHOICEST VARIETIES KNOWN IN JAPAN.

Other portions of the stock now offered is from an importation made by that enterprising firm this season, of the variety known as the SEEDLESS PERSIMMON. Both (the California grown and the imported) are in every respect reliable.

The former will have the preference with experienced fruit growers, as being already naturalized and sure to bear transplanting. Price, for the California grown, \$1 each; for the seedless, \$2 each. Samples can be seen and orders given at 317 Washington St.

**GEO. F. SILVESTER, Seedsmen, S. F.**

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

Trees, Plants. Spring Lists free. F. K. PHENIX, Bloomington Nursery, Illinois.

## TO COLOR BUTTER.

EVERY DAIRYMAN SHOULD USE

Wells, Richardson & Co.'s  
PERFECTED BUTTER COLOR.

It adds five cents per pound to the value.

It gives a pure rich Dandelion color.

It imparts no taste or smell.

It is as harmless as salt.

It is better than Carrots.

It is better than Annatto.

It is better than any other coloring.

Foreign or domestic, liquid or solid.

$\$ \#$  A sample sufficient to color fifty pounds of butter will be sent to any address, postpaid, on receipt of ten cents. Every Dairyman who wishes to realize the highest price should give it a trial now.

$\$ \#$  An energetic man wanted to act as agent in every town. Liberal terms to the right man. For terms and territory, address at once,

**WELLS, RICHARDSON & CO.,**  
Burlington, Vermont.

## MUSIC BOOKS

—FOR—

Schools, Academies & Seminaries.

**THE HIGH SCHOOL CHOIR,** (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by **EMERSON & TILDEN.**

Equally good are the older HOUR OF SINGING, (\$1.) by **EMERSON & TILDEN,** CHOICE TUNES, (\$1.) for 3 female voices, by **W. S. TILDEN,** and DEEMS SOLFEGGI, (75 cents) which has exercises in Italian style.

**THE ENCORE,** (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL,** (50 cents) by **W. O. PERKINS,** (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS,** Book 1, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by **EMERSON & TILDEN.**

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, **RIVER OF LIFE,** (35 cents), **SHINING RIVER,** (35 cents), **GOOD NEWS,** (35 cents.)

Either book mailed, post-free, for Retail Price.

**OLIVER DITSON & CO., Boston.**

**C. H. DITSON & Co.,** J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker, Philadelphia.

The Best Agricultural Paper in America.

PORTERVILLE, February 10th, 1875.  
TO THE EDITORS AND PUBLISHERS OF THE RURAL PRESS—  
Dear Sirs: I am going to change my residence, and I will take the RURAL PRESS again when I get settled, and will get back numbers. I can say without flattery you that it is the best agricultural newspaper in America, and I will use my influence in your behalf. Yours with respect,  
**JOHN MCINTIRE, JR.**

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

Risks written to Dec. 31, 76.	AMOUNT.	PREMIUMS.
\$0,202,435.00	\$130,022.18	
Less Amount Canceled.....	435,419.00	9,508.33
Amount in force, Dec. 31, 76.	\$5,767,016.00	\$127,053.80
Losses paid.....		\$16,330.00

## CASH PLAN.

Risks written to Dec. 31, 76.	AMOUNT.	PREMIUMS.
\$3,605,935.00	\$71,865.16	
Less Canceled and Expired.....	1,587,246.00	28,585.16
Amount in force, Dec. 31, 76	\$2,018,689.00	\$43,280.00
Losses paid.....		\$12,718.71

## OFFICERS.

**J. D. BLANCHARD**.....PRESIDENT  
**I. G. GARDNER**.....VICE-PRESIDENT  
**G. P. KELLOGG**.....TREASURER  
**A. W. THOMPSON**.....ATTORNEY  
**F. D. K. RULE**.....SECRETARY

## TRUSTEES.

**J. D. Blanchard**.....San Francisco  
**G. P. Kellogg**.....Salinas  
**I. G. Gardner**.....San Francisco  
**Chas. Laird**.....Salinas  
**Uriah Wood**.....San Benito  
**A. B. Nally**.....Santa Rosa  
**A. W. Thompson**.....San Francisco  
**A. D. Logan**.....Colusa  
**I. C. Steele**.....San Mateo  
**G. W. Colby**.....Butte County  
**A. Woll**.....Stockton  
**C. J. Cressey**.....Oakland  
**J. C. Merryfield**.....Dixon  
**E. W. Steele**.....San Luis Obispo  
**C. S. Abbott**.....Monterey  
**Dr. T. Flint**.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT.....**GILBERT W. COLBY.**  
MANAGING DIRECTOR.....**C. J. CRESSEY.**  
CASHIER.....**ALBERT MONTEPELLIER.**  
SECRETARY.....**F. A. CRESSEY.**

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

**WILLIAMS & MOORE, Prop's,**  
Stockton, Cal.

## The Nurseryman's Directory.

A REFERENCE BOOK  
OF THE  
NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsman in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the book of easiest reference. Price, \$10.00 per copy. Address,

**D. W. SCOTT & CO.,**

Publishers, Galena, Illinois.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
**CLINTON BROS.,** Clintonville, Ct.



# GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). AMOS ADAMS, (SECRETARY). THOS. FLINT  
R. C. HAILE, (VICE PRESIDENT). THOS. UPTON. G. P. KELLOGG  
JOHN LEWELLING, (TREASURER). I. C. STEELE. W. L. OVERHISER  
O. HUBBELL. D. CAMPBELL.

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

Orders from the Country promptly attended to and sent C. O. D.

**PALMER BROS.,**  
726-734 MARKET STREET, S. F.  
Our Motto: "LOW PRICES."  
Ladies' Hats and Bonnets—Latest Styles,  
French Millinery, Flowers, Feathers,  
Human Hair Switches, from \$1.00,  
Laces and Veil Stuffs, Veils,  
Neckties and Fichus,  
Purses, Belts, Fans, Jewelry,  
Collars and Cuffs, Aprons,  
Rushings, Embroideries,  
Worsted, Canvas, Ties,  
2 to 6 Button Gloves, (Tannets,  
Handkerchiefs, Stockings,  
Toilet Articles, Face Powders,  
Dress Trimmings, Buttons,  
Sewing Articles—Best in Market,  
Corsets—French Woven, Thompson's,  
Stair and Table Oil Cloth,  
Parasols, Umbrellas,  
Baby Goods of Every Description,  
Ladies' and Children's Suits,  
Ladies' Cotton Underwear of "Stems,"  
"Merino," "Norfolk" and  
"Brunswick."  
Morocco Satchels and Valises,  
Gents' Furnishings in all the Best Brands,  
Boys' and Men's Custom Made Suits.  
Deutsch, Francais, Espagnol, and Skandinavisk Sprog spoken.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosbie and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty, yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.



3000 Engravings: 1840 Pages Quarto.  
FOUR PAGES COLORED PLATES.  
A WHOLE LIBRARY IN ITSELF.  
INVALUABLE IN A FAMILY.

The sale is 20 times as great as the sale of any other large Dictionary.

More than 30,000 copies have been placed in the public schools of the United States.

Recommended by 28 State Superintendents of Schools.

"Indispensable to every student of the English language."—M. R. Waite, Chief Justice United States.

Published by G. & C. MERRIAM, Springfield, Mass.

## LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

\$55 per \$77 a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine.

## SANBORN & BYRNES,



Mechanics' Mills, Mission Street,

Bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Newels and Balusters.

## NEW VINELAND TEMPERANCE COLONY.

Incorporated November 6th, 1876.

One hundred square miles of Valuable Farm and Grazing Lands to be sold to actual settlers at a small advance on first cost, on eight years' time, interest at seven per cent. per annum. Valuable lands for fruits, vegetables, and cereals, and requiring no irrigation. None but stockholders to be purchasers of the lands. In subscribing for stock, ten per cent. is required at time of subscribing, \$100 on each share of stock of the par value of \$1,000. All percentages paid in on stock are received on first payment for lands. Ample provision is made for Schools, Library, Churches, etc. The manufacture and sale of intoxicating liquors will not be allowed on the lands of the colony. These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River. Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the company at Lompoc, Santa Barbara County, Cal. JAMES W. WEBB, President. CHARLES MALTBY, Secretary.

## DAVIS & SUTTON,

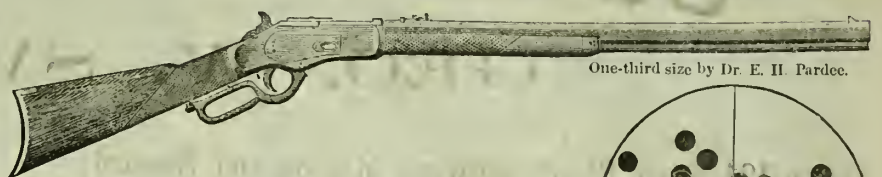
75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

# Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

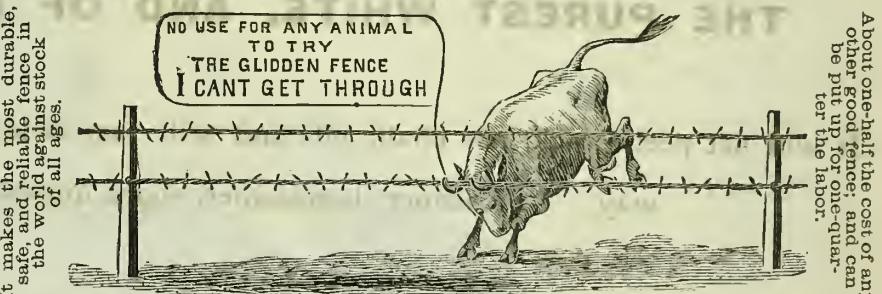
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Cartridges blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1860. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNANIMOUSLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery.
8. It is not pounded on with hammer and indented in main wire to hold it in place.
9. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
10. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - - - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

## CALIFORNIA YEAST CAKES,

MANUFACTURED BY

F. M. LEEF & CO., - - - SACRAMENTO, CAL.



B. B. SCOTT, General Agent, - - - Sacramento, Cal

References—Wholesale Grocers:

Messrs. Tillman & Bendel, San Francisco, A. P. Whitney, Petaluma, Adams, McNeil & Co., Sacramento.  
Taher, Harker & Co., San Francisco, Luther & Schroeder, San Jose, T. M. Lindley & Co., Sacramento.  
Newton Bros. & Co., San Francisco, Chas. Jones, Oakland, Booth & Co., Sacramento.  
J. A. Folger & Co., San Francisco, J. H. Seymour, Los Angeles, H. S. Sargent, Stockton.

## NAPA VALLEY PROPERTY.

The undersigned, a resident and practical farmer and horticulturist in Napa Valley for the past twenty-five years, is now making REAL ESTATE in this valley a specialty. Parties contemplating investing in Napa Valley can derive much valuable information relative to true values, seasons, rain-fall, crops, etc., by calling on or addressing the undersigned. Fine Wheat Farms at \$20 to \$60 per acre, ON LINE OF RAILROAD AND NAVIGATION. Superior Alfalfa Lands on Napa River; Productive Vineyard Properties; Garden Lands and Villa Residence Properties.

THOS. H. THOMPSON,

Wells, Fargo & Co.'s Building,

Napa, Cal.



CALVERT'S CARBOLIC SHEEP WASH, \$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

Dewey & Co. { 224 } Patent Agt's, { Sansome St }



# UNION BOX FACTORY,

## GEO. W. SWAN & CO.,

114 to 124 Spear Street, between Mission and Howard,

San Francisco.

### STRAWBERRY BASKETS:

SWAN &amp; CO.'S PATENT, ONE POUND, TIN TOP, PER 1,000,

\$ 9.00

SWAN &amp; CO.'S PATENT, ONE POUND, NO TIN, PER 1,000,

5.55

# AVERILL MIXED PAINT,

MANUFACTURED BY THE

# CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

For Sample Cards and Circulars, Address

# CALIFORNIA PAINT COMPANY,

27 STEVENSON STREET, SAN FRANCISCO.

## SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New  
Early Canada  
Early Dutton  
Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Sweet Corn.

Yellow Flint Corn.

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

### DAIRY TENANTS WANTED

For two of the best Dairy Ranches in the State. None but thorough dairymen, with California experience, are desired. The ranches are well-stocked, buildings first-class, and the product from them sells at the top of the market. Apply with full statements and references to E. J. WICKSON, Sec'y California Dairymen's Association, Office RURAL PRESS, San Francisco.

BOTTLE ROCK, Jan. 22d, 1877.

MESSRS. DEWEY & Co.—Gentlemen: Our patent papers, drawings and specifications have come to hand. We heartily express our thanks for the prompt and vigorous manner in which you have prosecuted our patent business. Respectfully yours,

A. H. MARSHALL,  
G. W. MARSHALL.

## H A R K !

THE

# GOLDEN PIANO

—IS—

COMING RIGHT ALONG,

—AND—

WILL BE SOLD

—AT—

## WELCOME PRICES

FOR CASH,

To all who want a good instrument and desire to pay for only what they get. Just wait for the "GOLDEN" PIANO and you can get a good one at a reasonable figure. Further particulars will be advertised soon.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

25

FANCY CARDS, 16 styles, with name, 10c.; 30 Fancy Bon Ton, mixed, with name, 20c.; 10 Comic Photos, 10c., or 20 Beautiful Scroll, 10c., post-paid. J. B. HUSTED, Nassau, Rems. Co., N. Y.

### OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.  
Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

### NAPA VALLEY PROPERTY.

The undersigned, a resident and practical farmer and horticulturist in Napa Valley for the past twenty-five years, is now making REAL ESTATE in this valley a specialty. Parties contemplating investing in Napa Valley can derive much valuable information relative to true values, seasons, rain-fall, crops, etc., by calling on or addressing the undersigned. Fine Wheat Farms at \$40 to \$60 per acre, ON LINE OF RAILROAD AND NAVIGATION. Superior Alfalfa Lands on Napa River; Productive Vineyard Properties; Garden Lands and Villa Residence Properties.

THOS. H. THOMPSON,

Wells, Fargo &amp; Co.'s Building,

Napa, Cal.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, MARCH 24, 1877.

[Number 12.]

## Assessing Agricultural Improvements.

There are some hardships inflicted by the prevailing method of assessing agricultural improvements in this State. We acknowledge we do not exactly understand just where the wrong lies, but we do know this, that some agricultural ventures in some of our best counties have been abandoned because the assessor elevated his views on the improvement before the same improvement was of any benefit to the man who planned and executed it. We know of no man at least who was forced to sacrifice several thousand dollars because the rates were put so high on his land, because of work which he had done without reaping a cent of benefit that he was forced to abandon the venture as a serious loss. This does not on the face of it appear to be a very direct way to favor agricultural improvement and investment. In fact it looks like something very different. Can any of our readers explain the matter?

Our thought is called this matter by a vigorous article, which wound in the *St. Helena Star*, upon the injustice of taxing vineyard improvements before there is any return from the investment. We shall quote a few points:

"A principle of valuation has heretofore prevailed in the assessment of vineyard property in this county, which we conceive to be erroneous and which, we trust, in justice to the vineyardist, may yet be abolished. Lands have been valued higher because being covered with vines, than much better land that was not. Now the tax on growing crops is opposed to the genius of modern law, and the assessor consequently would not assess the rich acre of bottom land any higher for having a finely waving crop of wheat on it than if it stood fallow for the season. But, by a strange perversion of the principles of justice, if a man has an acre of poor land on which nothing but vines will grow, and has spent four years of toil to make them grow on it—the meanwhile being out of any return for his property or his labor—the assessor will come along and charge that man about 100 over the value of good land for his barren acre; a clear premium of 100% for the privilege of having poor land instead of rich."

"Why not observe the principle of growing crops in one case as well as the other? The corn, wheat or potatoes maturing in or on the ground is a growing crop and is not taxed. The vine growing in the ground is also a growing crop and is taxed. Why this difference? One, that we know of, except that the farmer have, as a rule, to be planted over every year, the latter lasts a number of years. Some little advantage in that, truly, if you only look at that side of it, but on the other hand, look at all the expense for four years without a cent's return, for four years longer with at least but an insufficient one, and then think of charging a man extra for putting in that kind of a crop!"

We believe the same rule is observed in orchard improvements as in vineyards. The subject is one which will bear discussion.

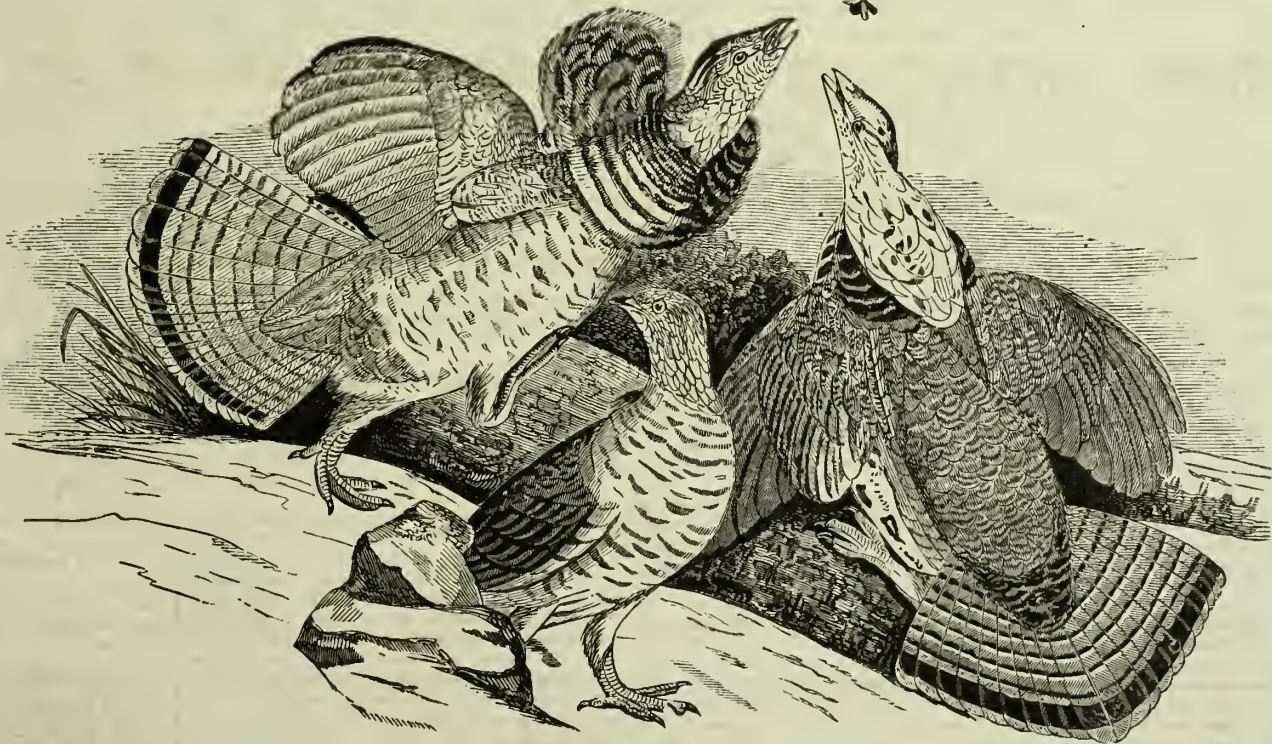
## Ruffed Grouse.

The bird of which we give an engraving on this page will be recognized by our Oregon and Northern California readers as a denizen of their thickets. Many others will also remember it the object of their gunning in the Eastern States. The grouse, although one of the most widely distributed birds in the United States, seldom, if ever, so far as we know, appears in our Southern counties. It is known as the "partridge" in the Middle States and the "pheasant" in the Southern States.

There is a close resemblance between this bird and the domestic fowl in their natural habits, especially with respect to the rearing of their young. About the first of May is the season for forming the nest, which the female constructs of dry leaves and herbaceous plants,

they sometimes breed. In the spring and autumn the male often betrays himself to the gunner by a drumming noise produced by his wings, which they have been known to continue for several hours at a time, and may sometimes be heard at a distance of half a mile. Their human persecutors imitate this noise, by tapping on dry and inflated bladders, when the bird comes forth to combat a supposed rival, and is shot; and they are also caught in traps set upon their drumming ground, or logs. Different species of hawks also destroy them, particularly the red-tailed and Cooper's hawks. Skunks, weasels, raccoons, opossums, and foxes are also their foes, some of them sucking their eggs, and others feeding on their flesh.

Seeds and berries of all kinds chiefly comprise their food, but they are particularly fond of fox-grapes, winter-grapes, strawberries and dew-berries. In winter or early spring, they eat the tender buds of various trees, and thus sometimes prove injurious to the apple and other fruit crops located near dense woods.



THE RUFFED GROUSE

in a spot where a heap of leaves has been formed by the wind, on the ground, beside a prostrate tree, or at the foot of a low bush. She lays from five to 12 eggs, of a dull, yellowish color. As she does not cover them on leaving her nest, like the turkey, goose and duck, the crow and raven not infrequently devour them. When she is present she defends them with great obstinacy, striking the intruder with her wings and feet after the manner of the common hen. As soon as the young emerge from the shell, which is about three weeks after the hen has commenced sitting, they are able to follow their mother, sometimes, indeed, running with a portion of the shell adhering to them; and when but six or seven days old, they are capable of flying a few yards at a time. She then leads them abroad in quest of food, covers them with her wings, and in every way provides for and protects them. Although a permanent resident in the region it inhabits, the ruffed grouse performs partial sorties at the approach of autumn, but not so extensive as the peregrinations of the wild turkey, the little partridge or the primed grouse, yet sufficiently so to be noticeable at periods when the food in some mountainous localities becomes scarce.

Although the ruffed grouse is partial to the craggy sides of mountains and hills and the rocky borders of rivers and small streams, thickly mantled with evergreen, small trees and shrubs, they at times remove to low lands, and even enter the thickest cane-brakes, where

They are then easily approached, but are too lean to be desired. About the first of September, when the mountains are covered with whortleberries and blackberries, is the proper time for shooting and catching them. Trap-boxes are then used, as well as the "figure-of-four." When the snow is deep, they often conceal themselves by diving beneath it and emerging at a distant place, but are often caught in the attempt.

The whirring noise produced by these birds when rising in alarm from the ground is not made at any other time. Its usual flight is low, straight forward, and seldom more than a few hundred yards at a time, being also stiff, and accompanied with a beating of the wings for more than half the distance, after which, it sails like a ship before the wind. It moves gracefully and proudly upon the ground, until alarmed, when it lowers its head, expands its tail, first runs a little distance, and then flies away with a whirring noise.

LAND PLASTER.—Those of our readers who desire land plaster can get a good article from the Golden Gate mills, as advertised in the *RURAL PRESS*. This company are diligent in procuring the finest qualities of gypsum, and have ample facilities for grinding it, as we saw during a recent visit to their works. We are well assured that plaster will be of value to our farmers for many uses.

## A Pest on the Lupin.

Those who are relying on the lupin to anchor down the drifting sands will be sorry to learn of an insect which has been doing the plant much damage in the Golden Gate park in this county. At the last meeting of the San Francisco Microscopical Society, as reported by C. Mason Kinne, Secretary, Mr. Hyde exhibited a number of branches of lupin destroyed by the larva of some insect, which he had obtained from Mr. Pritchard, Superintendent of Golden Gate Park. The ravages of this insidious little foe are becoming apparent in a very alarming manner, some 20 acres of the lupin of the park being destroyed. The blight was first noticed some six weeks ago, and rapidly spread from several well-defined patches. With the infected branches Mr. Hyde presented four vials, each containing forms of insect life thought to be obnoxious.

The fly found most numerous on the healthy and diseased plants and supposed by Mr. Pritchard to be intimately connected with the trouble, was at once counted out, as well as the second insect noted. The third, on a casual examination, bore some of the finger-marks of that pest of the agriculturist, the *Curculionidae*, of which there are some 10,000 known species; but, on further examination, Mr. H. Edwards decided it to be the active pupa of the second. He further stated that the larva which was tunnelling its way in such numbers up through the pith of the branches, destroying the

shrub and jeopardizing the well directed efforts of the Park Commissioners, to reclaim the sandy wastes, would no doubt be found in July, or thereabouts, to develop into one of the smaller *Noctuidae*, or night-flying moths, which seem to delight in bad deeds. The cabbage cut-worm is the larva of *Agrotis devastator*, one of the 2,500 species of its kindred, and serves as an example of what trouble they can cause. Feeding, as this new pest does, on the very heart of the plant, there is no way to become rid of the trouble but cutting down every infested plant, burning them, and thus lessen the production. Those already at work are domiciled beyond the reach of the turkey remedy proposed by Mr. Edwards some two years ago, and carried out with manifest improvement to the lupins, at which time the leaves were being destroyed by the larva of a small butterfly.

EUCALYPTUS HONEY.—A resident of Alameda county has been sending the *Bee-Keeper's Magazine* a phial of honey gathered from the flowers of the *Eucalyptus Globulus* (blue gum) during the month of December, 1876. The editor says: "It is highly aromatic and no doubt possesses medicinal virtues. It resembles, in many respects, the honey accompanying the queens we receive from the region of the Alps in Italy."

We can recommend the New York watch, of Springfield, Mass., as A. 1.



## CORRESPONDENCE.

### Placer County.

EDITORS PRESS:—Recently a neighbor here gave to me a copy of the *RURAL PRESS*. I find in it useful and reliable information to all agriculturists. This rural part of Placer county is not represented by correspondents, consequently I will give to your readers a synopsis of true facts in relation to the resources of this place. You may think I am partial when I say we have the most healthy location in the country; the atmosphere, dry and pure, really beneficial to persons predisposed to consumption, etc., while all the productions of the temperate as well as some of the torrid zones grow to perfection. Here we can raise from two to four crops a year. My second crop of potatoes were the best and will not rot like the first.

My neighbor's (Mr. R. Hector) fine orchard I will speak of first. In the latter part of February he had apple trees out in full bloom and leaf. Do you know of any locality ahead of us? Mr. Hector has about 250 cherry trees of the large black kind, many of them measuring two feet in diameter, and bear on an average over 200 pounds each. Here also can be seen a curiosity—seven different kinds of roses growing from a grape vine stock.

Next comes Mr. J. W. Smythe's fine orchard, with various kinds of the choicest varieties of fruit trees, including the orange, the useful as well as well as ornamental evergreen, covered with the choicest oranges. He has also the best variety of the Alexander peach; I do not believe any in the country can equal them.

Men's ideas improve and intelligence increases, so in relation to fruit growing by practice as well as reading such papers as the *RURAL PRESS*. The world moves on and old fogy ignorance is passing away. This will in time be the best country in the world. Can any other country plant crop after crop the whole year round, with flowers and roses in bloom all the year? Our resources should be heralded by telegraph to all.

JOHN McBRIDE.

New Castle, Placer county.

### Sowing Alfalfa—Milk Fever.

EDITORS PRESS:—Being so frequently inquired of concerning my method of preparing ground for alfalfa, I have thought it may spare some further inquiries and answers if I can get you to put it in print for me in your columns. It may be for the benefit of some of your readers who contemplate sowing so late in the season, as no doubt many will think it now.

The time of sowing, as well as the preparation of the ground, will be governed in a great measure by the season and nature of the soil that is to be prepared. But presuming that it has been plowed well and deep—if the nature of subsoil will admit of its being turned up without injury to plant life—early in the season, it will be necessary to keep it free from weeds by either a shallow plowing or cultivating to a depth of three or four inches. The land having had one deep plowing will not require stirring to more than sufficient depth to destroy the weeds or native grasses before sowing, as all clovers thrive best with what is called a solid bottom, which is attained by allowing the under soil to settle or solidify to a certain extent, between the time of plowing and sowing the seed. By having the ground plowed and thoroughly harrowed and worked to a fine tilth, three or four weeks before sowing, gives time for all the small seeds, that are near the surface, to germinate, thus ensuring their destruction in the final preparation of the ground for the reception of the alfalfa seed. Having the ground in something like the state described, when the time for sowing comes—being guided by the state of the soil and the weather—I take a cultivator, drawn by three stout horses, which thoroughly stirs the ground to the depth of three or four inches; the harrow and cross-harrow, and use the roller if necessary, till the ground is as level as harrowing will make it; finally roll it, and sow the seed upon the rolled ground; sowing about 25 pounds of seed per acre at one sowing, and then cross-sow with from 20 to 25 pounds per acre more, after which the seed is harrowed in with ordinary two or three-horse harrows and finished off by another rolling, which leaves the surface fine and even. By this method I have a remarkably even growth all over 50 acres of land, sown in three different seasons, viz.: 1874, 1875 and 1876, always sowing from the middle to the latter end of April, which I know is thought to be too late and no doubt is, under certain conditions of soil and climate, regarding which every man must use his own judgment.

The advantages I have had in late sowing are a comparative freedom from weeds and the retention of a loose surface soil all through the dry season, which to a certain extent acts as a mulching to the land.

Many failures in securing a good "stand" of alfalfa may be attributed to the following reasons, viz.: First, want of sufficient labor in preparing the ground. Second, an insufficiency of seed sown, and third, not covering the seed to a sufficient depth; the drier the soil, the

deeper the covering required. As soon as the roots have sufficient hold of the ground to allow of it being pastured off without pulling up by the roots, I turn in calves to eat it off, which causes it to branch out and make a still thicker growth than would otherwise be done, notwithstanding the apparently large quantity of seed sown per acre.

### Milk Fever.

Two articles on milk (puerperal) fever in cows have recently appeared in the *RURAL*. As this is the season, March, April and May, when cows are, at least as far as my experience goes, most liable to this disease, I may add that I have, at intervals of two or three years, lost a few cows by that almost incurable disease. I have however, had two recover under the "Aconite treatment;" but never had a case of a cow having puerperal fever after I had taken the precaution of giving two or three days before calving, one pound to one and a half pounds of epsom salts, according to size and condition of cow, with two ounces of saltpeter, two ounces ground ginger, given in about four quarts of water, with a pound of molasses added; at the same time keeping the cow moderately well sheltered from the cold winds that we are liable to have at this season of the year. I have never known of, or had a case in which I could not trace the cause to cold, either from draft in the stable, calving out of doors on a cold day, or some sudden change of the temperature, all of which should be carefully guarded against. I do not think flesh, that is condemned so much by some in dairy cows is so often the cause of the disease as cold, in fact, I am inclined to the opinion that the absence of the former is too frequently more injurious than its presence.

ROBT. ASHBURNER.

Borden Station, March 17th, 1877.

## HORTICULTURE.

### Fruit-Drying. Blowers' Evaporator, Etc.

EDITORS PRESS:—Judging from the present outlook, California this year is to have a greater surplus of fruit than ever. It is true, in many places where the means of irrigation are limited the fruit may not be quite up to the standard of excellence demanded in our markets or for shipping, but the many new orchards and young trees all over the State, as well as vineyards coming into bearing, makes an answer to the following question imperative: What shall we do with our fruit?

Practical experience teaches us that all cannot ship fruit successfully to the Eastern or even to the interior markets, paying the necessarily high railroad freight, box, labor and commission expenses. Even the most successful fruit merchants, with all their tact, energy and experience, make a poor showing after balancing their books at the end of the year.

The last resort of the producer then appears to be to dry his fruit, dry it in such a manner that its appearance will insure its ready sale in the markets of the world; it must also have a keeping quality, also must be so cheap that the toiling millions may eat and be happy, and also make glad the heart and pocket of the fruit grower.

To do this an evaporator of great capacity, cheapness and simplicity is necessary; of capacity so great as to use up all surplus fruit, and so cheap that any neighborhood or any large grower can erect one and pay for the whole concern out of the profits of a few weeks run from fruit which would otherwise be wasted or thrown on our markets to the entire ruin of profit. Having driers, only the necessary supplies need be sent forward, and grower and merchant and all parties profit by the arrangement.

I think we have succeeded in constructing such a drier, at least that was my experience the past year in a small vineyard of less than 25 acres of Muscatel vines, although the evaporator was not more than half completed when our heavy early rains came. I saved from what would otherwise have been almost a total loss, nearly or quite twice the cost of my drier, packing-rooms and 5,000 drying trays.

The drier is built according to the well-known laws of science. It consists of two furnace rooms in which the air is heated by simple devices large box stoves, drums, pipes, etc., surrounded by 16 independent drying-rooms, either one or all of which can be used at one time, as they are provided with doors by which the heated air can be turned on or shut off. Each room holds 204 trays of an area of six feet each, making for the room a drying surface 1,224 feet or for the 16 rooms 19,584 feet. Owing to the peculiar construction a very powerful draft is secured, carrying off the moisture as soon as evaporated, otherwise the drying would necessarily be slow. The point of saturation of the air being reached at any given temperature, the air must be removed to continue the process of drying, and moreover as the air passes further from the furnace, constantly losing heat and then not being able to retain the moisture held at a greater temperature condensation takes place, injuring the value of many kinds of fruit. Hence the absolute necessity of strong draft to cure any material in large quantity. Arrangements are completed for building a Blowers' drier at Newcastle, from where I am told over 1,000,000 pounds of fruit were shipped last year. The company intend to handle all kinds of fruit.

The patent was issued February 13th, 1877. I will be pleased to show the drier to any interested parties and explain its workings. If it will be of interest I will send you some items concerning the curing of raisins for your next.

W. B. BLOWERS.

Woodland, March 15th, 1877.

[Let us have the points on raisins by all means, if you please.—Eds. PRESS.]

### Fig Growing in Smyrna.

We believe that the fig producing ability of this State has as yet been but little developed. It is true that we grow figs and dry them, but that we have as yet the best varieties and command the market with our own product as we should is not certain. Indeed the subject of fig production is a subject which our best fruit growers are now experimenting with, and we have high hopes of their future achievements. Smyrna is famous all over the world for her figs, and this fact led Mr. G. P. Rixford, of the *Call*, to write to the U. S. Consul at Smyrna to gain some facts concerning methods, etc., in Asia Minor. He received last week in reply a letter from Mr. Augustus O. Clark, a very intelligent English gentleman, who settled many years ago in the Aidin district, where he engaged in the manufacture of liquorice paste and subsequently became a large owner of fig orchards. Mr. Clark is an enlightened agriculturist, and the information contained in this report may be relied upon. Mr. Clark writes as follows:

The Aidin district is the only one which produces figs for exportation. The fruit will grow anywhere in the neighborhood of Smyrna of a quality for consumption in a green state; but the Aidin plain is unique in its climate and soil as being favorable for the proper curing of the fig. The thermometer seldom falls below three or four degrees under the freezing point, and in the summer seldom rises above 130° Fah. in the sun. In Aidin the winters are generally wet, the dry weather commencing in May and continuing to the end of October. Any rain at the end of July or during the months of August and September, when the fruit is under the process of drying, injures its quality by causing it to burst, hardens the skin, gives the fig a dark color and spoils its keeping quality. Heavy dews will cause the same evils. What is required during the time the fruit is coming to maturity is fine weather and dry winds.

### Soil and its Preparation.

The fig tree grows in almost any soil; it grows very luxuriantly, however, in a rich, heavy soil; but to produce figs that will dry well, and please the merchant, the soil ought to be of a good depth, and of a rich, light sandy nature; this latter, if the weather is favorable, will produce large figs of a white thin skin and of the finest quality.

Before planting the ground ought to be well plowed two or three times to a good depth, well pulverized and freed from all weeds and extraneous roots.

The fig is propagated from slips, selected with as many fruit buds as possible. To form a tree two slips are planted, one foot apart, and then joined at the top. The trees, if planted in rich soil, should be placed about 30 feet apart, and for poor soil about 25 feet distant from one another.

The cuttings are to be planted in the month of March—two in each hole—at about nine or twelve inches apart, at the root end; then gradually bring the top buds to meet, just crossing them, thus X; then tread in the earth well. The cuttings must be full of buds or eyes, and when about to plant them cut the root end off at the first knot, care being taken not to leave any of the pulp in sight, as it will be liable to be attacked by worms, which will make the tree hollow and sickly. The cuttings are put into the ground to within one or two inches of the top, after which the process of crossing must take place. The ground must be well trodden in to within two or three inches of the top, then cover the remainder over with loose earth, which will protect the ends from the heat of the sun. When the trees arrive to about the height of a man, nip or cut off the tops to one uniform height, and this will cause the tree to branch out.

During the growth of the trees, the ground ought to be plowed up two or three times during the winter or spring, and the space between them may be used to cultivate broom, sesame or Indian corn. When the trees are large the same system of plowing and loosening the earth all round the trees ought to be continued. To make a fig tree grow well, the plowing of the garden is very essential. If this is not attended to, the fruit will be small and in every respect inferior. The first year of planting, the cuttings ought to be watered during the summer months.

### Application of the Male Fig

The male fruit, about the middle of June, contains a large number of small flies, and is thrown on the female trees; these flies then get distributed over the fruit and convey the necessary amount of pollen. The system is as follows:

When the female fig (first crop) is about the size of a hazel nut, five or six of the male figs are strung on a piece of string, and one or two of these bunches are thrown upon the female tree, according to its size and amount of fruit. Repeat this operation when the second crop is about the same size. As the tree grows larger

year by year, increase the number of strings; but never put more than six strings (say about 30 male figs) over the largest tree at one time. These strings are put on the tree about one hour before sunrise, and care must be taken that the weather is fine and no wind blowing. I may mention that, if the male fig is not applied the crop will not set, but the fruit will fall off; and if too many are applied the fruit will likewise fall or become very small or inferior.

### Curing.

About the end of July the first figs come to maturity. The fig harvest lasts about six weeks. When the fig is ripe, it will of its own accord fall from the tree, only partly cured. Women and children are employed to pick up the fruit into small baskets, to be conveyed to a place in the garden well exposed to the sun, where they are spread on a bed of dry grass or matting, singly—that is to say, not one on top of another—and are turned, every day, so as to get every side of the fig exposed to the sun. After a few days of exposure to the sun, those figs which are considered sufficiently dry are selected from the mass and divided into first, second and third quality. Care must be taken not to dry them too much. When properly cured the skin ought to feel dry, but the inside soft. Practice alone can teach to what extent the drying ought to take place. The grower then sends the figs to Smyrna, where they are re-sorted and packed for shipment.

## THE STABLE.

### Gambling and Racing.

No one who knows the *National Live Stock Journal* will think of its being neglectful of any true influence in the development and improvement of the horses of the country. This being so, the earnest protest which it makes against the wretched gambling which has fastened itself upon our horse exhibitions, possesses all the more weight. We quote from the article because its statements are applicable in this State. The *Journal* says: If any one is disposed to doubt the assertion that "a considerable proportion of the support of our racing and trotting associations comes from the gambling fraternity," they have only to consult the figures that have been published for the last trotting meeting at Buffalo, and the last running meeting at Jerome park—the leading trotting and the leading running course of America—to find our position fully confirmed. At Buffalo, the total receipts for season tickets, gate money, etc., for the four days, were \$15,136, and the percentage on pools sold, which came into the coffers of the association, amounted to \$5,305, being more than one-third as much as the total receipts for admissions. At Jerome park, we have seen no statement of the amount received from the "auction pools" sold, but from the "French mutuels" alone the percentage amounted to \$13,445—nearly as much as the entire amount of "purses" and "added money" given at the meeting. And when to this is added the percentage from the auction pools, the amount is simply enormous.

We are decidedly in favor of legitimate, honorably-conducted racing, because we believe that the severe ordeals of the turf furnish the most reliable and efficacious methods of eradicating the "weeds" that grow up in our best bred families of horses, and furnishes the most convenient and powerful check to the ruinous practice of breeding for pedigree alone, which prevails so extensively in some other classes of stock. So long as the ordeal of the hard-fought race continues, breeders will each year ask the question, how are the winners bred? The stallion whose produce shows speed, strength and endurance of the highest type, is the one sought after by breeders, no matter how unfashionable his family may have been in former generations. On the other hand, a stallion may be descended from a race of kings and queens of the turf, but if his loins do not beget winners, he is discarded.

It is this close attention to the individual merit of sires and dams, as shown by the records of the turf, taken in connection with their pedigrees, which has enabled the breeder of the blood horse to make constant improvement. If we abandon these turf contests, we lose this convenient method of deciding which are the best sons of famous sires, and are in danger of running to the extreme of relying solely upon pedigree.

But while we are thus decidedly in favor of supporting the race-course, we shall never cease to make war upon the pool-box as a part of its machinery. We have again and again denounced the demoralizing tendency of these gambling accompaniments of the race-course, and have plead earnestly for the banishment of the pool-box from all connection therewith. We believe this can be done; but it can only be effected by bringing a different class of men to the front as managers of our race-courses. Men whose leading motive is the improvement of our road horses; breeders who are enthusiastic lovers of the horse, must come to the front and assume the management. As we have heretofore said, so long as our race-tracks are controlled by men whose leading object is to make money, without regard to how it is made, we have no right to expect any reformation of the turf. The influence of the pool-box in the matter of dividends is too powerful to be ignored by such men, and outweighs all considerations of morality or public good.



## FLORICULTURE.

### Brodiae Californica.

W. C. L. Drew, of El Dorado, California, writes to the *Gardener's Monthly* as follows: Of the many strange and wonderful growths found in California, the botanist finds few of a more peculiar habit, and none that I know of deserves more attention. No other plant in the vegetable world acts as does this one.

The *Brodiae Californica* belongs to the natural order *Liliaceae*, and is known among the mass of floral people as the twining hyacinth, a name which it well deserves, as will be seen by the description given below. It has two near relations, both natives of California, but of a different habit. They are—*B. coccinea* bearing crimson flowers, and *B. grandiflora*, bearing blue flowers, both of which I shall describe at another time.

The *Brodiae Californica* starts to grow early in the spring, it sends up from two to four leaves, the latter very seldom, these are of various shades of green, being very dark where exposed to the sunlight, and light in the shade; they vary from one-half to one inch in diameter, and from one to three feet in length. I have often gathered them of over a yard in length, but they were always of plants in the shade. They have a deep channel running the entire length, and nearly always lie prostrate on the ground.

The flower-stem starts to grow about the middle of May; as soon as it gets five or six inches long, it commences to twine, and twines itself over any shrub or plant in its vicinity, whether five or ten feet high, it keeps on twining until it reaches the top of its support.

It takes it from two to four weeks to reach the top of its support, and all this time the flower bud remains dormant. After reaching the greatest height it can get, it stops to take a rest for a week or two. Then occurs the most singular phenomenon of all. The stem breaks off close to the ground, and keeps no connection whatever with mother earth, which until this time has given it nourishment; now the flower-bud begins to expand, and grows for about two weeks, when lo! the bud opens and exposes to view from six to 60 other flower-buds, which up to this time have been safely hidden from view. In about a week, or the first to the middle of July, the flowers open, and remain from two to six weeks, and this without any connection with the earth whatever. Whether it derives nourishment from the shrub supporting it, or the air, I am not prepared to say.

The flowers are of various shades of pink and pinkish purple; as before stated they are borne in clusters of from 12 to 60; they are from one-half to one inch in diameter, and the clusters from one to six inches in diameter.

The bulbs are of a medium size, and very deep in the ground, and so entangled with roots of underbrush that it is almost impossible to get them.

To any one who can get them, I would say get them. Plant about four inches deep, in rather good, rich soil, near some bush or shrub, so as to afford some support. It will not injure in any way. Cover in cold climate with suitable covering. Give no water except what it gets naturally. By following the above directions, I think you will have success.

## THE APIARY.

### Tests of Purity in Bees.

M. Metcalf writes to the *Beekeepers' Magazine* on the marks of pure Italian blood, as follows: I am reliably informed that many instances have been known in Italy where bright yellow queens have uniformly produced royal daughters exactly like the mother, although the rule with indifferent colored queens was quite the reverse. That the workers of some dark queens will bear the broad yellow bands of the best, and show, with other stocks bred from the same parentage, a kindly disposition, whilst the latter exhibit darker bands, or if a narrow stripe, is no proof of purity of the queens but quite the contrary.

What, then, are the tests of purity? I answer, color, mainly; disposition, next. The form of the worker bee, also, to the practiced eye, goes a good way, but is quite useless to the novice.

If I were to select for myself from an unknown stock of so-called Italian bees, I would take only those having queens of pure bright yellow, whose workers exhibited the broadest and brightest yellow bands; and if drones abound I would have a particular eye to such of the young of these as had not yet become of age or had taken flight, and see to it that they were all brightly marked, and every one exactly like his brother. If any one of these just emerging from their cells looked dubiously dark, I would pass them by, no matter how bright yellow the queen nor what the workers might be. If a few dark or even black drones should be found that had evidently taken wings and black or hybrid bees were anywhere about, the bare fact of the dark drones being found in an otherwise standard colony would not be conclusive against the stock, or that these drones were the progeny of this yellow queen, by any means, for the reason that the drones are, so to speak, "free commoners," and liable to be found, like

some of our modern preachers, frequently in the wrong fold. Nor is the disposition to sting upon slight provocation conclusive of impurity of blood, although it is true that the pure Italian is less liable to "get up on his ear," or yours, than his black congener. But this is so much a matter of education—or training would be a better word, perhaps—of the bees by the bee-master who has them in charge, that not much stress should be placed on that, unless, indeed, you know how they have been handled, for it is comparatively an easy matter to get a man, beast or honey bee to "go for" an inconsiderate intruder.

### Eastern Producers of Honey.

We notice by an admirable address delivered by our friend, R. Bacon, of Oneida county, New York, President of the Northeastern Beekeepers' Association, that Eastern beekeepers are waking up to the question of marketing as forced upon them by California progress. He said:

What unity of action has done for dairying and other branches of industry, it may also do for apiculture. It is beginning to be understood that association and unity of action are the great mainsprings of power and progress in the world. The beekeepers of this country have not fully awakened to this principle in marketing their products. They have proceeded upon the plan of individual action, and often through inexperienced salesmen the market becomes impaired and a loss to bee-men is the result. I am glad to hear the sound of reform in this direction coming over the plains from California, and may an echo return sounding the glad news to our brother beekeepers in California, that the East is also waking up to this subject.

I take the following extract from a committee report on selling honey. It says: "We are advised by San Francisco dealers that producers are very much to blame in our present demoralized market in this city, by ordering forced sales while it is out of season for its sale, and also by sending to parties who, by inexperience are not informed as to this fact, and have consequently sacrificed their consignment."

Our local home market has been affected in a similar way to that of San Francisco, and all of these will act and react so that our Eastern markets will be affected in like manner, according to the well known laws of trade. This report tells us that the California honey market has become demoralized by inexperienced salesmen, etc., and fears are entertained that the Eastern markets may become so, too. Is not this the case, to a certain extent already? We earnestly hope that the beekeepers of this country will wake up to this matter and prevent, if possible, further injury to our market.

## SHEEP AND WOOL.

### Fish for Sheep Feed.

Whether any of our shepherds in the districts now affected by the drouth can practically turn any of the products of our ocean fisheries to serve the present needs, we cannot tell. It is, however, certain that fish and fish refuse have been profitably employed as sheep feed. In the latest issue of the *Live Stock Journal* we read as follows: We remember to have read that, in some parts of Norway, cows were compelled, by the scarcity of other forage, to eat fish during a portion of the long winter; but until finding the statement in the Report of the Agricultural Department of Maine for the 1874-75, recently published, were not aware that the idea had attracted attention in this country. It appears that as long ago as 1869, a paper was laid before the Maine Board, by M. L. Wilder, a member, in which the opinion was ventured that fish offal would be found not only cheaper, but a superior feed to any other provender used. Mr. W. said:

I keep about 100 sheep, and have fed fish offal to them for ten years. The offal is made from herring caught in weires, salted the same as for smoking, cooked, and the oil pressed out, leaving a pomace, for which the sheep are more eager than for grain. For the last three winters I have kept my sheep on threshed straw, with one-half pound per day to each sheep of dried fish pomace, or one pound of green (as it shrinks one-half in drying), and they came out in the spring in much better condition than when fed on good English hay, with corn. I consider the pomace worth as much as corn, pound for pound.

Some two years since, for the purpose of testing the value of fish scrap with some accuracy, a quantity was obtained from Mr. Wilder and placed in the hands of J. R. Farrington, instructor at the State College, with the request that he fed it with corn, in such manner as to best ascertain its comparative value. For the purpose of the experiment, ten lambs dropped the previous spring were selected, and divided into two lots of five each. Beginning January 15th, one lot was fed with corn and the other with fish—each lot allowed all the hay it would eat. At the end of 16 weeks it was found that the lot eating corn had gained 48 pounds, or 15½% in weight, while that eating fish had gained 47 pounds, or 15 1-12%. The experimenter adds that the details were not entirely satisfactory, but he did the best he could under the circumstances. Nothing is said about the surroundings of the animals during the experiment, and the inference is allowed that these were favorable to thrift.

## THE VINEYARD.

### The Fruit Brandy Law.

As a matter of news for the information of our wine distilling readers we print below the law which was framed by the Department of Internal Revenue to answer the diligent request of the producers:

*An Act relating to the production of Fruit Brandy and to punish frauds connected with the same.*

Be it enacted, etc., That the Commissioner of Internal Revenue shall be, and hereby is authorized, in his discretion, and upon the execution of such bonds as he may prescribe, to establish warehouses, to be known as special bonded warehouses, not exceeding ten in number in any one collection district, exclusively for the storage of brandy made from grapes, each of which warehouses shall be in the charge of a storekeeper, to be appointed, assigned, transferred and paid in the same manner that storekeepers for distillery warehouses are now appointed, assigned, transferred and paid. Every such warehouse shall be under the control of the Collector of Internal Revenue of the district in which such warehouse is located and shall be in the joint custody of the storekeeper and the proprietor thereof, and kept securely locked, and shall at no time be unlocked or opened, or remain open except in the presence of such storekeeper or other person who may be designated to act for him, as provided in the case of distillery warehouses. And such warehouses shall be under such further regulations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may prescribe.

Section 2. That every distiller of brandy from grapes, upon rendering his monthly return of materials used and spirits produced by him, shall immediately pay the tax upon such spirits, or may, after they have been properly gauged, marked and branded, under regulations to be prescribed by the Commissioner of Internal Revenue, and approved by the Secretary of the Treasury, and also stamped, as hereinafter provided, cause them to be removed in bond from the place of manufacture to a special bonded warehouse, under such regulations and after making such entries, and executing and filing with the collector of the district in which such spirits were manufactured, such bonds and bills of lading, and giving such additional security as may be prescribed by the Commissioner of Internal Revenue and approved by the Secretary of the Treasury.

Sec. 3. That all brandy intended for deposit in a special bonded warehouse, before being removed from the distillery, shall have affixed to each package an engraved stamp indicative of such intention. To be provided and furnished to the several collectors, as in the case of other stamps and to be charged to them and accounted for in the same manner; and for the expense attending, providing and affixing such stamps ten cents for each stamp shall be paid the collector on making the entry for such transportation.

Sec. 4. That any brandy made from grapes removed in bond, according to law, may, upon its arrival at a special bonded warehouse, be deposited therein upon making such entries, filing such bonds and other securities; and under such regulations as shall be prescribed by the Commissioner of Internal Revenue with approval of the Secretary of the Treasury. It shall be one of the conditions of the warehousing bond covering such spirits that the principal name of said bond shall pay the tax on the spirits, as specified in the entry, or cause the same to be paid within three years from the date of the original gauging of the same, and before withdrawal, except as hereinafter provided.

Sec. 5. That any brandy made from grapes may be withdrawn once, and no more, from one special bonded warehouse for transportation to another special bonded warehouse; and such brandy shall, on its arrival at the second special bonded warehouse, be immediately entered therein, from which warehouse it shall be withdrawn only on payment of the tax or for immediate exportation. In case the brandy withdrawn is intended for deposit in another special bonded warehouse, an additional stamp, indicative of such intention, shall be affixed to each package withdrawn, as in the case of brandy withdrawn from a distillery intended to be so deposited. And in case the brandy is intended for exportation, an engraved stamp, indicative of such intention shall be affixed to each package so removed, as in the case of spirits withdrawn from a distillery bonded warehouse for exportation, under the provision of section 3,330, Revised Statutes; all the provisions of which section, not inconsistent with this act, are hereby made applicable to such withdrawals. And all withdrawals authorized by law of grape brandy from any special bonded warehouse shall be, upon making such withdrawal entries, and under such regulations, and unless the withdrawal is upon payment of tax, upon the execution of such bonds and bills of lading as the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury may prescribe. Export bonds given under the provisions of this act shall be canceled upon the production of such certificates of lading as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury may prescribe, or upon proof of loss at sea, satisfactory to the Commissioner of Internal

Revenue. And the provisions of existing law relative to an allowance of loss by casualty in a distillery bonded warehouse are hereby made applicable to brandy stored in bonded warehouses, in accordance with the provisions of this act.

Sec. 6. That the provisions of existing law in regard to the exportation of distilled spirits are hereby extended so as to permit the exportation from special bonded warehouses, of grape brandy free of tax in any original cask containing not less than twenty gallons, and for the exportation of grape brandy upon which all taxes have been paid, with the privilege of drawback in quantities of not less than one hundred gallons, and in the distillers' original casks, containing not less than twenty wine-gallons each.

Sec. 7. That whenever, in the opinion of the Commissioner of Internal Revenue, any special bonded warehouse is unsafe or unfit for use, or the merchandise therein is liable to loss or great wastage, he may discontinue such warehouse, and require the merchandise therein to be transferred to such other warehouse as he may designate, and within such time as he may prescribe; and all the provisions of section 3,272 of the Revised Statutes of the United States relating to transfers of spirits from warehouses including those imposing penalties are hereby made applicable to transfers from special bonded warehouses.

Sec. 8. That the tax upon any brandy distilled from grapes removed from the place where it was distilled, and in respect of which any requirement of this act is not complied with, shall at any time, when knowledge of such fact is obtained by the Commissioner of Internal Revenue, be assessed by him upon the distiller of the same, and return to the collector who shall immediately demand payment of such tax, and upon the neglect or refusal of payment by the distiller, shall proceed to collect the same by distraint. But this provision shall not exclude any other remedy or proceeding provided by law.

Sec. 9. That nothing in this act shall be construed as extending the time in which the tax on brandy made from grapes shall be paid beyond three years from the day on which the taxable quantity is ascertained by the gauger; and all brandy made from grapes, found elsewhere than in a distillery or special bonded warehouse, not having been removed therefrom according to law, and all brandy on which the tax has not been paid within three years of the date of the original gauging shall be forfeited to the United States.

Sec. 10. That the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may make all needful rules and regulations for carrying into effect the provisions of this Act, and such regulations when made shall have all the force and effect of law.

Sec. 11. That in case any grape brandy, removed from the distillery for deposit in a special warehouse, shall fail to be deposited within such warehouse within ten days thereafter, or within the time specified in any bond given on such removal, or if any grape brandy deposited in any special warehouse shall be taken therefrom for deposit in another warehouse, or for export, or otherwise, without full compliance with the provisions of this Act, and with the requirements of any regulations made thereunder, and with the terms of any bonds given on such removal, then any person who shall be guilty of such failure, and any person who shall in any manner violate any provision of this Act, or of the regulations made in pursuance thereof, shall be subject, on conviction, to a fine of not less than \$100, nor more than \$5,000, and to imprisonment for not less than three months, nor more than three years, for every such failure or violation; and the spirits as to which such failure or violation shall take place shall be forfeited to the United States.

WORTH KNOWING.—We are assured that one pound of green copperas, dissolved in one quart of water and poured down a water-closet, will effectually concentrate and destroy the foulest smells. On board ships and steamboats, about hotels and other public places, there is nothing so nice to purify the air. Simple green copperas, dissolved in anything under the bed, will render a hospital, or other place for the sick, free from unpleasant smells. In fish-markets, slaughter houses, sinks and wherever there are offensive gases, dissolve copperas and sprinkle it about, and in a few days the smell will pass away. If a cat, rat or mouse dies about the house and sends forth an offensive gas, place some dissolved copperas in an open vessel near the place where the nuisance is, and it will purify the atmosphere.

FLUIDS OF THE MOUTH.—Dr. Hodson wisely calls attention in the *Medical Record* to the fact that, in any illness involving a feverish condition, the fluids of the mouth are constantly as intensely acid, as respects the teeth, as in any medicine administered by the physician; and, moreover, from the high temperature of the buccal cavity at such times, the power of these acids for evil is greatly augmented. Further, a direct consequence of these conditions is the especially rapid fermentation and decomposition of all food lodged between and around the teeth, and the consequent elimination of other deleterious acids. Dr. Hodson recommends rinsing the mouth with lime water, diluted according to the sensitiveness of the mucous membrane, and flavored with a few drops of wintergreen or peppermint to make it agreeable.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will hereafter be held on the second and fourth Tuesdays of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHAR,  
Master Golden Gate Grange, S. F.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

## Granges, Homes and Crops of Sacramento County.

EDITORS PRESS:—Since my last about the Reno meeting, my work has been continued in Sacramento county. At American River Grange, March 3d; Enterprise, the 10th; and Cosumnes, the 17th. We had meetings by invitation and appointment. Could people who like to believe and assert that the Grange cause is dying out have attended these meetings with me, they would be fully convinced of their error. At each place an open meeting was held and the attendance was large by outsiders as well as members. A rain, welcome enough for the crops, prevented a general attendance at Enterprise, as we would otherwise have had, yet the room was well filled. Besides these meetings I have, during the same time, attended three others at Pioneer hall, Sacramento. The first, Friday evening, March 2d, at which an explanatory lecture was given on the purposes and work of the Sovereigns of Industry; the second, Wednesday afternoon, March 7th, where delegates from Sacramento, American River, Enterprise and Florin Granges met to take steps to form a general Co-operative Association for Sacramento county and part of Placer; the third, Friday evening, March 16th, at which a Council of Sovereigns, with 22 charter members—14 men and six ladies—called Capital Council, was organized.

Now that the principles and advantages of a true co-operative association are beginning to be understood, our fellow Patrons in the large and wealthy district, of which Sacramento is the chief trade center, are determined to form one on the safest and strongest basis possible at the earliest practicable date. For this reason, at the business meeting mentioned, committees were appointed to visit all the Granges of this county and Roseville, Lincoln and Wheatland Granges, in Placer, to see what stock their members will take in such an association, and to invite every Grange in the district to send delegates to a general meeting in Sacramento, April 17th. At the latter meeting their proposed By-Laws will be amended and finally adopted, and they will prepare to begin with the central society at once, with the understanding that, as its business and strength grows, branches of the same shall be established under the same management at different trading points, according to the wants and convenience of all its members.

Let every member of the Granges named who possibly can arrange work and spare the time to be present at that important meeting come and help in this great and good business enterprise. Our fellow Patrons in Sacramento county seem to be awaking to the value of such a strong central society. Those interested in several smaller local associations formed from the best of motives, are beginning to be wisely convinced that by forming first one strong central wholesale society, the local wants of each Grange in the whole district can be finally secured in the best manner possible. It is hoped all interested will remember that the 17th is the date of the meeting at Pioneer hall, and will attend promptly. This work has given me such an opportunity as I never before had to see the central part of Sacramento county, lying between the Central Pacific railroad and the Sierras. This includes the rich, mellow alluvial lands in American river and Cosumnes bottoms. It comprises beyond question some of the surest grain, fruit and pasture lands of California. All early-sown grain, chiefly barley, will be certain to yield well here even with light spring rains. The past week I have seen barley heading out, and large fields of it fully two feet in height. The great mass of fruit trees, peaches, apricots, plums, pears, cherries, and apples, in numerous large orchards are filled with young fruit, all blooming. Pasturage is abundant and still growing well, though much of it is blooming and seeding with such short stems as always indicate our drier seasons. Sheep and all stock are in the finest condition. Lambing is finished or nearly so. On Mr. William Ryan's large sheep ranch they have about 120% of lambs in proportion to their ewes. It is a fact worthy of note that over 10% of the yearling lambs—about 900—on this ranch have fine lambs. There could have been a more favorable lambing season than this.

An evidence of thrift in all this region is that few ranches are encumbered by mortgages. Large numbers of the well-to-do farmers here

have carried out and are now carrying out one of our many good Grange principles—"To add to the comforts and attractions of our homes." I have enjoyed the cordial hospitality of the homes of many members and non-members of the Grange. Among others, E. G. Morton, Dr. Manlove, John Taylor, J. Routier, A. W. Bryan, N. Kane, Wm. E. Bryan, Mr. Chatfield, L. H. Fasset, and J. C. Belcher. A more hospitable, whole-souled, sensible people I have not met with anywhere in California. Many have recently built new and tasteful homes, others are preparing to build.

No where in the State have I seen a better example of what may be done on our plains in eight years, in tastefully improving by constant industry a beautiful home in which to enjoy the well-earned rewards of toil, than in the home of Mr. Belcher, near the Cosumnes. Sheltered by shade trees, surrounded by choice flowering shrubs and plants and blue grass sod, adorned with gracefully trailed ivy and honeysuckles, enlivened by the notes of linnets and other forest songsters. At Mr. Rontier's, who certainly has the most skillfully grafted trees I have ever seen, where the new wood takes complete possession of the old stock, I found a flower garden full of the richest of hyacinths, the bulbs imported from Holland, and such tulips as I have seen nowhere except in the nursery of Sutton Sons at Bedford, England. Speaking of England, its happy homes are justly celebrated. I am sure to find their thorough counterpart in the happy homes of California.

All the fields, pastures and roadsides are carpeted with our beautiful and fragrant wild flowers. Of these, none is more conspicuous than our yellow violet, with upper flower leaves purple on their back. This shows another point of resemblance in our Pacific coast to England. Last May in the pastures of Derbyshire I saw the wild heartsease blooming. Our wild heartsease is almost the same.

J. W. A. WRIGHT.

Cosumnes, March 19th.

## Grange Petitions to Congress and Our Legislatures.

EDITORS PRESS:—Please insert the following report of the Committee on Good of the Order of the National Grange at its last session in Chicago. The report was adopted unanimously, is now one of the authoritative acts of the National Grange, and it should be published generally, that our members and others may know what is being done in a systematic way, with many non-partisan questions of political economy on which all Granges can and should take action. This was one of the numerous decisive acts of the National Grange on the last day of that most important session. Next week I hope to give your readers some description of the central part of Sacramento county and of my visits to American River, Enterprise and Cosumnes Granges.

J. W. A. W.

Sacramento county, March 13th, 1877.

### The Report.

The following is the report to which Brother Wright refers:

"The Committee on the good of the Order have had under consideration the preamble and resolutions offered by Bro. Osborn, of Wisconsin, to wit:

"WHEREAS, There are certain objects which are regarded by the members of this Order as essential to their material interests, among which are the following, to wit:

"1st. A department of Agriculture in the National Government, the head of which should be a member of the Cabinet.

"2d. The enactment of laws providing for a reduction of the legal rate of interest on money.

"3d. The enactment of laws providing for the improvement of natural water-channels.

"4th. For the improvement of our patent laws.

"5th. For the security of depositors in banks.

"6th. For equality of taxation.

"7th. For equitable regulations controlling railroad management. And

"WHEREAS, Such objects cannot be attained unless favorable legislation be had from our National Congress. And

"WHEREAS, To secure such special attention from the lawful representatives of the people it has become necessary that earnest demands be made upon them by their constituents. Therefore, be it

"Resolved, That, in order to secure practical results in the direction indicated, the following course of action, intended to develop the latent power of our Order for such purposes, be recommended by this body, to wit:

"Forms of petition to Congress for any purpose, or purposes, he may select, shall, from time to time, be drawn up by the Master of this National Grange, and a copy thereof sent by him to the Master of each State Grange, who, thereupon, will see that copies thereof be circulated through the Granges of his State and returned to him for the purpose of being forwarded, with the respectful request for attention, to the Senators and Representatives of the people of that State in the National Congress.

"That subsequent thereto, and repeatedly, and as often as the Master of the National Grange shall deem beneficial, he will draw up a form of circular letter, to be addressed to United States Senators and members of Congress, requesting a report of progress in the desired legislation, and urging the necessity of action; such form of circular letter to be sent to the Master of each State Grange throughout the

country, with the request that, upon a certain day fixed by him (the Master of the National Grange), copies thereof be forwarded to the Senators and Representatives in Congress from his State, and, furthermore, that we, through our Subordinate, County, and State Granges, urge prompt recognition of our demands, by either favorable or unfavorable responses to our petitions, on the part of our public representatives.

"And would report that the first section thereof, in relation to the establishment of a Department of Agriculture, has already been reported on by your committee and wisely acted on by the Grange, and recommend that the remainder of the resolutions do pass."

On motion, the recommendation was concurred in.

## Fruit Meeting at Grange Headquarters.

Some thirty gentlemen, identified with the fruit-growing and live-stock interests of California, Nevada and Utah, met at Granger hall, corner of California and Davis streets, Tuesday afternoon, for the purpose of making arrangements for the incorporation of a Fruit and Meat Shipping Company, to be founded upon and take the place of the Fruit Shipping Company. The meeting was reported by the *Call*, and we draw therefrom points of interest.

The proposed plan of the company is to establish slaughter-houses at principal railroad shipping points; there to dress the meat—beef or mutton—and ship in quarters in refrigerator cars to San Francisco or Eastern markets. This will be in addition to shipments of fresh fruits in their season.

The meeting was called to order by J. D. Blanchar, who was chosen President, and E. J. Earl was appointed Secretary. A number of letters were read from persons in the interior who favored the movement, but could not be present.

J. Earl, Secretary of the old company, explained the objects of the new organization, and elaborated upon the advantages that would accrue from its successful operation to the pomologists and stock-raisers on the Pacific coast. The capital stock has been placed at \$500,000, divided into 50,000 shares.

After articles of agreement relative to the new corporation had been presented for signatures, the convention adjourned until 7:30 p. m. At the evening session, Mr. Earl submitted a statement of the operations of the California Fruit Company for the past season. Some \$4,000 was received from stock subscriptions, all of which was expended in experiments. In addition to that amount some \$3,000 was expended in building a patent Allegretto refrigerator car and paying the royalty by private parties, which will be turned over to the new company. There was less money used in experimenting in the best mode of shipping fruit overland than was expected, and the results were excellent.

A number asked what arrangement had been made with the railroad company to run the refrigerator cars.

Mr. Earl said the company were willing to extend every facility to the Fruit Shipping Company, as they wished to see it a strictly California and Nevada enterprise. As favorable terms would be given as could be made, and the railroad company would make allowance for the use of fruit cars, and keep them in good running order, and allow them to be under the control of the company. "In fact," said Mr. Earl, "the terms granted us are very satisfactory." A good arrangement had been made with Allegretto for the use of his patent. He has signed a contract with the fruit company, allowing them to use his right for \$200 a car, with complete control of cars as long as they run.

A resolution was offered and adopted that shares in the new company will be issued for certificates of the old company, share for share, and that all payments made on old stocks shall be credited on the new books.

A report on subscription was made, and it was found that some \$200,000 worth of the stock had been taken. It is the intention of the company to have agents in all parts of California and Nevada to solicit subscriptions in order to have the stock as widely spread as possible. No difficulty whatever is apprehended in placing the remaining \$300,000 of the capital stock.

The gentlemen named in the agreement were authorized to take the necessary steps to incorporate and perfect plans, and were instructed to report at the April meeting.

The following are the members of the Convention: P. Stauffer, Kelton, Utah; George Barrott, Winnemucca, Nevada; H. Temple, Oakland; Amos Adams, Franklin; J. M. Fowler, Lodi; Benjamin Bates, Courtland; J. D. Cassidy, Petaluma; R. B. Blowers, Woodland; W. B. West, Stockton; John Lewelling, St. Helena; Dan. Yeiser, Snelling; W. S. Bayley, Virginia, Nevada; J. W. Abbott, Alvord, Oregon; N. Wines, Ruby valley, Nevada; Wm. Samson, Winnemucca, Nevada; J. Earl, Oakland; J. D. Blanchar, San Francisco; John Cashin, Nevada City; J. S. Sweeney, San Francisco, Daniel Inman, Contra Costa county; J. B. Saul, San Francisco.

LECTURE BY PROFESSOR HILGARD.—We desire to call attention again to the lecture by Professor Hilgard, of the State University, to be delivered by request of Temescal Grange, at Temescal, on Tuesday evening, April 17th. The subject will be one of importance and all interested in agriculture will do well to attend.

## Directors' Meeting of the Grangers' Business Association.

Immediately after the adjournment of the meeting of stockholders, the newly elected Directors met at the Secretary's office.

Present, D. Inman, John Lewelling, A. D. Logan, Amos Adams, I. C. Steele, O. Hubbell, W. W. Gray and Thos. Flint.

On motion of Director Lewelling, Daniel Inman was elected President.

On motion of Director Gray, A. D. Logan was elected Vice-President.

On motion of Director I. C. Steele, Amos Adams was elected Secretary.

On motion of Director Gray, John Lewelling was elected Treasurer.

On motion, Directors Flint, Steele and Hubbell were elected as an Auditing Committee.

It appearing from the proceedings of the stockholders' meeting that two vacancies exist in the Board of Directors, Director Adams offered a resolution that W. L. Overhiser, of Stockton, and A. T. Hatch, of Solano county, be elected to fill said vacancies. The motion was carried by a unanimous vote.

On motion, Directors Overhiser, Hatch and Colby were appointed a Committee on Finance.

On motion of Director Steele, Director Adams was appointed a Committee on Buildings.

On motion of Director Steele, Director Inman was elected Business Manager for the ensuing year.

On motion of Director Steele, the Secretary was authorized to issue a duplicate certificate to C. E. Plummer for one lost.

Director Adams offered the following:

Resolved, That the Building Committee be authorized to act in conjunction with a like committee from the Grangers' Bank and Farmers' Fire Insurance Company to ascertain what it will cost to erect a three-story brick building on the ground now occupied by the warehouse. Motion carried.

The Directors then adjourned to meet on the third Tuesday in May, 1877.

AMOS ADAMS, Secretary.

## Attention Desired.

EDITORS PRESS:—I would like, through the columns of the RURAL PRESS, to call the special attention of officers and members of Subordinate and Pomona Granges to the importance of a general expression of opinion from them to the Executive Committee, which meets on the 3d of April, as to the propriety of issuing the *California Patron* semi-monthly. The question also of organizing a mutual benefit or life insurance in connection with the Grange, is, I think, worthy of thoughtful investigation.

Any matter for the good of the Order, of general interest and sufficient importance, from individual Patrons, Subordinate or Pomona Granges, if addressed to any member of the Executive Committee, or the W. S. S. G., would, I think, be appreciated and receive due attention.

CHARLES H. COOLEY.

Cloverdale, March 18th.  
P. S.—There is an error in your Grange directory, to which I would call your attention: Brothers Logan, Leonard and Thompson are no longer members of the Executive Committee; their term of office expired last October, and Brothers Nelson, Pomeroy and Woodard were elected their successors.

## From the Granges.

### Surprise Valley Grange.

EDITORS PRESS:—Our Grange is in a flourishing condition. We meet twice a month with a good attendance. On the 22d of February we had a Grange ball which was a grand success. Bro. and Sister Linseott prepared the supper, which was as good as any Granger ever sat down to. There were as many as 200 partook of supper and breakfast in the Grangers' hall. Everything went off on the square. We are getting new members nearly every meeting.

JOHN BOCHER, Sec'y.

### Cambria Grange.

Rufus Rigdon, Secretary, writes as follows: "We are working in harmony and hope we may have a bountiful harvest of full ripe sheaves; and also wish success to the Press!"

EDUCATION FROM THE GRANGERS' STANDPOINT.—There will be an open meeting of the Golden Gate Grange, to be held April 10th, 1877, which all interested in the subject of education are cordially invited to attend. Members of the Order who contemplate visiting San Francisco are requested to so arrange their business as to be present at that time.

## In Memoriam.

NEW CASTLE GRANGE, No. 241.  
WHEREAS, It has pleased the Great Master above to take from our midst our dearly beloved and Worthy Master, W. H. BRAINARD, to rest from his earthly labors in that mansion not made by hands, be it therefore,

Resolved, That we recognize in the death of Bro. BRAINARD, the loss of a genial friend and an earnest worker for the Order.

Resolved, That we extend to the family and relatives of our deceased brother our heartfelt sympathy.

Resolved, That our charter be draped in mourning for 60 days, and that the usual badge of mourning be worn by the members of this Grange.

Resolved, That these resolutions be spread upon the minutes of this Grange, and a copy thereof be furnished the *Placer Argus* and *Herald*, and the *PACIFIC RURAL PRESS* for publication.—Committee: Mattie J. Nixon, W. A. Donaldson, B. P. Tabor.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**RAVENOUS ANIMALS.**—Alameda *Independent*, March 17: Last autumn the Contra Costa Water Company purchased a band of 900 sheep in Fresno county, and brought them to the region adjacent to the San Leandro reservoir. A large number of lambs were in the band, and the long drive used the little fellows badly. Every night many of them would fall down never to rise. A villainous band of coyotes followed the sheep from Fresno, being attracted by the lambs. The rancheros in Eden township, in the vicinity of the reservoir, have been greatly pestered by the coyotes during the past three months. Hunters, traps and poison, have been brought into requisition to kill the "varmints" without success.

## BUTTE.

**CROPS.**—*Record*, March 17: In all this region it is the general testimony that the crops never looked better at this season of the year. This is a fact which should not be lost sight of in any estimate of capacities. If we can have good crops in the large area indicated, even with half the average rainfall—that is to say, 10 inches instead of 20 inches—there cau in the future be but a very few of those breaks in our swelling prosperity which are constantly predicted, but seldom come.

## CALAVERAS.

**FRUIT DRIER.**—*Citizen*: The erection of an Alden fruit drier in San Andreas, which has been talked of for some time, has been decided upon and the establishment will be put up in time to work this season's fruit. Although there is not the present time a sufficient quantity of fruit raised here to make the enterprise profitable, yet we have confidence that ranchers will at once plant trees, as they can be assured of a market for all the fruit and vegetables they can raise at remunerative rates. The factory will be built of capacity to preserve 8,000 lbs of fruit per day this summer, but the building will be constructed large enough to hold two additional evaporators, which will double the working capacity. We have no doubt but that inside of two years it will be found necessary to do so.

## CONTRA COSTA.

**CROPS.**—*Gazette*, March 17: The rain of Saturday morning last, the 10th instant, gave us here a measure of thirty hundredths of an inch, making our total measure for the season since the 15th of October, 7.31. This last little rain, like most that have preceded it this season, was heavier in the Pacheco, San Ramon, and other districts about the base of Diablo than here, and all the portion of the county west of the Diablo meridian is now giving as fair promise of good crops as we have ever known. It is true that the store of water in the earth from this season's rainfall is not sufficient to stand the crops through a long protracted siege of north wind and hot weather before their maturity, but escaping such trial and having the help of a few more showers, they cannot fail to give a good yield. Moreover, the light and mellow condition of the surface soil, this season, is favorable to the retention of moisture in the earth below for supply of the plants, while a tight and deep packed crust, such as is usually left by the beating winter rains, draws up through countless capillary channels and dissipates to the atmosphere incalculably more water than is required for the growth and maturing of our crops.

**A LARGE ORANGE.**—Among a lot of fine oranges from the Alhambra grove, laid on our table a few days since by Dr. Strentzel, was one that measures fifteen and one-eighth inches around its larger circumference, and fourteen inches and three-quarters around the smaller. The other specimens were not of such large dimensions, but rich in juicy flavor, and in testimony of the character of the climate and soil of our country for the open air production of such tropic fruits—as well as all those of the temperate zones, in the greatest perfection.

## EL DORADO.

**CROPS.**—*Republican*, March 17: Nearly all the grain sown in the foothills is looking splendid, and is now so far advanced that good crops are assured even though we were not to get another drop of rain.

## FRESNO.

**DRY.**—*Expositor*, March 17: The plains are fearfully dry. There is scarcely anything in the shape of vegetation growing. All hope for rain has departed, and the grim reality is now staring in the face of all who are not blessed with irrigating facilities. The result is sure to be very severe on many of the new settlers, and, in fact, upon almost everybody. It is an unfortunate state of affairs, but the result will ultimately be for the best, as it will stimulate the completion of a more thorough system of irrigation. If the waters of the San Joaquin were as fully utilized as those of King's river, the people of Fresno county would be practically independent of the rain clouds.

**FIGS FOR HOGS.**—W. B. West, of Stockton, has filled an order for 1,100 two-year-old fig trees for Mr. E. W. Chapman, of Borden, Fresno county. We understand that it is the design of Mr. Chapman to plant these fig trees for the sole purpose of raising and fattening hogs. Hogs are very fond of the fruit, which contains such a large quantity of saccharine, that it is very fattening. The fig tree after

getting well started requires no attention, bears several crops a year, and is the most prolific fruit tree known. It would therefore seem to be a most profitable enterprise in which to engage. It is a well known fact that the fig tree, like the sugar beet, extracts alkali largely from the soil, and where that element exists in excess the planting of the tree is advantageous to the land.

## KERN.

**SHEEP.**—*Courier Californian*, March 17: Mr. John Barker, as early as November last, adopted a plan that has resulted most fortunately in the treatment of his sheep. Instead of herding them he turned them loose in the mountains and let them take care of themselves as best they could. He has thus been saved the expense of herding for that time—no trifle itself when it is remembered that there is something like 18,000 sheep. The result has proven the wisdom of his course, for while his neighbors' flocks have been decimated, he has lost but very few. Of course, the increase this year is not very apparent, but he considers that he has done well to save his old stock. The grass in the foothills is very short yet, scarcely affording any feed for stock. If there is not more rain soon the wild range will be practically ruined. In some places the alfilerilla is already in blossom, while it is so short that sheep cannot nibble it.

**SHEARING.**—Sheep shearing is well under way. A large quantity of wool has already been delivered at the depot. It will be a short shearing and comparatively a light fleece all around.

## LAKE.

**THE CROPS.**—*Democrat*, March 10: Farmers are all jubilant over the fine prospect for a grain crop this season. Never did crops look so promising. The feed for stock was never better, and stock men are as joyful as grain growers.

**HAY IN MARCH.**—Mr. Wm. Castle, superintendent of Buckingham place, is cutting hay there. We acknowledge the receipt, per Captain Fraser, of several stalks of barley, taken from Buckingham place last Wednesday, which measure three feet ten inches in length. This barley, Mr. Castle says, will cut six tons to the acre.

## LOS ANGELES.

**CROP PROSPECTS.**—*Herald*, March 17: While we have no manner of doubt but that it would have been greatly better to have had copious rains, the chief damage to us will result from the injury to the sheep interest, and that will be only temporary. The money brought into the county for wool, as a general thing, did not enter largely into circulation. The Basques, particularly, bought little or nothing. Our sheep-farming will be remodeled, very much to the benefit of this section. The wheat crop also will suffer. We were at first inclined to think that many new settlers had purchased mesa lands, and that the drouth meant their ruin. We are glad to learn that nearly all the mesa land farming has been of a purely speculative character, and that crops were put in on the understanding that, if the rains were seasonable, so much the better; if not, well and good. The great farming interests of Los Angeles county—those which depend on the moist and irrigated lands—are in as healthy a condition as at any time in our history. The crops will be large, and they will command a high price.

## MARIN.

**HICKS' VALLEY.**—*Petaluma Argus*, March 17: A very productive and beautiful district is Hicks' valley, situated in Marin county, six and a half miles southwest of Petaluma. The farm houses along or in sight of the road, between town and the point where the road enters the canyon leading to Nicasio, are owned by Mrs. Edwards, Mrs. Weaser, Hall Brothers, Thomas Morrison, Mr. Skivington, Abraham Ward, A. F. Brodly, Wm. Jones, Nat. Giacomini, J. McBrown, J. A. Thompson and two or three others. The dwellings are nearly all well built and commodious buildings, and have barns, dairy-houses, sheds, etc., in keeping with their fine appearance. Good fences on the ranches, fine orchards embracing many varieties of fruit, tastefully laid out flower gardens, and a general appearance of thrift are some of the characteristics of this region. This has been an unusually favorable season for dairying. We believe it safe to say that a much larger quantity of butter has been made in Hicks' valley and along the route between Petaluma and there, this season than in any previous season up to this date. We estimate the quantity brought to this city weekly, at present, at 160 boxes of 100 pounds each.

## MONTEREY.

**CROPS.**—*Democrat*, March 17: The agricultural outlook in this valley, in all the county, in fact, saving the Pajaro, could hardly be worse than it is at present. Showers that may fall might give us a little hay, and possibly some grain in forward spots, but they must come soon to do any good. Ex-Supervisor Sheehy was over here this week and reports the Pajaro country as looking well for crops. Grain, he says, is more advanced than usual at this time of the year, attributable to the mildness of the season and comparatively small quantity of rain, that district being apt to have too much rather than too little wet. Mr. S. added that the farmers over there are going into beets extensively, to supply the Soquel sugar works, and as a consequence, that potatoes, which are a drug now, will be scarcely raised the season ensuing.

**MOHAIR.**—Mr. C. P. Bailey has just shipped the spring clip of his flock of Angora goats. Owing to dry weather and consequent short grass, the yield was far below the average. He sheared only 1,000 head of grades, (15-16ths), and scoured a little over 2,000 pounds of merchantable mohair. Ordinarily he shears 3,000 head and averages four pounds to a fleece. He intends, as soon as the kids get large enough to travel, to move his entire herd into the mountains in Nevada. He thinks the increased yield and quality of the fleece will more than pay for the trouble and expense. His prize ewe, the "Queen of Monterey," this year yielded a fleece of seven and a half pounds.

**IRRIGATION.**—We mentioned last week that the Tholke boys, in the Natividad Canada, were irrigating successfully quite a tract of land, and now we report two other enterprises of the kind in this valley, near Castroville. First is that of Frank Blakie who is utilizing the water flowing from the ditch which is draining the Sausal lagoon. The ditch discharges into a natural channel or slough, which, at the point where it reaches Blakie's land, at this end of the Cooper ranch, is dammed so as to raise the water a little above the level of the adjacent plain. Side-cuts in the bank of the slough and furrows to convey the water, at convenient distances apart, then distribute it over a surface of 50 or 60 acres, upon which is now growing finely a crop of grain. The second enterprise, as we are told, is by Bob Hanna, who, with a donkey engine and an endless chain of buckets, proposes to pump water from the Salinas river in quantity to water a number of acres. He is said to have his apparatus all ready, and, as there is plenty of water in the river, there seems no reason why the project should not be successful in raising a quantity water and securing a growth that will richly compensate the trouble.

## NAPA.

**GRAIN AND MUSTARD.**—*St. Helena Star*, March 17: I took a ride yesterday down the valley as far as Yountville. The crop prospect I never saw better since I can remember. The grain field of Mr. Ish, of Oakville, looks exceedingly fine, although he pastured 1,000 head of sheep on it for several days. I observed several farmers pulling the mustard from their wheat in that part of the valley, and think it an excellent idea. If some of our neighbors near home would do the same thing, I think they would profit thereby.

## PLACER.

**NEWCASTLE.**—*EDITORS PRESS*:—The prospect for fruit growers in this vicinity is now encouraging. Two fruit driers, one at Newcastle, the other at Auburn, are to be put in operation this summer and a market will then be established for our surplus fruit, which has hitherto gone to waste.—B. P. TABOR.

## SAN JOAQUIN.

**THE CROP PROSPECT.**—*Stockton Independent*, March 13: A very fine specimen of wheat and barley in the ear, was brought to our office recently by F. J. Byrne. It was taken from the high lands near the Poland house, and is an average of a large field. The stalks were three feet high. Coming from this character of land the large growth made is surprising. There is still considerable anxiety among even those farmers whose crops are looking finely and have attained a large growth, on account of the lack of moisture in the subsoil. The rains thus far have only soaked down six or eight inches, leaving a dry streak beneath which has never been wet. It is feared unless good soaking rains come on next month sufficient to wet the soil thoroughly, that the north winds of early spring will dry out the surface moisture, leaving the plants nothing to mature the grain upon. That is borrowing trouble, however, as the crops look well now and we are likely to have plenty of rain.

**LIME WATER FOR SNAILS.**—Since our publication of the discovery that lime water would effectually kill the pestiferous snails that prey upon the gardens of Stockton, a number of our citizens have tried the experiment and found the remedy an effectual one. The snails hide during the daytime under sidewalks, old boards and in holes in the ground, coming out at night in swarms, if that term may be applied to the crawling things, and laying waste the tender plants without fear or favor. The lime water must therefore be applied at night. It is a singular fact that the lime water, so fatal to the snails, has no effect upon the harmless little sowbugs, their boon companions.

## SAN LUIS OBISPO.

**A RARE AND CURIOUS FLOWER.**—*Tribune*, March 17: During the week Mr. Ernest Krebs had a floral gem on exhibition on Monterey street. It belongs to the *ivia* family, and came from the Island of Guernsey, having been imported by Mrs. Langlois, of Morro. The flower has the appearance of a diminutive gladiola. The flowers are borne on an upright stem, about 15 inches in length from the ground line, the spike of flowers being one-half the total length. The flowers are a pale, bluish green, with a deep violet-purple center. They are about an inch and a half across, composed of six petals, three stamens and three pistils, alternating, so that they correspond in position to the petals. The flowers radiate from all sides of the stalk, thus forming a perfect spoke. This is the first specimen ever bloomed in San Luis.

**PREPARE TO IRRIGATE.**—The season is so far advanced and the time of usual rainfall so nearly over, we can with comparative certainty estimate the result. Crops and grass must inevitably prove light where not an absolute failure.

But one remedy remains, and that, in the physical nature of things, but partial. This remedy is in irrigation. There is a good deal of land, as we have in former articles pointed out, susceptible to irrigation. Where steps have not already been taken to utilize the water now running to waste in our numerous streams, it should at once be done.

## SAN MATEO.

**THE CROPS.**—*People's Journal*, March 17: The section of country lying between the summit of the Sierra Moreno range and the Coast country proper, seems to have been peculiarly favored with rain this season, having had far more than either the valley on this side or the coast on the other. Crops in the section alluded to, are reported to be looking unusually well and to give sure promise of a large harvest. A much larger acreage has been put in than usual. From Weeks's or Hamm's ranch on the east, to about Bell's on the west, and from the Big Redwoods on the south, to Byrne's store on the north, prospects of a heavy crop were never better.

## SOLANO.

**STRAWBURNERS.**—*Chronicle*, March 17: Heald is building 15 strawburner threshing engines the present season. There will be a less demand for these engines this year than last, for the reason that the crop of wheat in the San Joaquin valley and other sections of the State will be a partial failure, and engines owned there will be carried to other parts of the State.

## SONOMA.

**ALEXANDER VALLEY.**—*Russian River Flag*, March 15: Last Monday we took a trip to Geyserville and Alexander valley, and interviewed many of the farmers and stock-raisers whom we saw in the trip. On the whole route from Healdsburg to Geyserville, and down the river, through Alexander valley, we did not see a single field of poor wheat. Some fields of grain are already so far advanced in growth that the tender stalks cannot support the weight of the blades, and the wheat is beginning to fall down. But the general belief among the farmers is that unless we have heavy late rains it will nearly all straighten up. The warm rains, during the past two months, have been favorable to a rank growth of late grain and grass. B. D. Myrick, whose place is about five miles north of Geyserville, informed us that the grass in the hills is higher and better than at any time within his recollection. Cattle are gaining in flesh, and sheep are remarkably fat.

## STANISLAUS.

**AT WORK.**—*News*, March 16: The San Joaquin Canal Company pitched their first camp last Monday. Work on the ditch has now begun in earnest. Consequently, people living under the line of the proposed extension are hopeful. Property is reviving in value, and a new impetus will be given to that section. The ditch, if completed and managed properly, will continue Hill's Ferry as one of the most prosperous towns of the valley.

**SENSIBLE.**—Mr. P. H. Delaney, whose farm is situated on the Tuolumne river near the town of LaGrange, has secured water from the mining and canal company, and is endeavoring to irrigate his fields. He has also seeded some 50 acres in alfalfa, and says he thinks he shall cultivate considerable corn. This is certainly a most sensible move on the part of Mr. Delaney, and is one which, if practical, should be imitated by many others in the foothill country of the same locality.

**RAIN.**—One of the heaviest rains of the season occurred at this place on Saturday last. The rainfall must have amounted to nearly half an inch. Whilst the rain appears to have been general over the county, it is believed to have been heavier at Modesto than most other places. It has had the effect of stimulating the growth of both grain and grass. Still, as the saying is, we are "not yet out of the woods," and are anxiously waiting for more rain. The danger is not past, still we are hopeful.

## TULARE.

**WHEAT.**—*Delta*, March 17: After investigation and inquiry, we believe we are justified in saying that there will be enough wheat raised in this county this year to supply the home demand, but none for export. A well devised system of irrigation put into practice would preclude the probability of a drouth ever affecting us again. We have the water to irrigate three times the amount of land now under cultivation, but we have failed to utilize it in the proper manner.

**SHEEP.**—There is a regular begira among sheep owners. Some are fleeing from the wrath to come, and others to the evils they know not of. The mountains are full of sheep and the grass is growing scarce even in those regions. As for the plains, they are almost as bare as a well-traveled thoroughfare. The sheep are now too poor to kill for their tallow, and the pelt market stands a good chance of being glutted.

## YOLO.

**RAIN AND CROPS.**—*Mail*, March 17: The rainfall so far this season is not so great in measurement as it has been in benefits. Up to the first of March 9.13 inches had fallen, as indicated by the pluviometer at Elston & White's drug store. March 3d gave us .20, March 10th .14, and March 11th .04, which added to the previous amount makes a total of 9.61 for the season. The crops are still growing, and are not yet in any danger of being injured, but it is evident that unless we have at least one inch well distributed, the winter-sown will not mature to any great extent. The summer-fallow can weather the drouth.





### Be Always Giving.

The sun gives ever; so the earth—  
What can it give so much 'tis worth?  
The ocean gives in many ways,  
Gives baths, gives fishes, rivers, bays;  
So, too, the air, it gives us breath;  
When it stops giving comes in death.  
Give, give, be always giving;  
Who gives not is not living;  
The more you give  
The more you live.

God's love hath in us wealth unheaped;  
Only by giving is it repaid;  
The body withers, and the mind  
Is bent in by a selfish rind.  
Give strength, give thought, give deeds, give self,  
Give love, give tears, and give thyself.  
Give, give, be always giving;  
Who gives not is not living;  
The more we give  
The more we live.

### Caws and Effect.

Nine metaphysicians perched aloft  
On the top of a dry pine-tree,  
Have talked all day in a marvellous way  
Of divine philosophy.

No wild Coleridgean rambles they  
All over the realm of laws;  
They stick to their text, however perplexed,  
The doctrine (and practice) of caws.

The biggest erow on the nearest limb,  
Gave first with never a pause,  
A clear, profound, deliberate, sound  
Discourse of proximate caws.

A theologian in a cassock clad,  
With a choker under his jaws,  
And a cold in his head, either sung or said  
A treatise of second caws.

A fish-hawk lit on the top-most limb,  
With a picket in his claws,  
When small and great began to debate  
Concerning efficient caws.

And when, at the close, the congress rose,  
I saw two old crows pause,  
And what they said as they flew o'erhead,  
Had the sound of final caws.

No longer in me, O Philosophy,  
Thy devotee expect;  
In spite of thy laws, here's a chain of caws,  
And not one single effect.

Harper's Magazine.

### Ladies as Lawyers.

[Written for the RURAL PRESS by MRS. C. I. H. NICHOLS.]

Under the heading "A Lady Argues Her Own Case," I find in a *Call* of late date, the following notice: "In a suit in ejectment for 200 acres of land, in Alameda, the novelty was presented of a lady arguing her own case in the Supreme Court yesterday. The case was before the higher court on an appeal from the judgment of the Third District Court rendered in November, 1875 in her favor. After arguments by Haight & Taylor for appellants, Mrs. Frost addressed the court, arguing and summing up her case forcibly and logically, to the surprise and admiration of the members of the bar present."

The above notice reminded me of a similar and romantic incident which occurred in the District Court of New Orleans many years ago, the lady in the case being the celebrated Mrs. Myra Clarke Gaines, who has recently gained a second and final decision in her favor in the Supreme Court of the United States, to real estate in the city of New Orleans, for which, it is said, she has been offered \$2,500,000 in cash, and one-fifth of the proceeds of her property when recovered, is she would assign her interest to the party offering," etc.

Of a woman so widely known, and on whose character for womanly truth and sweetness not even her bitterest opponents have cast a shadow of suspicion, I think your readers would be pleased to learn incidents of more than personal interest, which I had from herself, and which have not, in their relations to her private life, so far as I know, been given to the public.

I made the acquaintance of Mrs. Gaines in 1852, in Brattleboro, Vt., where she spent some weeks in my family as a summer boarder from New Orleans. I was previously acquainted with her history as published in *Godey's Lady's Book* in the commencement of her public career, and so much additional as had transpired in her splendid fight in the courts of Louisiana, for recognition as the legal heir of her father, Daniel Clarke.

Mr. Whitney, her first husband, who had commenced the prosecution of her claim, died of fever in New Orleans a few weeks prior to the session of the court in which it was pending. He had charged her to remain in the city till her case was decided, assuring her that if she staid by it she would win, but if she left she would lose it through the machinations of

her opponents—a host in numbers, and in the aggregate possessed of great wealth. It was a test case, if judgment should be rendered in her favor the probability was that many, if not all the persons in possession of property belonging to the estate of Daniel Clarke would come forward and compromise with her as his heir.

After her husband's burial, and the settlement of expenses, she found herself in possession of means sufficient only for a month's plain board, and must seek it in less expensive lodgings, or appeal to a wealthy boarding-house-keeper, who, in poverty and widowhood, many years before, had been helped by Daniel Clarke to her present lucrative occupation, and had often publicly said that if ever any heirs of his were in need she would repay them his kindness to her and her children. Mrs. Gaines went to this woman who gratefully acknowledged her obligation, accepted the amount tendered for "a month's plain board," and installed Mrs. Gaines, her three children and their nurse in a suite of beautiful rooms with every attention due to a high-priced boarder. Scarcely two weeks had passed when this woman, tempted by the application of a foreign nobleman, whose presence would be an advantage to her house, requested Mrs. Gaines to vacate her pleasant rooms for lodgings under the rafters in the attic story. Too proud and crushed in spirit to remonstrate, Mrs. Gaines sat down by her sick baby—in convulsions on its garret pallet—weeping bitter tears, when an apology from her landlady, and permission to return to her rooms, was brought to her, with private information that the servants of the establishment (two elegant houses united by a covered way), had threatened to leave in a body if Mrs. Gaines was not reinstated in her original quarters. "Just at this moment," to give the incident in her own language, "the porter handed me the card of General Gaines. As I entered the reception room, the General advanced to meet me, saying, 'Mrs. Whitney, I understand you are in trouble and need a friend,' and clapping his hand to his side he added, 'I have two good swords, madam, and both shall fly from their scabbards in your service.' 'Do you wonder,' exclaimed the little woman, her face all aglow with the grateful recollection, 'do you wonder that I loved him? Three weeks later the General escorted her into court as his wife, where a friend and a sword were indeed of service.

As Mrs. Gaines remarked to me in 1852, this suit had been to her an education. The prosecution of the suit involved a vast amount of study and intellectual contact with professional men of culture. Thorough exploration of French and English documentary evidence touching the legality of her parents' marriage—as affected by certain technicalities pertaining to the divorce of her mother from a previous husband—required patient and persistent application. Between her father's death and her marriage, which took place, I think, at the early age of 16, her opportunities for education had been less than a common school in the rural districts of the North. But when, at her marriage, she learned the facts of her paternity and the interests involved, her energies were roused; her resolution was taken. "It was not the fortune my father left," said she, "that so nerved me for the work, but my own legitimacy and my mother's good name, which were involved in my success." She studied her case pro. and con. She read law and made herself familiar with every probability in the proceedings. She assisted her counsel in the preparation of her case—eliciting evidence, unearthing facts, exploring law digests and reports, informing herself not only in the bearings and relations of her case, but in the duties, liabilities and limitations of court and counsel as well—till at the time when she appeared in court as Mrs. Gaines, she was qualified to prepare "briefs" and argue her own case.

There was a powerful combination of interests to defeat her suit, extending, as she had reason to believe, to the Bench itself. And when her counsel attempted to plead, the Judge presiding ruled out each count as presented. Left without a stand-point from which to plead, her counsel, in despair, threw up the case, and in the emergency proposed that she should take his brief and argue her own case. She hesitated. "You are competent, and it is your right, Myra," said the General. "Every American citizen has the right to be heard in his own behalf." Thus encouraged, she stepped forward—the General by her side—and claimed her right to be heard. The judge objected, that "being a married woman she was not responsible." "I am responsible," exclaimed the General, significantly clapping his hand to his side and straightening himself to his full height. "I demand for the lady her right, as an American citizen, to plead her own cause." The Court assented, and Mrs. Gaines, having spoken an hour, asked an adjournment to the next day, which was granted. But, in returning home, the Judge was thrown from his carriage and laid up some two weeks with a broken limb. When court was reopened, so great was the interest, that for a long distance from the courthouse the streets were blocked, and, arrived at the entrance, the little woman was passed over the heads of the crowd to the counsel's stand.

She had previously shown by reference to official records of the court, that the presiding Judge had acted as counsel in a case involved in the question at issue, and was therefore legally estopped from sitting upon it judicially. Her appeal was accordingly made to a jury, which returned a verdict in her favor. Her success resulted in a compromise with many persons in possession of portions of the estate,

on terms generous to them and honorable to herself. But compared with the whole, these covered but a margin of the estate in controversy. Finally, after years of expensive and wearisome litigation, in which her opponents had apparently exhausted every art known to the legal profession in the interest of defeat and delay—her case reached the Supreme Court of the United States, which just upon the eve of the late civil war, rendered a judgment in her favor. When peace had restored the judicial relations of the National and State Courts, Mrs. Gaines returned to Louisiana to obtain possession of her estate, and again the case was referred from the Louisiana Court to the U. S. Court, and a few months since resulted in a decision in her favor, which it is to be hoped ends the opposition by "quieting title," as we say here in California.

From several notices which have appeared recently in leading papers, I cut the following from the Washington correspondence of the daily *Call*: "Mrs. Myra Clarke Gaines, whose name has been written so many times on court records, and whose famous 'claim' equals any ever bewildering the chancery lawyers of England. \* \* \* Only last week I saw her signal a car which couldn't stop till it had rounded a curve, but fearing to lose it, she ran more swiftly than I could, and hopped into it as gayly as if 45 years of perplexing litigation, and 70 odd of a harassed life, had left no trace upon her. She is altogether impressive. Her eyes are exceedingly beautiful still, her complexion wonderfully clear, and free from wrinkles, and the anburn frizzettes don't seem a bit too youthful. She talks well; her reminiscences of celebrated men and women are innumerable; she feels a vivid interest in current affairs, laughs while she calls herself the 'old lady,' and believes in womanhood with an intensity that is as delightful as it is rare."

"Oh dear!" she sighed; "what is to become of our country? I do wish the women had a voice in elections; they would soon settle matters!" I smiled incredulously. "Do you think so? It seems to me we should squabble worse than the men!"

"No indeed, we shouldn't," she answered earnestly. "A woman's instincts are much better than a man's logic. She may make a fuss about little things, but in any great emergency, she always comes up on the right side."

Mrs. Gaines is a brunette. Her mother French, her father a northern man, herself born and reared in the south. In form, features and grace of motion, at 47 she was a model of beauty. Quickwitted, generous in all her instincts, unreserved in expressing, as giving reasons for her opinions, her self-respect was so thoroughly interwoven with fellow feeling, that from the servants to the mistress, from the nameless waif to the man of name and culture, her presence was sunshine, her conversation enchantment, whether or not they accepted her premises or arrived at her conclusions.

Pomo, Mendocino Co., March 8th, 1877.

### A Story with a Moral.

Within a year a ship was undergoing an examination in a dry dock, and at a certain point its bottom, for a few inches square, was found to be not thicker than a piece of paper. On examination, it was ascertained that a small pebble was lodged in the space between the plank which faced the water and that which made the inner floor of the vessel; it had been there for two years, and with every motion of the vessel on its billowy home that little pebble also moved, and in its motion wore away some of the timber; too small it may be for detection by an ordinary microscope, but in the course of a year it was enough to wear away an inch of solid timber, and in the second year nearly two inches more, for, with the increase of room which it made for itself, there was an increase of momentum, and consequent wear. Because the captain of that vessel was ignorant of that imprisoned pebble, and because he saw no indication of its destructive influences, they were not the less real, and not the less certain of terrible disaster, but for the fortunate discovery. Thus it is with human life and health, the breathing of a vitiated atmosphere, whether in close and small rooms or large and close bedrooms, or in family rooms over cellars without ceilings, whose noisome odors rise incessantly, day and night, to the upper portions of the buildings—the fumes of decaying vegetables, etc. The breathing of such or other vitiated atmospheres does, by an immutable law of nature, bring injury to the system with the same certainty that gravity will affect a projected feather, or cannon ball or mountain.

GOOD ADVICE.—It is much better to tread the path of life cheerfully skipping lightly over the thorns and briars that obstruct your way, than to sit down under every hedge lamenting your hard fate. The thread of a cheerful man's life spins out much longer than that of a man who is continually sad and despondent. Prudent conduct in the concerns of life is highly necessary—but if distress succeed, dejection and despair will not afford relief. The best thing to be done when evil comes upon us is not lamentation, but action; not to sit and suffer, but to rise and seek the remedy.

It is wonderful how readily people believe anything they would like to be true.—*Country Parson.*

AN Indian woman is a squaw; therefore an Indian baby is a squawling.

### Fifty Dollars.

[Written for the Press by L. J. DAKIN.]

I think it was in *Harper's Weekly* I first read Whittier's remark that \$50 a year seemed to him a sufficient sum to dress a woman. And the men who were dining with him smiled at his simplicity, for they, accustomed to the costly toilets of Washington ladies, judged it a hardship for a working woman to dress on \$50. Numerous periodicals have copied this anecdote as though they would say, "See what the poet thinks you ought to spend, and then remember what you do spend."

Very well, I think Whittier was right. Fifty dollars will clothe a woman comfortably and neatly, though, of course, she cannot change her hat with every new fashion; it must serve her more than one year, and so must her best dresses, which, by the way, she cannot have made by any celebrated dress-maker, but will probably get a pattern and cut them herself and make them, too, unless she can get a seamstress at a very reasonable rate for a very few days.

I know many women who move in good society, are intelligent, sensible and even well dressed, but who rarely spend as much as \$50 on their own clothing during the year. Their good silks they have had eight or ten years and, with alterations now and then, they will probably last as much longer. Not long ago I was admiring a friend's new suit, or a suit which I thought was new.

"Do you think it looks stylish?" asked she. "Why it is an old dress I've been fixing over; I've had it six years. The present cost is three bits for buttons. What do you think of that?"

"I think you are one of the women who can dress well, yet spend but little money."

"Well, I really believe I am, for I have not had a nice new dress for four or five years. I always get good things when I do buy, and then they last a long time. There's that Thibet you've seen me wear. You would hardly think it, but I've had that dress 10 years, and it's a handsome dress yet; stylish, too, for it used to be a wide, full skirt, so I had plenty to make it over as they wear them now."

"Do you think you spend \$50 a year for your dress?"

"No, indeed! I know I don't. Of course I have done it some years of my life, but not for several years. Muslin is so cheap, it does not take much money to keep a good supply of underclothing, and as for shoes, hats and dresses, get good ones and they wear so long. My cloak I've had eight years, and my velvet hat I got at the same time, and it is good yet. When the style changes very much, I alter it myself, and it comes out looking just as good as new."

"You get along so well now, what would you do if you were rich?"

"Oh, very differently indeed! I wouldn't spend two or three weeks altering old dresses; I'd give them away; and my new dresses I would hire made, because the work or the pay for the work might benefit somebody."

Now, I have written what my friend said about clothes, because there are thousands of women in good society just as sensible and prudent as she is; so pray do not forget that when you cry out against the extravagance of other thousands, who spend more than they can honestly call their own, and ruin themselves by doing so, and still other thousands who spend money recklessly because they have plenty of it and do not consider that their example may lead others into temptation.

And while you cry out against the extravagance of women, cry equally as loud against the extravagance of men who smoke or chew tobacco, or drink wine and other liquors, not only spending their money needlessly but surely poisoning their blood and making themselves an easy prey to any disease by which they may be attacked.

Mothers be kind and sympathizing with your boys; help them to understand that true manliness does not consist in the ability to smoke a cigar or spit tobacco juice with true aim. When you kiss them good night you cannot help knowing the first time they use this weed, if they ever do, and then is your time to show them its filthiness. No young man would like it smeared over his face; why not keep the mouth as clean as the face?

And, mothers, do not let us forget our girls for one hour, let them confide in and love us, and we may be sure of some men and women in the future who will not be extravagant.

WORK WITHOUT WORRY.—Dr. Farquharson says: "So long as a brain worker is able to sleep well, to eat well, and to take a fair proportion of out-door exercise, it may safely be said that it is not necessary to impose any special limits on the actual number of hours which he devotes to his labors. But when what is generally known as worry steps in to complicate matters, when cares connected with family arrangements, or with those numerous personal details which we can seldom escape, intervene; or when the daily occupation of life is in itself a fertile source of anxiety, then we find one or other of these safeguards broken down."

BE ENVOUS.—Don't be content with doing what another has done—surpass it. Deserve success, and it will come. The boy was not born a man. The sun does not rise like a rocket, or go down like a bullet fired from a gun; slowly but surely it makes it round and never tires,



## Men's Part in Home Making.

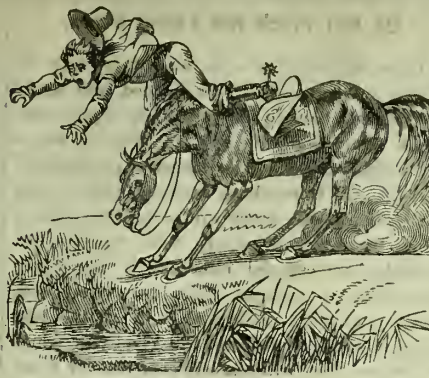
Most of the preachments we have seen from the text of happy home have been aimed at the women. This is natural enough, for they are the home makers of the world. But just now we desire to nudge the heads of the households, ask them how they are performing their responsible parts in the realm of home. Most men seem to think they have little to do in creating an "atmosphere of home." Their forte lies in breathing and enjoying the atmosphere after somebody else has made it; and not a few can't get along and make known their authority without "raising a breeze" in it. Men are too busy, too much pre-occupied, too impatient and thoughtless, and—it must be said of some of them—too selfish to do their fair share of that pre-eminently millennial work, the creating of a happy home, wherein love reigns supreme, and amiability, affection, cheerfulness, joy and peace are the natural conditions of family life.

Now, in certain things, man has been a constitutional shirk from the time of Adam—if the scientific gentlemen have left us any Adam—down to this day. Men will fight for their homes, and make slaves of themselves to their business to maintain them; but like the proverbial man who would die for a woman, but would never bring up a scuttle of coal, they can't tell what their children are studying at school, who their mates are, what they are learning of good or evil, nor hardly anything else that a father ought to know concerning his offspring. It is so sad a fact as to spoil the satire, when it is said that many a father finds the Sundays and holidays too few to enable him to "become acquainted with his boys." But we maintain that a man who hasn't time to be a father to his children, with all that includes, has no right to have any. He wrongs them, robs himself, puts an unjust responsibility upon the mother, and neglects his highest duties, human and divine.

There are so many ways in which a father may contribute to a happy home life that it seems strange the number of houses should so greatly exceed the homes. It takes so little to make children happy at home that it is a wondrous pity so many little ones are miserable, so uneasy, or discontented. If for an hour after the evening meal the father should give himself to his children, would the mother wear out so fast, or the children be so lawless, troublesome and uncomfortable? What a ministry for good to both parties is a papa's frolic with the babies! What an interest is added to the books, the drawings, the games, or even the studies, if father enters into them! How much it lightens the drudgery of piano practice for the daughter if papa calls for and praises her efforts! It is strange that with such sweet companionship, such pure affection, such unselfish enjoyment, such natural happiness, as may be had with the children, men do not give more time to their homes.

Aside from the children, and in homes where happily there are none, men still have a more direct part than most of them are ready to bear, in making the daily life pleasant. We hardly need say that a man should set the example for the family in patience, cheerfulness, courtesy, forbearance, and all the amiable moods and graces that are the soul of home happiness. The sort of men who display all their suavity and politeness on the street or at their business places, and save the storms, and sulks, and sourness, and all the evil brood of devilish dispositions that they characterize by the convenient euphemism of "moods"—well, we have our opinion of them! and if they will come within range, we don't mind expressing it privately, but are afraid it wouldn't look well in print. The whole tribe of home tyrants—men who make the entire household revolve around them at the center; whose tongues are chronically "furred" in the morning, and nerves so upset in the evening that the family must keep silence while they read and smoke; who "can't beat" the noise of innocent and natural mirthfulness; who have to be toadied and tended and humored—they ought all of them to be doomed to pass their days in shabby genteel boarding houses, without sight of wife or children, with hash for breakfast, warmed over pancakes for lunch, and lean mackerel and Centennial hens for supper, with the lodger overhead always learning the trombone, and servant girls that steal the hair oil. They don't deserve a home, and no man does who will do nothing to make it; for man's rights do not include the right to all the comforts of a home without any of the work, or worry, or self-sacrifice, or thoughtfulness and well-doing incident to its creation and maintenance. A good many men think they have done their full duty if they pay the bills more or less grudgingly. But one might as well try to warm a room with a fire-place and a pair of silver-plated andirons, and no fuel or fire, as to make a home with money. The money simply makes a place for the home; to complete it the man must put in himself, and the best part of himself at that.—*Golden Rule.*

WHAT IS FORTUNE?—What dost thou mean by fortune? If mere chance then to envy the lot of others, or murmur at thine own, is folly; if providence, then it is impiety; for whatever goodness, guided by unerring wisdom, doth, must be so well done that it cannot be mended; and whatever is merely in the power of a blind, giddy and inconstant humor (which is the notion by which men choose to express fortune), can neither be prevented, fixed or regulated.—*Rev. Richard Lucas, D. D.*



A Victim of Circumstances.

## Young Folks' Column.

### Little Brown Hands.

They drive home the cows from the pasture  
Up through the long, shady lane,  
Where the quail whistles loud in the wheat fields,  
They are yellow with ripening grain;  
They find in the thick, waving grasses,  
Where the scarlet-tipped strawberry grows;  
They gather the earliest snow-drop,  
And the first crimson buds of the rose.

They toss the new hay in the meadows,  
They gather the elder-bloom white,  
They find where the dusky grapes purple,  
In the soft-tinted October light.

They know where the apples hang ripest,  
And are sweeter than Italy wines;  
They know where the fruit clusters thickest,  
On the long, thorny blackberry vines.

They gather the delicate sea weeds,  
And build tiny castles of sand;  
They pick up the beautiful sea-shells,  
Fairy barks that have drifted to land.

Those who toil bravely are strongest,  
The humble and poor become great,  
And from these brown-handed children  
Shall grow mighty rulers of State;  
The pen of the Statesman and author,  
The noble and wise of the land,  
The chisel, the sword, and the palette,  
Shall be held in the little brown hand.

### Feline Attachment.

A little four-year old daughter of one of our citizens has a kitten that shows an uncommon degree of attachment for its little mistress. The child will take the kitten under one arm and with the other loaded with her playthings, carry them about the house all day long, talking meanwhile to the kitten as a mother would to her child. They are almost inseparable companions, and when the little girl is away from home the kitten is wild in its loneliness, and shows the greatest joy on the return of its companion by leaping into its arms and laying its head on her shoulder, purring her satisfaction in so loud a manner as to attract the attention of all in the house. A few evenings since the little girl was put to bed while the kitten was asleep behind the stove, and the bed room door closed. The kitten on awakening, wandered through the rooms in search of her playmate, to have her regular evening frolic, but could not find her. Then she was in trouble, and showed her feelings by the most piteous cries. She would then wildly run from one room to another, jump into the arms of all in the room, and, not finding her friend, would jump on to the bed, to the bed, turn over the pillows, work herself under the clothing, and not finding her there, would run swiftly about the house, uttering pitiful wails. Finally she found the child's clothing, and for a moment was happy. She pulled them out of the chair and dragged them partly across the room, and finally lay down upon them for a moment. But they were inanimate, and the one she wanted was not there. She then made for the bedroom door, and there crying pitifully began to push on it, trying to get it open. Shortly the cries ceased and all was still. The child's father went to inspect the cause and found the kitten had opened the door and was lying by the side of her little friend with her paws around the child's neck and her head against her cheek, purring her happiness into the ears of her sleeping friend.—*Michigan Farmer.*

CHILD FANCIES.—A little miss of six years, whose home is on a pleasant street of Santa Barbara, has a great love for her feathered friends. Her chickens, ducks, and turkeys are her pet confidants. The other evening her mother missed her from the house, and after repeated calls heard the voice of the little one answering her from the chicken house. Mother went, of course, to see what the wee one was doing, and found her fair-haired darling had climbed upon the roost with her pets, and was getting ready for a night's rest with them. The turkeys had put on a questioning air, and the ducks were quacking noisily as if rebuking the intruder, and the hens were evidently holding a convention in regard to the matter, while the child talked confidentially and endeavored to make it plain that she had come to live with them and care for them. The situation was amusing, but the little miss felt that a *fool* wrong was done her when the chicken roost vanished, and she was compelled to go back to ordinary child life, and the little cot where she always slumbered, all the romance of her future crushed out, as her vision of life in the hen-house vanished forever.—*Santa Barbara News.*

## GOOD HEALTH.

### Notes on Chronic Disease.

A writer in the *Herald of Health* takes a hopeful view of escape from those permanent ills under which many are suffering. He says: Chronic disease, in the general acceptance of the term, is simply a condition resulting from a want of life, force or vital energy within the physical system, not organic, but functional in character, and hence curable. But how curable? I answer, by simply supplying the deficiency of life force, or vital energy. But can life force or vital energy be supplied to the physical system to meet a deficiency? If so, how? I answer, by simply supplying the physical system with proper food. I answer, that the physical system as a single organ has one general, dominant function, viz.: to develop or produce life force, or vital energy, from proper, assimilable food. I answer, that life force can have no other origin than from proper, assimilable food. And I repeat, that the paramount function of the human body, as a single organ, is to develop from proper food material this life-awakening and life-sustaining power.

From this point of view the fatal error of the past is clearly seen and understood. Nostrums, drugs, arbitrary and pernicious rules and systems are seen usurping the place that can naturally be filled only by food.

In a reform in the dietetic system of the present age is found the only true remedy for chronic disease. But this reform must be based upon natural, philosophical principles. Physiological laws must be obeyed.

Life force has its origin in food; but in food of a peculiar character. The human body has its active and passive organs. What a steam engine or water wheel is in a manufacturing establishment, the nervous tissue is among the other organs in the human body. It is the life-awakening and life-enduring agent. It is the life motor, the life engine. The other organs move and act only as they are moved upon and actuated by its power. Its function is the general, universal function of the human body, and it requires food to supply its waste in proportion to its activity and energy. Hence the natural demand for food to supply the waste of the nervous tissue is proportionally much greater than for any other form required by the physical system. And the almost utter deficiency of nerve and brain food in the diet of the masses naturally suggests physical debility and mental incapacity; just those physical and mental conditions that are known to civilization by the term chronic disease. And to make the disaster more complete, unnecessary elements in the form of fat-forming and muscle forming material are substituted for the natural, necessary supply requisite for the nervous tissue. What then is the true secret of physical and intellectual health? I answer, first, to supply the waste in each tissue of the physical system with a requisite amount of proper assimilable food; and second, to avoid burdening the organs of digestion with an excess. Here is the true philosophy of the dietetic science. It may all be summed up in seven words; supply the waste in the physical system.

The possibilities of dietetic science as a means of uplifting the human race are practically limitless. A healthy physical system is to-day the exception, rather than the rule. That the divine capabilities of the human soul can only find a just expression through a perfect physical organ, is a fact that is not at present in any just degree understood. That chronic disease is almost invariably only a just punishment for a violation of natural dietetic law, rather than a natural sequence of intellectual culture and refinement, civilization fails to comprehend. Till a just understanding and appreciation of its true cause and proper remedy is entertained by the public mind, this scourge will continue to visit upon the transgressor the just penalties due to a violation of the most important fundamental law of human existence.

### Hints for Poor Sleepers.

Poor sleepers, says the *Herald of Health*, will find it advantageous often to raise the head of the bed a foot higher than the foot, and then to sleep on a tolerably thick hair pillow, so as to bring the head a little higher than the shoulders. The object of this is to make the work of the heart in throwing blood to the brain harder, so it will not throw so much. A level bed, with the head almost as low as the feet, causes an easy flow of blood to the brain, and sometimes wakefulness, when the vessels cannot contract on it and keep the brain empty.

Then the bed itself should be good. A very hard or very soft bed is not the thing. Hair mattresses are generally best, but these might be improved. Then the bedding should be porous, so as to allow free interchange of air. Air-tight beds are bad. So, too, the room should be large and airy, and the feet kept warm, and persons with a sensitive skin should have as light clothing as possible. Heavy clothing sometimes keeps the sensory nerves of the skin so active, that they send to the brain sensory currents that keep this organ active.

Whether sleeping with the head to the north makes any difference we do not know. It seems to in some cases, and in others not. It may be well to try it. Generally sensitive folks sleep better to have a bed to themselves.

## DOMESTIC ECONOMY.

### A Dinner and How to Cook It.

The New York *World* contains the following admirable suggestions for what is termed "a poor man's dinner," but which, well cooked, is good enough for anybody:

#### A Poor Man's Dinner.

Beef soup.  
( Beef a la mode. Potatoes in their jackets.  
( Macaroni. Cold-slaw.  
Bird's-nest pudding.

It must be understood from the beginning that a poor-man's dinner is always to be very good eating. The slender purse which forbids the delicacies and fat things of the market must find its compensation in skillful, judicious cooking and neat, deft serving. The bill of fare here offered, in the actual cost of the materials, comes within the means of the humblest reader. Just so far as he enjoys it, is altogether the affair of the madam, and it is to her assistance we come with a few hints. In selecting beef it must be kept in view that it is to furnish also the soup. As this is the case, it is only as beef a la mode that it can do double duty at the same meal. Let no housewife reject any one of the articles necessary for this dish. They add but little to the expense and much to its proper flavor. The provident housewife will always keep her larder provided with the various savory herbs and different condiments which will magically help her to set forth many different dishes from limited and little varied materials. Habit is the foe of the table, as many a weary man, sickening over his potatoes, turnips and cabbage, will assert. But to our recipes:

BEEF SOUP.—Take the round of beef, cut off the tough outer gristle, take out the bone from the center, break it up, throw all into the pot, with half enough water to cover, and stew, allowing half an hour to each pound of meat. Take the broth, to which, if not strong enough, add sufficient stock, which, as a careful housewife, you have always on hand. Meanwhile slice three onions and fry them to a light brown. Take a teaspoonful of celery seed, a teaspoonful of cloves, a blade of mace, half a teaspoonful of pepper, a little allspice, a teaspoonful of Worcester's sauce, and stew all together for two hours. Strain in the soup, and put it again on the fire; salt it to the taste.

BEEF A LA MODE.—If the round should be tough it may stew to advantage in the soup pot; after taken from the pot it will have lost some of its richness; this will be supplied by larding. With a larding-needle or sharp knife stab it thoroughly, and insert as deeply as possible a pound of salt pork cut into strips as thick as your finger; fill up the holes to the surface with a force-meat made in this manner: Take half a pint of vinegar, chop into it three or four little onions, add a teaspoonful of made mustard, a teaspoonful of nutmeg, a teaspoonful of cloves, half a teaspoonful of allspice, half a teaspoonful of pepper, some thyme and summer savory chopped fine and a tablespoonful of brown sugar. Let it simmer awhile, boil up once and then pour over the pork, letting it stand until cold. After using the pork, mix with the liquor sufficient bread crumbs to make a stiff force-meat. Fill also with the force-meat the hole from which the bone was taken. Having bound the beef about with a strip of cotton, put it in a baking pan with a little water, and cover tightly to keep in the steam. Baste occasionally; into the pan when nearly done put carrots sliced very thin. Serve garnished with parsley. In carving cut horizontally and very thin, and cover with the gravy.

MACARONI.—Take half a pound of macaroni and stew in a saucepan of boiling water slightly salted, until soft and tender. When drained, put a layer in a baking-dish, and grate over it a layer of cheese, adding bits of butter. Put layer upon layer until the dish is filled; finishing with a layer of cheese and half a cup of milk. Bake covered half an hour, then brown and serve in same dish.

COLD-SLAW.—Cut cabbage into thin shreds; for the dressing, take one cup of vinegar, one tablespoonful of butter, one of sugar, some pepper and salt, and let them come to the boil; add two tablespoonfuls of sour cream before serving.

BIRD'S-NEST PUDDING.—Soak a teacupful of tapioca in three cupfuls of lukewarm water for five or six hours, stirring occasionally. Peel six apples, cutting them in quarters and arranging them in the bottom of the dish, or the apples may be chopped fine; empty in the dissolved tapioca with a teaspoon of salt; bake one hour and eat warm with cream. If the apples are not sweet, serve with sugar or with hard sauce.

CABBAGE WITH MILK.—Cut half of a solid head of cabbage fine as for slaw. Have a deep spider on the fire and hot. Put in your cabbage, pour quickly over it a pint of boiling water, cover close, and cook for 10 minutes; then pour off the water that remains, and add half a pint of rich milk. When the milk boils up stir in a teaspoonful of flour moistened with a little cream or milk, a sprinkle of salt, and cook the flour a minute, then dish up. Those who usually find cabbage an unpleasantly indigestible article of food will be gratified with the result of this mode of cooking it. It is quite like cauliflower, and is much cheaper.





PUBLISHED BY  
**DEWEY & CO.**  
A. T. DEWEY. W. R. EWER. O. H. STRONG. J. L. BOONE.  
PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 224 Sansome street, southeast corner of California street, where friends and patrons are invited to our Scientific Press Patent Agency, Engraving and Printing establishment.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, March 24, 1877.

### TABLE OF CONTENTS.

ILLUSTRATIONS.—The Ruffed Grouse, 177. Ancient Ruins in Colorado and Utah, 185.  
CORRESPONDENCE.—Placer County; Sowing Alfalfa—Milk Fever, 176.  
HORTICULTURE.—Fruit-Drying, Blowers' Evaporator, Etc.; Fig Growing in Smyrna, 178.  
THE STABLE.—Gambling and Racing, 178.  
FLORICULTURE.—Brodie California, 179.  
THE APIARY.—Tests of Purity in Bees; Eastern Producers of Honey, 179.  
SHEEP AND WOOL.—Fish for Sheep Feed, 179.  
THE VINEYARD.—The Fruit Brandy Law, 179.  
PATRONS OF HUSBANDRY.—Grangers' Homes and Crops in Sacramento County; Grange Petitions to Congress and Our Legislature; Fruit Meeting at Grange Headquarters; Directors' Meeting of the Grangers' Business Association; From the Granges; Education from the Grangers' Standpoint; Lecture by Prof. Hilgard; Attention Desired, 180.  
AGRICULTURAL NOTES from the various counties in California, 181.  
HOME CIRCLE.—Be Always Giving (Poetry); Caws and Effect (Poetry); Ladies as Lawyers; A Story with a moral; Good Advice; Fifty Dollars; Work without Worry; Be Enthusiastic; Men's Part in Home Making; What is Fortune, 182-3.  
YOUNG FOLKS' COLUMN.—Little Brown Hands (Poetry); Feline Attachment; Child Fancies, 183.  
GOOD HEALTH.—Notes on Chronic Diseases; Hints for Poor Sleepers, 183.  
DOMESTIC ECONOMY.—A Dinner and How to Cook it; Cabbage with Milk, 183.  
QUERIES AND REPLIES.—Fungus on Wheat; Peanut Growing; Sweet Potato Slips, 184.  
GENERAL NEWS ITEMS on page 188 and other pages.  
MISCELLANEOUS.—Conditions of Successful Scientific Work; Substitute for Plaster of Paris, 186.  
GENERAL EDITORIALS.—Assessing Agricultural Improvements; Ruffed Grouse; A Pest on the Lupin, 177. The Dangers of the Town; Do not Pinch the Young Stock; The Week, 184. Fish Breeding for Farmers; Dio Lewis; Ancient Ruins in Colorado and Utah, 185.

### NEW ADVERTISEMENTS.

Windmills, Baker & Hamilton, S. F.; Poultry, Professor A. Corbett, N. Y.; Cards, Stevens Bros., Northford, Conn.; Land Plaster, Lucas & Co., S. F.; New York Watch Co., Dewey & Jordan, S. F.

### The Week.

The week has been only too fine. For the parts of our State which the water line now, doubtless, marks dry for the season, the skies have been too bright and the sun has turned to lighter yellow the landscape. It is beyond doubt that considerable areas of our State will have a rest from cropping this year, and where the owners can abide the time there will be greater returns for the respite from the reaper. But many there doubtless are to whom the lack of grain and cattle feed will result in hardship and the closest planning to survive the year financially. To these the injunction is to be brave, to persevere, for in due time they shall reap if they faint not.

The picture of the State at this season has sharp contrasts. In several counties the week's dry days have been needed to save the rank growths of grain from the rust and danger of lodgment. The notes of rust come from several counties where the sunshine has acted on the abundant moisture. We hardly think the damage will be great this year, although some conditions are favorable.

So far as we can learn from men we meet, and our correspondents, the feeling throughout the State is one of cheer and good heart. We have strong and brave words both from those who, as they walk, tread their crop beneath their feet, and those who raise their hands to reach its heading. Already the rattle of the mower is reported from many fields, and thus the forecast of the harvest comes.

ON FILE.—"Webber Lake, etc.," J. G. L.; "Vegetable Diet," S. W. J.; "Tehichi," P. M. N.; "Apricots on Almond Stocks," A. K.; "Curious Hole in a Tree," C. E. K.

### The Dangers of the Town.

Much has been written about the condition of the agricultural laborer in this State. We do not deny that in some respects it is hard, as a general rule, and that some things which are his customary prerogatives in the older States are not given him here, but on the other hand there is the superior opportunity which he enjoys here of getting a start for himself if he be wise and saves his wages. It is not the general subject which we design to discuss at this time. We rather would say a word to the young men who are now working for wages on the farm and whose future for good or evil depends altogether upon the acts of the next few years.

So far as our observation goes the earnest young man who is true to the interests of his employer meets with as much encouragement in California as in any other State. Being a young man ourself we have taken occasion to speak to many farmers who have favored us with visits, asking them what they thought the chance was for a young man to build up in their service. They have all answered with one accord: "I am disposed to help a young man if he be true to my interests and to his own. I like to see the young men grow up to do well. I like to see them save their money, for I know they can soon be owners of their own homes if they will do it. I give them my papers to read and help them all I can. But there is one thing which ruins young men and that is the desire to waste their substance in the towns. Here they lose their money, their health, their ambition and the next step is to become one of the army of blanket strappers who work during harvest and wander the balance of the year."

This is just the point which we wish to enforce at this time. The young man who has a chance to hire out for the year, say for \$300, can save \$200 of it and still have all a moderate desire will call for. If he have the genius of saving and can enjoy the satisfaction which every step toward being his own master gives such a one, he can save more than the amount we have named. At the beginning of the second year if his master is doing well he can increase his wages by \$50 or more and without any great deprivation of himself he can have \$500 in ready cash for his two years' work. If to his spirit of economy he adds fair business sagacity, he can get a start for himself with this amount. Mr. J. C. Smith, of Sutter county, who made us a call last week told us of a case of this kind which occurred within his own experience. A young German worked for him for two years and saved about the amount we have named. He then went to work for a neighbor by the year and took his pay in horses and farm tools. At the end of the third year there was a ranch for sale cheap in the neighborhood and the young man bought it, paying down what he had saved and having his horses and tools to begin with. This young man began in 1864, coming fresh from the old country and having none of the advantages which most young Americans possess. The last time Mr. Smith saw him he had his ranch paid for and \$7,000 in the bank. There was nothing peculiar in this young man's method except his desire to save his money and his resolute turning from those influences which destroy our young laboring men. He cared nothing for the allurements of the town. He rode to the village with his employer and was always ready to return with him. He saved his money and he saved himself.

Mr. Smith has had cases of directly the opposite character during his experience as an employer. He had one bright young man, for instance, who began his year well and worked until harvest time, then when harvest hands were getting twice his wages he deserted. He soon became associated with "certain low fellows of the baser sort." He passed his nights and Sundays in carousals in the town. He lost his self-respect; his health gave way to shameful diseases and he sank to utter worthlessness.

These two cases are real as the life of the two young men. There is nothing uncommon about them. Both experiences are repeated many times within the observation of many of our readers we doubt not. Are words necessary to enforce the lessons which the cases teach? If so let us make them brief: First, stick to steady employment, because its rewards are always accruing and because no time is at hand for the demons which rule in idleness. Second, hold yourself above the waste of money and of health which nights and Sundays of town dissipation will certainly demand from you. Third, begin at once to lay up capital by the zealous saving of your earnings. Hundreds of young men are doing this on our farms to-day and thousands more ought to be doing it. The way is open. The State demands thousands of good citizens of the kind which these young men can make of themselves if they will. What young man who reads this article will begin at once and enter upon a career which will ensure him a home of his own and the respect of his fellow-men?

POINT REYES.—An Eastern exchange locates Point Reyes in "Lower California," and then enlarges on its fine dairy adaptations. This attempt to read Point Reyes out of the United States will not meet with much encouragement from those who dwell there. The locality is on the California coast, north of San Francisco.

### Do Not Pinch the Young Stock.

In several counties of our State there will be this year a shortage of cattle food and many animals will have to be put upon short commons. Such being the case we wish to say a few words concerning the danger of pinching the young stock, from whose breeding powers will come the animals which will people our pastures when the times of plenty shall return. Our remarks have especial reference to the young thoroughbred animals. We have lately seen numbers of young cattle with some of the best blood in existence reduced to a condition which we believe they will scarcely ever recover from. There are several things to consider in this connection.

In the first place it is conceded that the excellence which has been attained by the several races of thoroughbred animals is due quite as much to the feed and care which they have received during all these years as to the powers of transmission which have been acquired by the method of breeding. The tendency of breed is to revert when its purity is invaded, and the tendency to deteriorate, when proper and sufficient food is denied, is fully as manifest. In short, intelligent breeding must be supplemented by judicious feeding if the breeder's aims are to be attained. This is true as a general proposition.

The application of the truth to the care of young stock is sharp. The profit of the breeder lies in the vigor of his animals and the foundations of this vigor are laid in the youth of the stock. A pinch of food during the first year in the life of a bull will be as marked on his future physical perfection as will the lack of care and kindness be in his disposition. The mistakes of the first year are seldom, if ever, overcome. If he is permitted to finish his first year with his outlines distorted because of lack of flesh, it is evident that if he ever gains his proper shape it will be at the expense of time when he ought rightly to be working for the profit of his owner; and the gravest trouble is, that during the early months the whole frame of the animal is being marked out and preparation being made for future growth. If the pinch is given to him at such a time he may never be fitted to take on the after growth. Coming to a weak and deficient maturity it is difficult to see how form and vigor can be afterward gained, except at great sacrifice of valuable time and a greater expenditure of food than would have achieved the same result during the earlier months of his life.

One great point in the breeding of thoroughbred stock lies in the early maturity which characterizes it. Here lies the greatest profit of the breeder whether he breed for fancy sales or for the butcher. Pinching the young stock shuts the gate upon this tendency of the breed and goes to make one of its most valuable powers inoperative. We think these general remarks may be found to have some weight in the present condition of affairs. Better by far sacrifice more of the old stock than to keep along so many that the young animals, upon whom the burden of future breeding must come, will be pinched for the feed which is essential to their future. Do not let the dry time have so great an influence upon the future as well as the present. By all means keep up the vigor of the young bulls, because when the feed comes again waist high in our fields, we want a race of cattle which we can see above it.

A MARL FOUND IN SAN JOAQUIN COUNTY.—Professor Hilgard writes in answer to some inquiries concerning a soil sent him for analysis by D. A. Learned, of San Joaquin county, that he found the sub-soil to be marl and says: The "subsoil" you send is very peculiar, and so different in every respect from the surface soil that if any one has ever plowed it up so as to mix it with the adobe, he could hardly have helped noticing some effect. Please investigate a little whether by accident or intentionally, such experience has not been had. The fact is that the material is true marl, containing according to a determination completed to-day by my assistant from 14 to 15 per cent. of carbonate of lime—the very ingredient which might be reasonably expected to relieve some of the most prominent defects of our adobe soils. Further analysis must determine whether or not it contains other important elements of plant food in notable proportions; but the suggestion to use it as an improver of your heavy adobe land is so strong, from what I already know, that I would like very much to have the experiment tried, if it has not been. As the season has turned out it may not be too late to do so this year, especially as one of the most immediate effects of an addition of lime to the soil is to increase its resistance to drouth.

LECTURE BY DIO LEWIS.—Dr. Dio Lewis will give us his famous lecture on "Our Girls," at the First Congregational church in Oakland, on Friday evening, March 30th, for the benefit of the free reading-room in Oakland. It will be worth going from San Francisco to hear and doubtless many of our readers in the towns of Alameda county will enjoy the treat. Music, both vocal and instrumental, suitable to the occasion, may be expected.

### QUERIES AND REPLIES.

#### Fungus on Wheat.

Some days ago we heard of a kind of mildew or rust that is attacking all the rank summer-fallowed wheat. We have heard of it all along the plains from Black's Station, in Yolo county, to a considerable distance above Colusa, and have no doubt but that it extends further up. The stalk near the ground is covered with a slightly reddish-colored coating, which, by scraping off, one can see is injuring the stalk. Some of the blades are also covered with it, and where such is the case they have died. This substance not only attacks the wheat, but it is also on the weeds, and in some places covers the ground. W. C. Harris, of Berlin Station, brought us a sample of the wheat on Thursday. Our theory of it is that it is a mold, caused by the wheat being constantly wet for the last six weeks, with no hard rains to wash anything of the sort off. The wheat affected has been growing well, but we are afraid that if it should continue it will do harm. A dispatch, just received from W. J. Clark, states that out of seven fields examined on the Colusa and Yolo line, five are badly mildewed. —Colusa Sun, March 17th, 1877.

When we read the above as telegraphed to the daily papers, we wrote to Mr. Green, editor of the Colusa Sun, asking specimens, which he kindly forwarded by mail. In the examination we sought the aid of C. Mason Kinne, Secretary of the Microscopical Society, and he made a careful study of the specimens. He found the fungus to be of the ascomycetes family, (*genus perisporiacei*), and without doubt is an *oidium* or imperfect *erysiphe*. The determination of the species was of course impossible in the time at command, for that would necessitate the complete development of the fungus, under the observation of the microscopist, and would occupy several weeks. The study was, however, sufficiently prolonged to decide upon the general characteristics of the fungus, and that is all that popular interest requires. As it is the habit of the group *erysiphe*, the fungus under examination finds its lodgment upon the surface of the leaf and consists of a white stratum composed of a profuse network of delicate threads, which do not penetrate the substance of the leaf; or, in the language of the mycologist, the mycelium spreads over the epidermis of the leaf, but does not enter its cell structure, the determination of the fact by the microscope was evidence that the fungus is not that known as "rust," (*Puccinia graminis*), because that fungus sends its mycelium deep into the cells of the leaf and bursting forth above destroys its vitality.

The specimen received from Colusa merely covers the leaf and may be scraped off and the microscope will show the structure of the leaf uninjured, although a discoloration remains. The way in which this family of fungi do injury to some plants is by covering the stomata, or breathing pores of the leaf surface, and thus preventing growth. Thus in covering the vine leaves during growth they choke the plant, and in fixing on the grapes they keep the skin from its normal enlargement, and thus cause it to crack and destroy the fruit. In the same way the same class of fungi do injury on the hop leaves and on other plants. They cannot, however, be so ruinous as the rusts (*Pucciniae*) the smuts (*Ustilagineae*), and others of other classes of fungi which cruelly pierce the vegetable structure through the stomata, and burst forth, carrying away the epidermis and utterly destroying the structure on which they feed.

Mr. Kinne informs us that in his examination he found that the fungus had fastened itself only on the older sheathing leaves of the culm and not on the culm or stalk itself. These leaves have chiefly done their work in the specimens examined, and the covering on their stomata will be comparatively harmless. It would be quite otherwise with "rust," for that would attack the stalk itself as well as the sheath, and thus attacking the avenue of life, would prevent the filling of the heads of the grain.

The editor of the Sun, in his remarks which we quote above, is doubtless right in his theory of the origin of the fungus. It is the result of abundant moisture, especially about the lower portions of the grain. So far as the specimens are developed they would seem to indicate, from the nature of the fungus detected and its attacking other than the vital parts of the plant, that the affected leaves may be lost without great injury to the filling of the heads; and therefore, unless the fungus show new features, its effect on the crop will not be great. This will be all the more probable from the fact that we are not likely to have much more weather favorable to the spreading of the disease.

#### Sweet Potato Slips.

EDITORS PRESS:—Will you please inform your readers through the Press where they can get sweet potato slips and their probable cost per thousand?—E. B. BOLE, Uncle Sam, Lake county, Cal.

This information should be given in our advertising columns by those who have the sets for sale.

#### Peanut Growing.

EDITORS PRESS:—Will you kindly inform me through the columns of your paper the method pursued in raising peanuts, and oblige.—W. COREY, Salinas City.

Will some California grower favor us with his methods of cultivation, etc.?

PRICE LIST OF FLOWERS.—W. A. T. Stratton of Petaluma, sends us a copy of his spring price list of flowering plants. It contains a perfect bouquet of beautiful and rare plants and should be in the hands of every owner of a garden and will be sent to all who desire it.

CHOOSE A GOOD COMPANION ONLY.—one of Dewey & Jordan's "New York watches."



## Fish Breeding for Farmers.

We are doing very well in this State in the way of introducing desirable kinds of fish and stocking our public waters with them. Last week we mentioned an appropriation which had been obtained from the general Government to forward this desirable work. We are also doing a good deal in the way of stocking private waters, and many a land owner will draw a cheap and nutritious breakfast from his ponds and streams as well as from his hennery, his garden or his herd. We hear of many cases of farmers who have introduced the carp from the ponds of Mr. Poppe, of Sonoma, and are obtaining satisfactory growth. Others are putting in trout. Reservoirs and streams are peopled in this way, and the latest note which we have upon the subject is that a man in Santa Cruz is going to stock his large tanks with this fish. We presume his water is cool and living, and, if so, we see no reason why he should not succeed. Some of the fattest trout we ever saw were in a tank or "pool," built in a New York dairy house, in which cans of milk were set for cooling. The water was constantly running in and out, and the fish were very thrifty. We have no doubt our farmers could do a great deal more in the way of making their water as productive as their fields if they were to give the subject attention.

The last time we saw the late Mr. Quinby, the celebrated bee-keeper, he was busily engaged in hatching trout to fill a group of ponds, which he had contrived on the side-hill which rose behind his house, filling his ponds with the water from springs which issued forth above. Indeed, the Eastern farmers are awakening to the opportunity which lies in their water resources. In the report, January 1st, 1877, of the Connecticut Fish Commissioners, we read: "There are few enterprises enjoying public attention at the present time that promise more profitable results than the multiplying of food fishes in fresh water ponds. It is the belief of all who have studied the subject, that fresh water fishes of all kinds can be multiplied almost indefinitely, and so cultivated as to be improved not only in quantity but in quality, and made to be the cheapest of cheap food. This fact should be repeated over and over again, until every one who has a patch of water on his premises large enough for tadpoles and shiners, can make it yield an abundance of wholesome fish food, at not half the trouble and expense with which he cultivates a like patch of ground. The food thus produced is too much neglected by the farming community; it affords elements of nourishment necessary to a healthy condition of the body, for which no cheaper, available substitute can be found." The report describes 256 ponds of five to 2,000 acres each, aggregating 31,604 acres in Connecticut alone—"These contain a considerable number and variety of food fishes—although probably not a thousandth part of what this may be made to produce at a little expense of time and money. Besides these (256) large ponds there are a greater number of ponds of less than five acres each, that are in like manner capable of development." From this it appears that the undertaking does not require any great stretches of water, and doubtless in our own State, as in Connecticut, there are chances for profitable work on a small scale. Who will take steps to beautify his lands by the contrivance of cheap fish ponds and at the same time furnish his table and the market with choice specimens of the finny tribe?

**NOTES FROM THE CAPITAL.**—Dispatches from Washington state: The President in an interview to-day with Wisconsin congressmen, intimated that the choice of Commissioner of Agriculture lay between Rusk of Wisconsin and LeConte of Philadelphia.

Secretary Schurz has appointed as a committee to investigate the grasshopper plague, under the act of Congress, Prof. Riley, State Entomologist of Missouri, Prof. Thomas of Illinois and Dr. Packard of Salem. These gentlemen will leave Washington soon for the scene of their labors.

**RIVERSIDE.**—We received a call on Monday from Mr. E. Cauldwell, of Riverside, San Bernardino county. He brought by way of introduction, a Pumulo orange, which was 22 inches in circumference one way and 24 inches the other. The berry weighed 3½ pounds. Mr. Cauldwell reports everything prospering in Riverside. The fruits show their stock and soil to be fine and the present rate of tree planting is very large. Mr. Crane is putting up an Alder drier. The irrigating canals are operating finely and new citizens are numerous.

**DOMESTICATED TROUT.**—We have received announcement that Livingston Stone, U. S. Deputy Fish Commissioner of Charlestown, N. H., is about to issue a revised and enlarged edition on his work, entitled "Domesticated Trout." It is of this book that Hon. Spencer F. Baird, U. S. Commissioner of Fish and Fisheries, says: "I shall take pleasure in recommending this book to any one who wishes a standard work on trout breeding."

The will of Joseph L. Lewis, of Hoboken, leaving \$1,000,000 to the Federal Government, to help pay the National debt, is to be contested by a person who claims that his wife is a niece of Lewis.

## Dio Lewis.

We are pleased to announce that Dr. Dio Lewis and wife have transferred their residence from Boston to Oakland, and thus become citizens of California. The grand work which Dr. Lewis has done for the advancement of sound ideas and practices of hygiene is well known to our readers, from the many good lessons of his which have been presented through our "Good Health" columns. This work has also won for him a national reputation. Long and excessive mental labors prostrated the diligent friend of humanity, and one year ago Dr. Lewis and wife came to California, and with a small camping party made a tour of the southern part of our State, and visited Yosemite and other notable places. The long cruise in our bracing air and invigorating sunshine gave Dr. Lewis and wife back to Boston feeling fully restored in health. But the severe winter made doubly dear the thought of California to them, and the month of February brought them back to us for the future. When such men and women, who have earned such enduring fame for their good works in the older States, turn to California for a second youth and a permanent home, who can

## Ancient Ruins in Colorado and Utah.

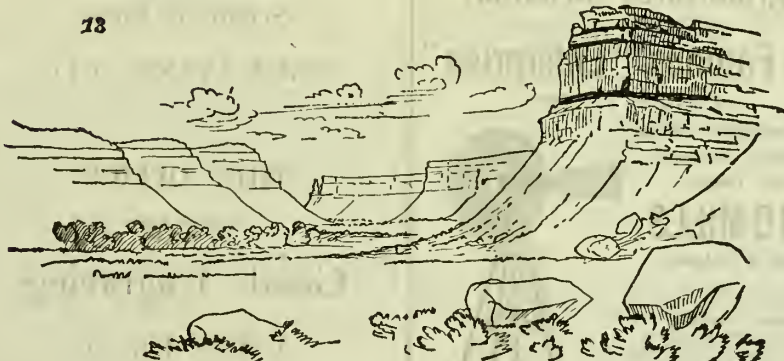
In our last two numbers we have devoted considerable space to a description of the very interesting ruins found in Colorado and Utah by the Hayden survey party, and now conclude the subject with a further description of some of the most curious of the structures found in the region referred to. While going down the canyon of the Mancos, one of the party discovered, far up the cliff, what appeared to be a house with a square wall, and apertures indicating two stories.

The house shown in Fig. 12, on this page, stood upon a narrow ledge which formed the floor and was overhung by the rocks of the cliff. The depth of this ledge was about ten feet by 20 in length, and the vertical space between ledge and overhanging rock some 15 feet. The house occupied the left hand half, the rest being reserved as a sort of esplanade, a small portion of the wall remaining, which cut it off from the narrow edge running beyond. The edges of the ledge upon which the house stood were rounded off so that its outside wall had to be built upon an incline of about 45°. The esplan-

12



13



14



ANCIENT RUINS IN COLORADO AND UTAH.

gainsay the merited reputation of our land? Our fair landscapes, our beautiful vernal winters, our pure air and the cordial welcome of our generous and open-hearted people are winning us friends among the best of the world. Such friends in turn aid us greatly in the development of our State. We doubt not the doctor's honest enthusiasm will call forth some of his most eloquent language concerning the advantages of a California home, and thus his efforts will prove equal to a score of immigrant societies to populate our beckoning fields and workshops with a prudent handed and brain-working people, many of whom, even with their late arrival, will outstrip some of the old '49ers in the honorable race toward a permanent prosperity.

A PRIVATE Toronto dispatch announces a decision of the Court of Appeals in that city, of interest in the business community. In the case of McLean vs. Dun & Co.'s Mercantile Agency, the judge decided that the defendants could not be held liable for losses incurred through their reports. The amount involved was small, but the principle involved made it a test case.

ade, too, had been extended by three abutments, built out flush with the walls of the house upon the steeply inclined slope and giving support probably to a balustrade.

The house itself, perched up in its little crevice like a swallow's nest, consisted of two stories, with a total height of about 12 feet, leaving a space of two or three feet between the tops of the walls and the overhanging rock. The ground plan showed a front room about six by nine feet in dimensions, and back of it two smaller ones, the face of the rock forming their back walls. These were each about five by seven feet square. The cedar beams which had divided the house into two floors were gone, except a few splintered pieces in the wall. In the lower front room are two apertures, one serving as a door and the other, up near the ceiling, as an outlook over the canyon beneath. In the upper story a window corresponding in size, shape and position to the door below, commands an extended view down the canyon. Directly opposite this window is a similar one opening into a large reservoir or cistern, the upper walls of which come nearly to the top of the window. From the window and extending down to the bottom of the reservoir are a series

of cedar pegs about a foot apart, enabling the occupants to easily reach the bottom.

The party prospected the ledge upon which this house was found and came upon the ruins of half a dozen houses of smaller size. One little house in particular, at the extremity of the ledge, was especially unique in the daring of its site, filling the mind with amazement at the temerity of the builders and the extremity to which they must have been pushed.

The party continued on down the canyon, the features being much alike. At some distance down, however, the scenery changes, the highest level of the mesa coming forward and towering over the valley with a thousand feet of altitude; the bottom lands widening out to a half and three-quarters of a mile in breadth. Everything is dry, dusty and barren, the stream itself losing in volume and becoming more turbid. Figure 13 represents in outline the characteristics of the canyon or valley at this point. In the high bluff on the right hand of the sketch are many curious and unique habitations. The position of these houses can be seen in Fig. 13, in dark heavy lines near the summit, just above the most precipitous portion of the bluff, generally at a height of from 600 to 800 feet above the level of the canyon. The house shown in Fig. 12 is in the same sort of a position. Fig. 14 shows a sketch of some of the larger of the ruins which we have described.

Aside from the interest attaching to the ruins themselves there are thrown around them the romance and charm of legendary association. The story runs thus, as given to Mr. Jackson's party by the guide: Formerly the aborigines inhabited all this country. They had been over as far west as the headwaters of the San Juan, as far north as the Rio Dolores, west some distance into Utah and south and southwest throughout Arizona and on down into Mexico. They had lived there from time immemorial. They cultivated the valley, fashioned whatever tools and utensils they needed very neatly and handsomely out of clay and wood and stone, not knowing any of the useful metals; built their homes and kept their flocks and herds in the fertile river bottoms and worshiped the sun. About 1,000 years ago, however, they were visited by savage strangers from the north, whom they treated hospitably. Soon these visits became more frequent and annoying. Then their troublesome neighbors—ancestors of the present Utes—began to forage upon them and, at last, to massacre them and to devastate their farms; so, to save their lives at least, they built houses high upon the cliffs, where they could store food and hide away till the raiders left. But one summer the invaders did not go back to the mountains, as the people expected, but brought their families with them and settled down. So, driven from their homes and land, starving in their little niches in the high cliffs, they could only steal away during the night and wander across the cheerless uplands. At the canyon of the Hovenweep, Utah, they halted and probably found friends, for the rocks and caves are full of the nests of these human wrens and swallows. Here they collected, erected stone fortifications and watch-towers, dug reservoirs in the rocks to hold a supply of water and once more stood at bay. Their foes came and for one long month fought and were beaten back, and returned day after day to the attack as merciless and inevitable as the tide. Meanwhile, the families of the defenders were evacuating and moving south, and bravely did their protectors shield them till they were safely 100 miles away. But the narrative tells us that the hollows of the rocks were filled to the brim with the mingled blood of besiegers and besieged, and red veins of it ran into the canyon. It was such a victory as they could not afford to get again, and they were glad to follow their wives and little ones to the south. There, in the deserts of Arizona, on well-nigh unapproachable and isolated bluffs, they built new towns, and a few descendants—the Moquis—live in them to this day, preserving more carefully and purely the history and veneration of their forefathers than their skill and wisdom. It was from one of their old men that this traditional sketch was obtained. The floor, of nearly white sandstone, upon which the butte stands, is stained in gory streaks and blotches by the action of an iron constituent in the rocks of another portion of the adjoining bluffs, and this feature gives rise, probably, to the legend. Half a mile back, or north, from this historic butte, is a group of small cave houses. A long bluff line, about 100 feet in height, of alternating bands of red and white sandstone, has, along a line of its upper strata, quite a number of shallow caves, in which are snug little retreats, securely walled in, the masonry perfect and substantial. Along the top of the bluff are traces of old walls, but now well-nigh obliterated.

**THE PHYLLOXERA IN FRANCE.**—A dispatch from Paris, dated March 14th, says: The commission appointed by the French Academy of Sciences to investigate into the phylloxera insect, report that 25 departments have been ravaged, and in many districts poverty, privation and misery have replaced affluence, in consequence of the destruction of the vines. Traffic on railways and canals has diminished, and the public taxes do not yield enough to pay for collection. Besides the damage already done, the districts of Burgundy, Champagne, Loire and Cher are now threatened. The commission recommend various measures for isolation of the infected districts and the destruction of affected vines.



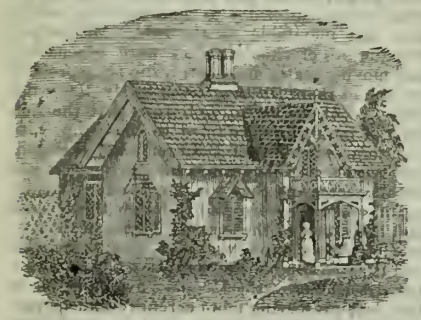
## Conditions of Successful Scientific Work.

One hears a good deal talked now-a-days of scientific research, and among it a good deal of what I cannot but think mischievous nonsense about the peculiar powers required by scientific investigators. To listen to many, one would suppose that the faculty of adding anything whatever to natural knowledge was one possessed by extremely few persons. I believe, on the contrary, that any man possessed of average perseverance is capable, if he will, of doing good original scientific work. Any hardworking and commonly intelligent man, who likes his profession, will make a good soldier, or lawyer, or doctor, though that combination of powers which makes the general, or the great jurist, or the great physician, is given to but few.

So it is with the pursuit of science; assuredly not every one of her followers, very probably not one among us now present, will become a Linnaeus, or a Cuvier, or an Agassiz. It may not be given to any of us to make some brilliant discovery, or to first expound some illuminating generalization; but we can, each and all, if we will, do good and valuable work in elucidating the details of various branches of knowledge. All that is needed for such work, besides some leisure, intelligence, and common sense (and the more of each the better), is undaunted perseverance and absolute truthfulness; a perseverance unabated by failure, and a truthfulness incapable of the least perversion (either by way of omission or commission) in the description of an observation or of an experiment, or of the least reluctance to acknowledge an error once it is found to have been made. Moreover, this love of truth must extend to a constant searching and inquisition of the mind, with the perpetual endeavor to keep inferences from observation or experiment unbiased, so far as may be, by natural predilections or favorite theories. Perfect success in such an endeavor is, perhaps, unattainable, but the scientific worker must ever strive after it; theories are necessary to guide and systematize his work, and to lead its prosecution in new directions, but they must be servants, and not masters. I may, perhaps, seem to be insisting at too great length on a self-evident point; but the more one knows of scientific work and workers, the more does one realize the importance and the difficulty of attaining a perfectly balanced mind and of arriving at an unprejudiced deduction from observation.—*Prof. Martin, in Popular Science Monthly.*

**SUBSTITUTE FOR PLASTER OF PARIS.**—Best whitening, two pounds; glue, one pound; linseed oil, one pound. Heat altogether, and stir thoroughly. Let the compound cool, and then lay it on a stone covered with powdered whitening, and heat it well till it becomes of a tough and firm consistency; then put it by for use, covering with wet cloths to keep it fresh. When wanted for use, it must be cut in pieces adapted to the size of the mold, into which it is forced by a screw press. The ornament may be fixed to the wall, picture-frame, etc., with glue or white lead. It becomes in time as hard as stone itself.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

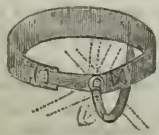
**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

## WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
303 Pine Street, San Francisco.



## RUPTURE CURED

Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.

Send for Illustrated Circular and Price List. MAGNETIC ELASTIC TRUSS CO., 609 Sacramento Street, San Francisco.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

W. H. GROVES, Stockton, Cal. Eggs for Hatching from Pedigree and Selected Light and Dark Brahmas, Buff Cochins, White and Brown Leghorns. For prices address as above. For sale, a few fine White Leghorns.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Breeder of Improved Berkshire Swine.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm Pumping, Railroad and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## Fraud! Fraud!!

## COLLINS &amp; CO'S CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



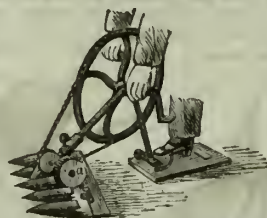
GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or unhitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, *a*, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address, WIESTER & CO.,  
17 New Montgomery St., San Francisco.

## GREAT IMPROVEMENTS ARE NOW

## BEING INTRODUCED IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

MORE ANON.

25

FANCY CARDS, 16 styles, with name, 10c.; 25 Cardinal Red Cards, name in gold, 20c.; 30 Royal Bristol Cards, with name, 20c., postpaid.  
J. B. HUSTED, Nassau, Reims Co., N. Y.

## FOR SALE.

ENGLISH PATENT

## Straw - Burning Engines.

At the Vienna Exhibition, the Diploma of Honor, Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, Manufacturers of

HEAD & SCHEMOITH'S

## PATENT ENGINES

For

Burning Straw, Reeds, Corn-Stalks, etc.

These engines for burning straw and other vegetable products have been tested for some time in Russia, on the banks of the Danube, in Egypt and India, and have been found to effect a

GREAT SAVING OF FUEL,

Enabling steam power to be introduced into countries where it was formerly impossible to use it.

## The Expansion Engines

Of this firm ARE CELEBRATED FOR THEIR SMALL CONSUMPTION OF FUEL and do not burn more than about three to three and a half pounds of coal per indicated horse-power per hour. This Engine was on exhibition at the Mechanics' Fair last fall in San Francisco. It is the

Only Fire-Box Straw-Burning Engine on the Coast,

And is without doubt the BEST PORTABLE ENGINE ON THE COAST; Extra Government safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## MUSIC BOOKS

—FOR—

Schools, Academies & Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DREAM'S SOLEGGI, (75 cents) which has exercises in Italian style.

**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL**, (50 cents) by W. O. PARKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker, Philadelphia.

## ARITHMETIC MADE EASY.

ROPP'S

## EASY CALCULATOR

Is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can simultaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months.

The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Cribbs; a Time, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightning calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided.

The work is nicely printed on fine tinted paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY & CO., San Francisco.



## Poultry.

## PLYMOUTH ROCKS.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. I offer for sale a few sittings, price, \$12 per sitting of thirteen eggs. Eggs always fresh and well packed. Orders accompanied by the money will be filled in the order in which they are received. Send money by postoffice order, registered letter or by express.

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.



## WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

RENO, I. P. LORD, NEVADA.  
BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.



Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*



## LOOK!

ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,  
Ceres, Stanislaus County, Cal

## Stock Notices.

## PUBLIC SALE

—OF—

## SHORT HORN CATTLE,

TO BE SOLD

On Thursday, April 5th, 1877,

AT THE

Fair Grounds, near San Jose,  
CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US TO CLOSE UP OUR PARTNERSHIP AFFAIRS; WE SHALL THEREFORE SELL, AT PUBLIC SALE, THE ENTIRE AVENUE RANCH HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to Breeders, and all parties wishing to purchase high bred Short Horns.

Full Sale Catalogues furnished on application.

CYRUS JONES & CO.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,  
NAPA, CAL.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). AMOS ADAMS, (SECRETARY). THOS. FLINT  
R. C. HAILE, (VICE PRESIDENT). THOS. UPTON. G. P. KELLOGG  
JOHN LEWELLING, (TREASURER). I. C. STEELE. W. L. OVERHISER  
O. HUBBELL. D. CAMPBELL.

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## A JOINT AUCTION SALE

—OF—

## Blooded and Graded Stock.

—ALSO—

## A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville,

Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

## ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

## LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

## PACIFIC,

By Red Cloud, out of Reta, two years old. (Herd book No. 24,249.)

## PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of Imported Cows.

Also, four head of Thoroughbred Cows and Heifers.

Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows,

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers.

Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums under \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

## THE BENNER RANCH

Will also be sold at Public Auction, consisting of 560 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

## SALE POSITIVE, IN GOLD COIN.

## Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,  
HENRY PRESTON,  
DAVID S. BENNER.

Feb. 24th, 1877.

## DAVIS &amp; SUTTON,

75 Warren St., New York,

## Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## LEVI STRAUSS &amp; CO.,

## Patent Riveted

## Clothing,

14 & 16 Battery St.,  
San Francisco.



These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.

USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## Practical

## BOOKS

—AT—

## BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

## CIVIL ENGINEERS,

## FARMERS,

## MACHINISTS.

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F

London Assurance Corporation,  
OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - - \$14,993,466

Western Assurance Company,  
OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

## MOUSTACHE PROTECTOR.

Will fit any Cup.



Everywhere a

## Favorite.

See the figures and strike, AGENTS, while the iron's hot. STORE-KEEPERS sell streams of them to the LADIES for presents. Moustached gents hook on to them at sight. Its a gem, and sells itself. Try it. Profits immense and a sure thing. Nickel plate only 25c., \$1.50 per doz., six doz., \$8. Gold gilded 50 cts., \$3 a doz. by mail.

C. H. BARROWS, WILLIMANTIC, CONN. Refers by permission to Mer. Loan & Trust Co., J. Brown, P. M., and Ed. Journal, Willimantic.

## PACIFIC RURAL PRESS,

A first-class 16-page Agricultural Home Journal, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Subscription, \$4 a year.

DEWEY & CO., Publishers, SAN FRANCISCO

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76...	\$6,202,435.00	\$136,022.13
Less Amount Canceled.....	435,419.00	9,568.38

	AMOUNT.	PREMIUMS.
Amount in force, Dec. 31, '76...	\$5,767,016.00	\$127,053.80
Losses paid.....	\$16,330.00	

## CASH PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76...	\$3,605,935.00	\$71,805.16
Less Canceled and Expired....	1,587,246.00	28,585.16

	AMOUNT.	PREMIUMS.
Amount in force, Dec. 31, '76...	\$2,018,689.00	\$43,230.00
Losses paid.....	\$12,718.71	

## OFFICERS.

J. D. BLANCHARD.....	PRESIDENT
I. G. GARDNER.....	VICE-PRESIDENT
G. P. KELLOGG.....	TREASURER
A. W. THOMPSON.....	ATTORNEY
FERD. K. RULE.....	SECRETARY

## TRUSTEES.

J. D. Blanchard.....	San Francisco
G. P. Kellogg.....	Salinas
I. G. Gardner.....	San Francisco
Chas. Laird.....	Salinas
Uriah Wood.....	San Benito
A. B. Nally.....	Santa Rosa
A. W. Thompson.....	San Francisco
A. D. Logan.....	Colusa
I. C. Steele.....	San Mateo
G. W. Colby.....	Butte County
A. Wolf.....	Stockton
C. J. Cressey.....	Oakland
J. C. Merryfield.....	Dixon
E. W. Steele.....	San Luis Obispo
C. S. Abbott.....	Monterey
Dr. T. Flint.....	Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT.....	GILBERT W. COLBY.
MANAGING DIRECTOR.....	C. J. CRESSEY.
CASHIER.....	ALBERT MONTEPELLIER.
SECRETARY.....	F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Sprains, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

## The Nurseryman's Directory.

A REFERENCE BOOK  
OF THE

NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,  
Publishers, Galena, Illinois.

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.



## Col. Hollister and the Diospyros Kaki.

Although we have printed much concerning this fruit in late issues, we are glad to make room for a letter from Col. Hollister, of Santa Barbara, who is a pioneer in the test of the tree:

EDITORS PRESS:—Seven or eight years ago I purchased of a Mr. Van Reid, of San Francisco, half a dozen Japanese persimmon trees, in pots or boxes. Two of them lived, but for four years, from neglect or want of proper care, did not do well, or perhaps being kept too long in the boxes in which they were received. After being put in better position they gradually recovered and for two years have done well. I can scarcely express my surprise upon seeing the magnificent fruit of the last year, when the trees had proper care.

The fruit is, I think, the most beautiful of all the fruits I have ever seen, and is most delicious to the taste. You can judge of what an improvement it is upon the old persimmon of the Eastern States, when I tell you that I carried four of them to San Francisco last fall, which weighed three-quarters of a pound each.

This variety is seedless and can, of course, only be propagated by budding or grafting. The fruit is a rich golden color, a little deeper, approximating towards a red, and seems more like a ball of wax than a fruit.

It is simply splendid. I see that Rev. Henry Loomis is introducing this fruit and other varieties of the persimmon into this State from Japan. May good luck attend him. He can do no better thing for California. I think it will be the greatest acquisition to our State in the way of fruit ever introduced.—W. W. HOLLISTER, Santa Barbara, March 14th.

**PAPER MAKING.**—We recently found the market rates for paper ruling very low in the Eastern States. Many mills making ordinary qualities are at a standstill. Those making superior qualities are willing to increase their supplies and make favorable contracts. At Salmon Falls, five miles west of Westfield, Mass., we visited one of the very best mills in this country—and that implies in the world. It is owned by the Jessup & Laffin Paper Co., and the mill in its general details was constructed under the eye of its (now deceased) founder, Mr. Jessup, after nearly a lifetime spent in successful paper making. The Fourdrinier machinery is used in connection with other perfected moving and stationary apparatus. The water supply is ample for a very large business, and from the uniform character of the superior writing and size blank printing paper issued under its able and experienced superintendent, we are confident that the future of these works will develop more importance than its friends are really aware of. Mr. Henry J. Bush, President of the company, informs us that so far, even in these dull times, the demands for their paper have equaled the supply from this new mill.

**NEW ORDER ON HOMESTEAD ENTRIES.**—A dispatch from Washington, dated March 16th, says: The General Land Office to-day promulgated an important order, signed by Secretary Chandler just before his retirement from the department, modifying his decision of last May, so as to permit soldiers' and sailors' additional homestead entries to be made in the following named cases, which are very numerous, and affect large bodies of land in California: First, those which are presented prior to the order of March 20th 1876, suspending all entries of this kind and rejected for reasons insufficient in law to bar their reception, but kept alive by appeal, and which by such rejection were postponed beyond the date of the order and so lost. Second, those actually in the hands of agents or attorneys at the date of the promulgation of the instructions of May 22d, in the execution of the department's decisions of May 17th, 1876, which under said instructions have not been recognized and which still remain in the hands of such agents or attorneys. Third, entries will be allowed to be made by agents or attorneys of the party originally entitled to the entry, but only after the Commissioner of the General Land Office shall have certified that the claim is valid and that the party is entitled to the amount of land claimed, under such instructions and regulations as the Commissioner may prescribe.

**LANGLEY'S DIRECTORY.**—Langley's San Francisco Directory for 1877 has been issued from the press. This is the 20th year of publication and it is really a standard work. It contains a great mass of information aside from the Directory proper, all of which has been compiled with intelligent care and conveniently arranged. A thorough publication of this character is of importance to the city. In our journeying in Eastern cities we saw none equal it. The publisher is experienced and careful, and his work circulates more in proportion to those of other cities, showing the work is appreciated. The go-aheadiveness of our city makes frequent changes necessary and also makes a Directory almost indispensable. The Directory for 1877 contains a lithographic map of the city, with colors indicating the different sub-divisions of the city and county, with streets, wharves, reservations, etc.

**RAPID GROWTH.**—Mr. Moore, of the Union box factory brought us a very interesting specimen of rapid growth of barley on Monday. Some seed was thrown into a box which had soil of no unusual preparation save that it contained a little horse manure. The box was not placed in a heated place. The growth of the seed from the morning of the 12th to the morning of the 18th was ten inches, whether there was enough horse manure to heat and force the growth or not, we do not know, but certainly the growth was fast.

DEWEY & JORDAN have been at 433 Montgomery street, S. F., for 13 years. They are reliable—like the "New York watches" they sell.

## General News Items.

THE spring meeting of the California Rifle Association will take place at San Bruno, San Mateo county, on Wednesday April 11th.

REAR-ADMIRAL SIR EDWARD BELCHER, the explorer who commanded the expedition in search of Sir John Franklin in 1852, died in London last week, aged 78.

FOUR clerks of the U. S. Treasury left for Europe on the 18th, carrying with them \$10,000,000, of the 4½ per cent. United States bonds for the Syndicate.

THE English steamship, *Spartan*, left New York on the 18th for Java, freighted with 394,000 gallons of refined petroleum. She goes via the Suez canal. The object is to head off the arrival in Java of 250,000 gallons of oil, shipped in sailing vessels in last January and February. This is the first ocean steamer carrying petroleum.

GENERAL SHERIDAN has the arrangements completed for the erection of two new military posts in the Indian country as soon as the materials can be transported up the Yellowstone. One is to be located at the mouth of the Tongue river, the other near the mouth of the Little Big Horn river. Each post will contain quarters for 12 companies, and these will be garrisoned by six companies of cavalry and the same number of infantry. General Sheridan is of the opinion that if there had been posts in that country a year ago the Custer massacre would not have occurred.

## Thoroughbreds for Japan.

The *Call* says: Sunday last there came from Sacramento the horses purchased of Theodore Winters by the Japanese Commission. These were Bradley, Ralston and three two-year-old fillies by Norfolk, the one being a sister to Ralston, another out of Ballerina and the third is a daughter of Maggie Dale. This represents as good blood as there is in any country, and the Commissioners are not only fortunate in getting them, but it is an indication that the gentlemen entrusted with the duties are fully posted as to the different and most valued strains of blood, and the infinite superiority of the best over those which are not so well bred. These horses are of the very highest type of the blood-horse, their forms being in keeping with their fine pedigrees. Ralston and his sister have a close relationship to the wonderful mare Mollie McCarty, all having the same dam, while Mollie is by a grandson of Lexington and the others by a son of that great horse. The Ballerina filly is also of nearly the same strain, the only difference being the Balrownie cross. Imported Balrownie is nearly related to the most popular family in England, as Blair Athol's dam was a half sister, and the books of that stallion being filled, though the subscription price is \$1,000, is the best proof of the value which is placed upon it in that country. It is superfluous to write much of these horses as their merit is well known and acknowledged by every one who has a fancy for horses, and though it is to be regretted they should be exported from California, in view of the large trade which is likely to result from a trade of this kind with Japan, a great benefit will follow to the breeders of this State. Although it is the intention of the Commissioners to confine their purchases mainly to thoroughbreds, and another good sample, they have bought in Regent, by Lodi; his dam, Eva Coombs. They will also send out a few draft stallions. Two of these have been bought of Mr. Dougherty, of the Anador rancho, and are large, powerful horses, of very good form, and will be a valuable acquisition to the breeding stock of the country they are to be shipped to. All through the purchases are good, and will be a credit to California, and the best possible advertisement of the breeding advantages it possesses.

**FIRE INSURANCE.**—We are pleased to call the attention of our readers to the assurance agency of Cross & Co., of San Francisco. This firm represents the London Assurance corporation, which is the oldest company doing business in the United States, and the wealthiest. It was established in 1720 and has assets to the amount of \$15,000,000, exclusive of capital unpaid. It transacts fire insurance and does business all over the State through local agencies. This corporation has been represented on this coast five years. Another company represented by Cross & Co., is the Western Assurance Company. This is the strongest Canadian company. It is young, as are all Canadian companies. It has made its deposit of \$120,000 with our insurance authorities, according to law, for the security of policy holders. We have insured with Cross & Co., and thus show our confidence in them.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.

WILL T. Johnson of Modesto please inform us what the money is for he sent us by Wells, Fargo & Co. about Sept. 30th, 1876?

A BOOK to sheep-growers will be sent free by addressing James Moore & Co., San Francisco.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.



Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious, able, and well conducted journal.  
Because it is the largest and best agricultural weekly west of the Rocky Mountains.

That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.

That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.

That the *RURAL*, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

SUBSCRIPTION, \$4 a year in advance.

DEWEY & CO., Publishers.

San Francisco, 1877.

## PATENT AGENTS.

Office—224 Sansome St., San Francisco.

PATENTS obtained promptly; Caveats filed expeditiously; Patent re-issues taken out; Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Soliciting Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons, and our success and business are constantly increasing.

The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

DEWEY & CO., Patent Solicitors.

San Francisco, 1877.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte and Sutter counties.  
G. W. McGREW—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERLAIN—Tulare, Kern and Fresno counties.  
A. U. STRONG—Lake, Napa and Solano counties.  
G. KUTNOW—Contra Costa county.  
W. D. WHITE—San Bernardino and Los Angeles counties.

SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

## Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, *Harper's Weekly* and *Scientific American*, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, Dewey & Co., Publishers, San Francisco.

INFORMATION IS WANTED at this office of the whereabouts of Wm. John Lawrie, formerly newspaper agent. Last heard from Jan. 27th, 1877, in Petaluma.

**\$500**

Yearly Profit from 12 Hens, by Hatching Eggs and Raising Poultry by means of horse manure alone. The Centennial and several Gold Medals, and 12 Diplomas, have been awarded to Professor A. Corbett, No. 7 Warren Street, N. Y. Testimonials and Catalogue sent on receipt of a three cent stamp.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,

LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

Call and See them or Send for Description and Prices. Sent by Express to any part of the Pacific Coast.

DEWEY & JORDAN,

No. 433 Montgomery Street, San Francisco.

NEW YORK WATCH CO'S FIRST CLASS AMERICAN WATCHES, FROM SPRINGFIELD, MASS.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, March 21st, 1877.

The general course of trade during the week has not arisen from the dullness which we noted a week ago. All dealers in supplies and manufactured goods say trade is slow and consequently the disposition of merchants is somewhat depressed.

In the market for farm products there has been a little better feeling, and prices for Grains of nearly all kinds, save Wheat, have secured a slight advance, as will be seen below. The Wheat market has been quiet and sales have been at previously established prices. The English Wheat market is quiet also, and the prices offered have dropped a point since Wednesday of last week, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
	10s	5d	10s	9d	10s	9d	10s	1d
Thursday.....	10s	5d	10s	9d	10s	9d	10s	1d
Friday.....	10s	5d	10s	8d	10s	8d	10s	1d
Saturday.....	10s	5d	10s	8d	10s	8d	10s	1d
Monday.....	10s	5d	10s	8d	10s	8d	10s	1d
Tuesday.....	10s	5d	10s	8d	10s	8d	10s	1d
Wednesday.....	10s	5d	10s	8d	10s	8d	10s	1d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
	10s	5d	10s	9d	10s	9d	10s	1d
1875.....	8s	11d	9s	5d	9s	4d	9s	10d
1876.....	10s	2d	10s	6d	10s	6d	10s	11s
1877.....	10s	5d	10s	8d	10s	8d	10s	11s

## The Foreign Review.

LONDON, March 19th.—The *Mark Lane Express*, in the review of the British Corn trade, for the week, says: "Advices from the agricultural districts are not unanimous on the subject of improvement, some reporting satisfactory progress in out-door work, and others inactivity, owing to the unsettled weather. There are only a few complaints regarding the aspect of the growing Wheat plant, which, considering the weather, presents a very satisfactory appearance. Still, occasional reports of yellowness reach us. With few exceptions, the country markets have been poorly supplied with Grain from farmers, who have been too much engaged with sowing to devote much time to threshing, and the provincial trade in English Wheat is firmer. Imports of Wheat into London have again been light, and have consisted chiefly of Dantz and Indian descriptions. There have been no arrivals from Atlantic ports. Considerable firmness has prevailed in trade, albeit transactions have not been large, and a quantity of low-class Indian Wheat was taken off our market for the Continent. Although business was unimpaired, a steady consumptive demand has been shown, and the depletion of granary stocks in London is going on steadily. With few arrivals at ports of call, the floating cargo trade has ruled steady for Wheat, and prices for red and white descriptions have been maintained, while Maize, owing to larger arrivals, has barely supported former values.

## Freights and Charters.

The ocean freight market, says the *Commercial News*, has been slightly more active during the week. A first-class wooden ship has accepted £2 to load Wheat to Cork for orders, and a handy sized A 1 iron ship has been secured to load to a direct port at the same figure. This rate, however, must be considered as purely nominal, as it is impossible to give accurate quotations, owing to the dullness of the market and the competition among ships to get away. We have now in port 12,237 tons of tonnage engaged for Wheat and 11,401 tons for miscellaneous purposes. Following are the Wheat engagements for the week: Ship *Eliza McNeill*, 1,583, Wheat to Cork, U. K., £2. Ship *Edskale*, 1,220, Wheat to Liverpool, £2.

## New York Grain Market.

NEW YORK, March 19th.—The Wheat market remains quiet and steady, and at the close exhibited rather more tone, owing to the fact that apprehensions of excessive supplies on both sides of the Atlantic are generally wearing away. Northwestern advices state that that part of the country has already become pretty well drained of Wheat, stock at shipping ports not only being so much lighter than usual at this period of the year, but supplies in farmers' hands are reported to be uncommonly light in some sections; there being, it is said, a scarcity even for seeding purposes, with occasionally as high as \$1.50 per bushel paid. There has been rather more export business in local mill and other kinds of Flour adapted to tropical and semi-tropical latitudes, and a fair movement for the Province, while the European trade continues much at a stand. Prices remain about steady.

## Chicago Grain Market.

CHICAGO, March 20th.—The markets during the past week have ruled rather steady, and Wheat has been rather firmer. A break in price is among the probabilities, and is confidently predicted by some. The principal reason therefore is the small foreign demand at present prices and the subsidence of the war fever in Europe. Prices closed as follows: Wheat, \$1.23; Corn, 87c; Oats, 33c; Rye, 61c; Barley, 53c; Pork, \$13.65 per hhl; Lard, \$9.20 per 100 wt. These prices are all for regular cash. Receipts of Wheat last week were 40,000 bushels; Corn, 310,000; Oats, 94,000. The shipments of Wheat were 45,000 bushels; Corn, 173,000; Oats, 73,000. There receipts for the same time last year were—Wheat, 140,000; Corn, 232,000; Oats, 84,000. The shipments were—Wheat, 91,000; Oats, 52,000. Freight rates on corn have been reduced between the Missouri river and St. Louis and Chicago, and vast quantities which are said to be in the country, between the two rivers, are expected to come into this city. Lake navigation will commence next month, and many charters for lake shipments are already taken.

## Eastern Wool Markets.

NEW YORK, March 19th.—As a result of the long period of inactivity, prices of the better grades of domestic Wool have finally receded from the position they have maintained for some months past. Since the decline there has been quite a liberal inquiry for medium grades, and the aggregate of business has made a fair showing. Fall California continues to realize extremely low prices, in some instances hardly covering cost, but spring is exceedingly firm, as the stock is very limited. Sales for the week include 323 bales fall California at 13c18c; 15,000 lbs spring do, 26c; 3,000 lbs choice Western Texas, 22c; 4,000 lbs do, 16c; 40,000 lbs Ohio, 42c; 16,000 lbs unwashed do, 28c; 7,000 lbs fine delaine do, 50c; 50,000 lbs State, 40c; and 100 bales Donskoi, 340 do Oregon, 2,000 lbs California, pulled, 20,000 lbs foreign Noils, 75,000 lbs Eastern Texas, 75,000 lbs Western do, 25,000 lbs combing pulled, 35,000 lbs super do, 2,000 lbs X do, 5,000 lbs No. 1 do, 1,000 lbs No. 2 do, 1,000 lbs Creola do, and 6,000 lbs unwashed Missouri, on private terms.

PHILADELPHIA, March 20th.—Wool dull; supply light; Colorado washed, 20c25c; unwashed, 16c25c; extra and Merino, pulled, 30c42c; No. 1 and super pulled, 30c36c; Texas fine and medium, 20c25c; coarse, 16c20c; California fine and medium, 25c30c; coarse, 18c22c.

BOSTON, March 21st.—Wool steady, with moderate demand from manufacturers. Medium and No. 1 Ohio and Pennsylvania, 40c42c; X, 41c43c; XX, 45c47c; choice fine

Wools, 43c; Wisconsin and Michigan, 36c36c; super and X pulled in fair demand at 30c47c; low grades dull; combing and delaine firmer; prices range from 47 to 52c. In California there have been sales at 14c25c for fall.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Feb. 28.	WEEK March 7.	WEEK Mar. 14.	WEEK Mar. 21.
Flour, quarter sacks..	61,242	60,220	13,171	96,541
Wheat, centsals.....	111,835	236,948	60,291	112,748
Barley, centsals.....	6,457	10,416	8,750	8,546
Beans, sacks.....	1,049	1,726	1,021	883
Corn, centsals.....	2,324	3,850	7,653	3,661
Oats, centsals.....	7,848	1,285	1,116	3,672
Potatoes, sacks.....	16,026	9,754	15,132	11,793
Onions, sacks.....	1,149	931	1,469	1,469
Wool, bales.....	98	346	885	1,572
Hops, bales.....	45	167	35	20
Hay, bales.....	686	955	1,168	1,149

Bags—The Bag trade is reported slow and no change is given prices. Sales are reported of 100,000 Wheat Bags at 8c cash. Jobbing rates for smaller lots may be found below.

Barley—Barley has been firmly held and sales have been made at advanced prices. We note sales during the week: 600 sks choice Bay Feed, to be delivered at Oakland, \$1.42; gold; 300 do Coast Feed, \$1.46; silver; 800 sks choice Bay Feed, \$1.35, half silver; 2,000 do light Bay Brewing at \$1.35, half silver; 300 cts Bay Feed, \$1.45, silver; 2,500 sks good do, \$1.37; gold; 3,000 cts choice Bay Brewing, \$1.45, gold; 600 sks Coast Feed at \$1.45; 250 do bright Chevalier at \$1.40; 800 do Bay Feed at \$1.40; and 400 do Coast Feed, in warehouse, at \$1.45 per ctn, all sales payable in silver; 3,000 cts choice Bay Brewing at \$1.45 per ctn, gold; 300 sks Bay Feed at \$1.45 per ctn, silver; 300 sks Bay Feed, \$1.40; 100 do do, \$1.42; 200 do Coast Feed, \$1.45; 450 do do, \$1.45—all these sales were for silver; 1,000 cts bright Bay Feed at \$1.35 per ctn, silver; 750 do, \$1.35 per ctn, gold.

Beans—Prices are unchanged, except Bayos, which are quotable at \$2.75c3.12, with a higher price for seed selections.

Buckwheat—Buckwheat still rules at \$1.80 per ctn. Corn—Corn has sold at a farther advance. We note sales: 250 do do, \$1.50 per ctn, silver and 200 do at \$1.45 per ctn gold; 400 sks White at \$1.50 per ctn, silver, and 575 sks do at \$1.42; per ctn, gold; 110 sks small White at \$2.10 per ctn, half gold; 900 sks large Yellow at \$1.50; 140 do do at \$1.52; per ctn, gold; 488 sks large Yellow in two lots at \$1.50 per ctn, half silver; 100 sks small Yellow, \$1.65, silver; \$1.50, silver, was bid for large Yellow. 200 sks fair White, \$1.47; silver; 600 do choice do, \$1.42; gold; 2,000 do good Yellow, \$1.52; per ctn, silver.

Dairy Produce—Although the price of Butter has not improved, except for a few fancy brands, the feeling is better because of the extensive packing which is now being done. This reduces the visible supply and as the season promises to be very short in several dairy districts, the outlook must be considered good. Cheese does not change.

Eggs—Eggs are quotable 1c lower than last week.

Feed—The mill price on Bran has been advanced to \$18 per ton. Hay has sold within its former range. We note sales: 50 tons choice Wheat at \$17.50; 20 tons stock at \$13.50; 50 tons Cow at \$14, and 25 tons Wheat and Oat mixed at \$10.50; 22 tons good Cow, \$14; 42 do choice Vol. unteer Wheat and Oat at \$16.50; do coarse Wheat at \$15 per ton; 44 tons good Wild Oat at \$15; 46 do choice Vol. unteer, \$10; 44 do choice Wheat at \$17.50; 44 tons good Oat at \$16; 62 do good Wheat and Oat at \$16; 49 do do, \$16.50. The choicest Wheat is quoted at \$18 per ton.

Fruit—About 2,000 boxes Oregon Apples sold by auction, mostly at \$1.25c1.65, with a few in bad order, at 35c38c. Oranges are in good demand. California Lemons are dull in consequence of large importations of Sicily. The novelty of the markets continues to lie in the Strawberry crate. Supplies have increased so that sales have been made at 30c40c per lb.

Hops—A private trade circular says of the San Francisco trade: "There has been a trifle better feeling, with more transactions for good grades, than noted for some time though at low prices. Washington Territory Hops are pretty well cleaned up. Stocks of California and Oregon are ample and pressed for sale. Brewers' wants are very small; they claim to have ample stocks for the next 60 days." We hear some holders say they find it impossible to get an offer of over 15c16c. The fanciest are quotable at 18c. Emmet Wells reports the New York market for the week, ending March 9th, as follows:

Under the influence of a decline in the London market, our own market continues dull with prices more or less nominal. There is a marked falling off in the export trade; and, as brewers are buying very sparingly we must now look for an accumulation of stocks, and possibly low prices. We renew our quotations this week without change; yet, while we quote 17c as the topmost figure attainable, we may add, that very good Hops have been sold this week as low as 10c12c, under what is termed forced business. Our London correspondent gives no encouragement to our shippers, when he says, "London dealers now have more American Hops on hand than they know what to do with." On the whole, the outlook is anything but flattering for holders. Quotations: New York, 10c17c; Eastern, 10c15c; Wisconsin, 8c12c; Yearlings, 6c10c; Olds, all growths, 4c6c; Californians, nominal, 15c20c; Oregon, nominal, 15c20c.

Oats—Oats are unchanged in price. We note sales as follows: 200 sks choice Feed at \$2.30; per ctn silver, and 300 do at \$2.10; per ctn gold; 200 sks choice Feed, \$2.10; 300 sks Bay Feed, \$2, gold.

Onions—Former quotations are retained. We note sales of 30 sks good Union City, 85c; 100 do good to choice do, 87c; 60 sks good Stockton, 75c per ctn.

Potatoes—The depression continues. We note sales: 150 sks choice Tomatoes, 52c; 150 sks good Tomatoes, 55c; 600 do inferior, 20c; 150 sks Humboldt brought 55c per ctn.

Provisions—A considerable improvement is apparent in our prices for Fresh Meat. A better inquiry has arisen, but it is somewhat doubtful how long it may continue, in view of the numbers of cattle which, according to reports, must come upon the market. Cured Meats are very dull and there is no change in prices.

Poultry and Game—Poultry prices are generally

reduced, as may be seen in our tables of quotations below. Rye—Rye is unchanged.

Vegetables—There is little to note except a cheapening of Asparagus and Rhubarb. A consignment of Tomatoes was received to-day from Los Angeles by Ellis & Co. The price is not yet fixed, but one box sold at about 20c per lb.

Wheat—The range of prices remains unchanged from last week. The tendency of sales can best be learned from the following transactions: 200 sks choice Milling, \$2.15; 2,400 cts choice Milling, \$2.15; 1,600 cts Australian Milling, \$2.12; and 500 do choice Club, \$2.14; 15,000 cts choice Shipping, \$2.07; 600 cts fair Milling, \$2.10; 3,000 sks good Milling, \$2.10; 500 do choice do, \$2.15; 1,400 do choice Shipping, \$2.10; 500 sks fair Milling, \$2.10; 600 sks good Milling, \$2.10; 200 do extra choice do, \$2.16.

Wool—We find considerable difficulty as yet in getting hold of anything definite concerning the prices which are obtainable for spring Wool. There have been a few sales made, but not enough it is thought to fix the market. Our prices for spring Wool are pronounced of a proper range by those who have made sales on commission, and this is as certain as we can be until the market becomes more open. We hear of a sale of very burry spring Wool at 10c. The prices now reported may be found in our table.

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., March 21, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat, 9 @ 91		Neatfoot, No. 1, 00 @ 90	
Neville & Co's		Castor, No. 1, 25 @ 30	
Hand Sewed, 22x36, 9 @ 91		Baker's A. A., 25 @ 30	
24x36, 10 @ 101		Oliver, Plagniol, 25 @ 30	
24x40, 10 @ 101		Polar, 10 @ 101	
Machine Sewed, 22x36, 9 @ 91		Polar, 10 @ 101	
Flour Sacks, bales, 9 @ 91		Boiled, 82 @ 85	
Quarters, 6 @ 7		Cocanut, 80 @ 85	
Eightths, 4 @ 5		China nut, 68 @ 70	
Hessian, 60 inch, 11 @ 12		Sperma, 160 @ 165	
45 inch, 8 @ 9		China Whales, 60 @ 65	
40 inch, 7 @ 8		Carls, refined, 10 @ 11	
Wool Sacks, 3 @ 50		Lard, 10 @ 11	
Standard Quarters, 11 @ 12		Oleophine, 35 @ 36	
Bean Bags, 7 @ 8		Devos's Brilt., 34 @ 35	
CANNED GOODS.		Nonpareil, 50 @ 50	
Assorted Pic Fruits, 18 @ 20		Eureka, 32 @ 38	
2 1/2 lb cans, 2 75 @ 25		Barrel kerosene, 30 @ 30	
Table do, 3 75 @ 25		Downer Ker., 48 @ 50	
Jams and Jellies, 4 25 @ 50		Elaine, 48 @ 50	
Pickles, 1/2 gal., 3 50 @ 50		PAINTS.	
Sardines, q. box, 1 65 @ 1 90		Pure White Lead, 93 @ 101	
H. Boxes, 3 00 @ 3 00		Whiting, 11 @ 11	
COAL—Jobbing.		Putty, 4 @ 5	
Australian, ton, 8 00 @ 9 00		Chalk, 14 @ 14	
Coke Bay, 8 00 @ 9 00		Paris White, 24 @ 24	
Bellingham Bay, 8 00 @ 9 00		Venetian Red, 3 1/2 @ 3 1/2	
Seattle, 8 00 @ 9 00		Averill Mixed, 2 00 @ 2 40	
Cumberland, 14 00 @ 17 00		Paint, gal, 2 00 @ 2 40	
Mt. Diablo, 5 75 @ 7 75		White & tints, 2 00 @ 2 40	
Lehigh, 22 00 @ 22 00		Green, Blue & 3 00 @ 3 50	
Liverpool, 8 50 @ 9 00		Light Red, 3 00 @ 3 50	
West Hartley, 1 00 @ 1 00		Metallic, 30 @ 60	
Scotch, 7 50 @ 9 00		RICE.	
Scranton, 13 00 @ 16 00		China No. 1, lb., 52 @ 61	
Vancouver Id., 10 50 @ 12 00		Hawaiian, 6 @ 6 1/2	
Charcoal, sack., 75 @ 75		Cal. Bay, ton, 13 00 @ 14 00	
Coke, bbl., 60 @ 60		Common, 6 00 @ 8 00	
COFFEE.		Carson Id., 13 00 @ 14 00	
Sandwich Id., lb., 21 @ 21		Liverpool fine, 20 00 @ 20 00	
Costa Rica, 22 @ 22		SOAP.	
Guatemala, 20 @ 21		Castile, lb., 10 @ 10 1/2	
Java, 24 @ 24		Common brands, 4 1/2 @ 6	
Manila, 20 @ 21		Fancy brands, 7 @ 8	
Ground, in cs., 25 @ 25		SPICES.	
FISH.		Cloves, lb., 45 @ 50	
Sac to Dry Cod., 5 @ 7		Jassie, 22 @ 25	
Boneless, 8 @ 10		Nutmegs, 85 @ 90	
Eastern Cod., 7 @ 7		Pepper Grain, 15 @ 17	
Salmon, bbls., 9 00 @ 10 00		Pimento, 15 @ 16	
2 lb bbls., 4 50 @ 5 00		Mustard, Cal., 1 50 @ 1 50	
3 lb cans, 3 00 @ 3 00		Cal. Cured, 13 @ 13	
Pick Cod. bbls., 22 @ 22		Circle A crushed, 13 @ 13	
Hf bbls., 11 00 @ 11 00		Powdered, 13 @ 13	
Mackerel, No. 1, 15 00 @ 16 00		Fine crushed, 13 @ 13	
Hf Bbls., 3 00 @ 3 25		Granulated, 13 @ 13	
Ex Mess., 3 50 @ 4 00		Golden C., 11 @ 11 1/2	
Pkld Herring, bx 3 00 @ 3 50		Hawaiian, 11 @ 11	
Boston Smoked Hg., 40 @ 50		Cal. Syrup, 72 @ 72	
LIME, ETC.		Hawaiian Molasses, 25 @ 27	
Lime, Sta Cruz, 2 00 @ 2 25		TEA.	
Cement, Rosen, 2 75 @ 3 50		Young Hyson, 35 @ 50	
Portland, 4 75 @ 5 50		Moyune, etc., 35 @ 50	
Plaster, Golden, 3 00 @ 3 25		Country pkd Gunpowder & Im-	
Gate Mills, 3 00 @ 3 25		perial, 50 @ 60	
Land Plaster, 10 00 @ 12 50		Foo-Chow O., 35 @ 60	
NAILS.		Japan, 1st quality, 25 @ 35	
Assorted sizes, keg 3 25 @ 4 00		2d quality, 25 @ 35	

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., March 21, 1877.

FRUIT MARKET.				
Apples, bx.	50 @	2 50	Prunes.....	12 @
Crab, lb.	2 @	3	Raspberries, lb.	1 50 @
Manana, bch.	2 00 @	3 50	Malaga.....	3 00 @
Cocanuts, 100.	5 00 @	6 00	Zante Currants.	9 @
Limes, Mex.	8 00 @	12 50	VEGETABLES.	
Cal.....	10 00 @	15 00	Artichokes, doz.	75 @
Lemons, Cal. M.	10 00 @	15 00	Asparagus, bx.	60 @
Sicily, bx.	10 00 @	11 00	Beets, ctn.	50 @
Oranges, Mex.	8 00 @	12 50	Cabbage, 100 lbs	50 @
M.....	— @	—	Carrots.....	37 1/2 @
Tabiti.....	12 50 @	35 00	Cauliflower, doz	50 @
Cal.....	12 50 @	35 00	Celery.....	50 @
Pears, bx.	1 00 @	2 50	Garlic, lb.	1 @
Pineapples, doz	6 00 @	8 00	Pears, Green	7 @
Strawberries, lb.	30 @	40	Sweet.....	9 @
DRIED FRUIT.			Lettuce, doz.....	10 @
Apples, lb.	4 1/2 @	6	Mushrooms.....	8 @
Apricots.....	10 @	12 1/2	New Potatoes.....	2 1/2 @
Citron.....	25 @	30	Parsnips, lb.	1 @
Figs, Black.....	5 @	7	Rhubarb.....	2 @
White.....	6 @	8	Horseradish.....	4 @
Peaches.....	7 @	10	Squash, Marrow-	
Pears.....	7 @	10	fat, tu.....	12 50 @
Plums.....	3 @	4	Tomatoes, lb.	50 @
Quince.....	3 @	4	Turnips, ctn.	50 @
Blended.....	12 1/2 @	13 1/2	White.....	75 @



## Nurserymen.

Four Grand Prize Medals  
AWARDED OUR EXHIBIT  
AT THE CENTENNIAL.



Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—128 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, **B. K. BLISS & SONS,**  
34 Barclay street (P. O. box 5,712), New York.



## TREES,

## TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERY, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

**W. R. STRONG & CO.,**  
Nos. 8, 8 and 10 J Street, Sacramento.

**SEEDS**  
Our Combined CATALOGUE for 1877  
OF  
**EVERYTHING**  
FOR THE  
**GARDEN**  
Numbering 175 pages, with Colored Plate,  
**SENT FREE**  
To our customers of past years, and to all purchasers of our books, either Gardening for Profit, Practical Floriculture, or Gardening for Pleasure,  
(Price \$1.50 each, prepaid, by mail.)  
To others, on receipt of 25c.  
Plain Plant or Seed Catalogues, without plate, free to all.  
*Peter Henderson & Co.*  
Seedsmen, Market Gardeners and Florists,  
35 Cortlandt St., New York.  
**PLANTS**

200,000

Australian Gum Trees For Sale,

—AT—

**STRATTON'S GUM TREE FOREST NURSERY,**  
HAYWARDS, ALAMEDA CO., CAL.

These trees are from five to twelve inches high, transplanted regularly into boxes 30x20 inches square, weighing 150 pounds. 150 or 500 in each box, in splendid condition for transplanting to their permanent location. Price, \$8 to \$12 per 1,000. Will contract to plant the trees, or furnish superintendence, on low terms. Cash must accompany orders for less than \$50, or if greater than that amount, city reference must be given. Address,

**JAS. T. STRATTON,**  
East Oakland, Alameda County, Cal.



## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
**JOSEPH SEXTON,** - - - - - Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

**FLOWERS**  
Strong Plants delivered free of cost safely per mail at your door. Satisfaction guaranteed. Splendid assortment of  
**ROSES**  
6 for \$1,  
13 for \$2. Send for  
New Catalogue of Plants,  
**HOOPES, BLO. & THOMAS,**  
Cherry Hill Nurseries, West Chester, Pa.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns,  
Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
**W. A. T. STRATTON,**  
Petaluma, Cal.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting  
Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles  
of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1860. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles  
and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

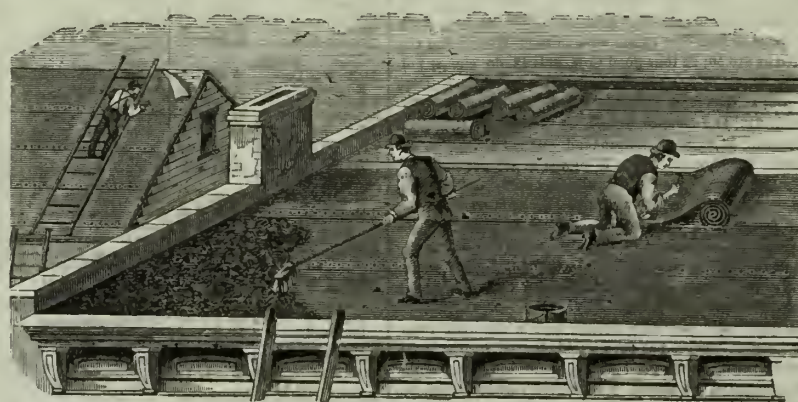
H. W. JOHNS' PATENT

## ASBESTOS ROOFING AND ASBESTOS PAINTS,

## ASBESTOS CEMENT FOR LEAKY ROOFS,

Asbestos Roof Paints for Leaky Roofs,

## ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

**Thompson & Upson, 5 First Street, near Market, S. F.,**

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE &amp; CO., San Francisco.

## LOS GATOS NURSERIES.

**S. NEWHALL, Prop'r,** - - - - - San Jose, Cal.  
A large and general assortment of

## Fruit and Ornamental Trees,

Evergreens, Flowering Shrubs, Roses, Greenhouse  
Plants, Grapevines, Small Fruits, etc. I offer for  
sale a well assorted stock. Low-topped,  
stalky fruit trees a specialty. Address,

**S. NEWHALL,** - - - - - San Jose, Cal.

## PETALUMA NURSERIES.

Established - - - - - 1860.

We offer this season a large and well-selected stock of  
Fruit Trees, Fruit Bushes, Vines, Shade Trees and a general  
assortment of Evergreen Trees and Shrubs. We have 1,000-  
000 Gums from 35 per M up, according to size. We have also  
an over-stock of Pinus insignis, Monterey Cypress, Pure  
White Pampas Plants, large plumes, Large Araucaria Ex-  
celsa, American Elm, Black Walnuts and Blackberry Roots,  
at v. ly low rates. Price List sent on application. Address,  
**WM. SEXTON, Petaluma, Cal.**

## FRUIT AND ORNAMENTAL TREES,

Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior  
to anything of the kind ever offered in this market. Two  
and three years old. Grafted of choice varieties.  
FRUIT TREES of all varieties in large quantity at re-  
duced prices. Also, Monterey Cypress, Monterey Pines,  
Blue Gums, Magnolias, Acacias, Roses, etc. Those laying  
out new grounds will find it to their advantage to call  
and examine our stock before purchasing elsewhere.

THOS. MEHERIN,

516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco.  
Agent for the Nurseries of B. S. Fox, San Jose. Send  
for Price Catalogue.

**Trees, Plants,** Bulbs. Fall Price List and Bulb  
Catalogue GRATIS. Address, F.  
**K. PHENIX,** Bloomington Nursery, Ill.

## Seedsmen.

A New and Delicious Fruit.

## THE DIOSPYROS KAKI,

Known as the DATE PLUM, or

## THE JAPAN PERSIMMON,

BEAUTIFUL IN COLOR,  
DELICIOUS IN FLAVOR,  
MAGNIFICENT IN SIZE.

Average Weight, One-half to One Pound Each.

Four Varieties, Warranted Genuine, and  
will Bear in from One to  
Three Years.

Grafted and Reliable Stock Only.

PERFECTLY ADAPTED TO CALIFORNIA, AND NOW  
GROWING IN SANTA BARBARA, SAN FRAN-  
CISCO AND SONOMA COUNTIES.

"Its introduction will be a boon to our country."  
J. M. RODGERS, Admiral U. S. N.

"A magnificent fruit."  
J. C. WATSON,  
Commander U. S. Navy.

"Worthy to be ranked with the peach and pear of Cal-  
ifornia."  
P. V. VEEDER, D. D.,  
Tokyo, Japan.

Fruit on exhibition, and Trees, Clums and Seeds for  
sale by **REV. H. LOOMIS,** at R. J. TRUMBULL'S  
Seed Store, 421 Sansome street, San Francisco. Send for  
circular.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and  
Ornamental Trees, etc.

We call the attention of farmers and country merchants  
to our unusually low prices. All Seeds warranted  
fresh, pure and reliable. Trade price list  
on application.

\* \* We have just issued the most complete guide to the  
Vegetable and Flower Garden ever issued upon this coast.  
It is handsomely illustrated, and contains full descrip-  
tions of Vegetables, Flowers, Grasses, Trees, etc., with  
full instructions as to their culture; mailed free on appli-  
cation.

SEVIN VINCENT &amp; CO.,

607 Sansome street, S. F.

P. O. Box 10231.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

## SPANISH CHUFA

## SEED FOR SALE.

Address  
**L. L. BEQUETTE,**  
Downey City, Los Angeles  
County, Cal.

**Trees,** Plants. Spring Lists free. F. K. PHENIX,  
Bloomington Nursery, Illinois.

## LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

**\$55 to \$77** a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine.



# UNION BOX FACTORY, GEO. W. SWAN & CO.,

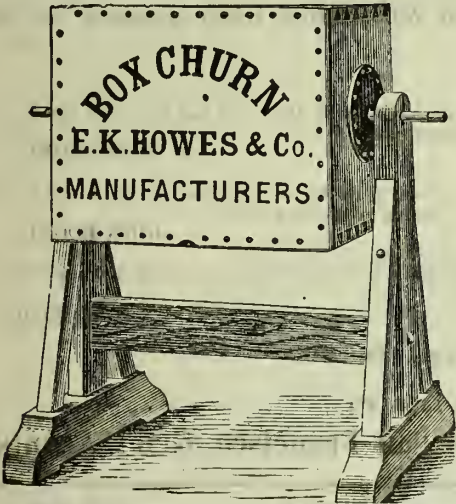
114 to 124 Spear Street, between Mission and Howard, - - - - - San Francisco.

## STRAWBERRY BASKETS:

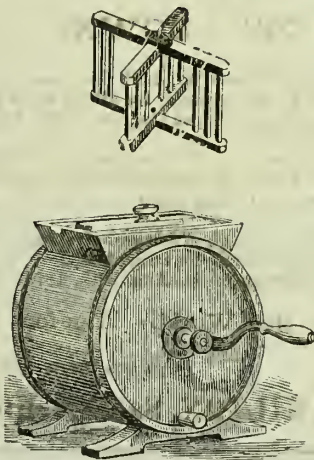
SWAN & CO.'S PATENT, ONE POUND, TIN TOP, PER 1,000,	- - - - -	\$ 9.00
SWAN & CO.'S PATENT, ONE POUND, NO TIN, PER 1,000,	- - - - -	5.55

# E. K. HOWES & CO.,

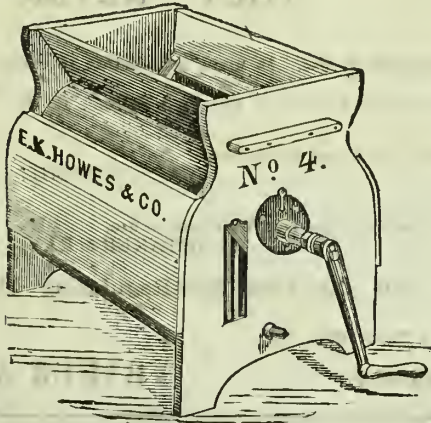
Nos. 118, 120 and 122 Front Street, - - - - - San Francisco.



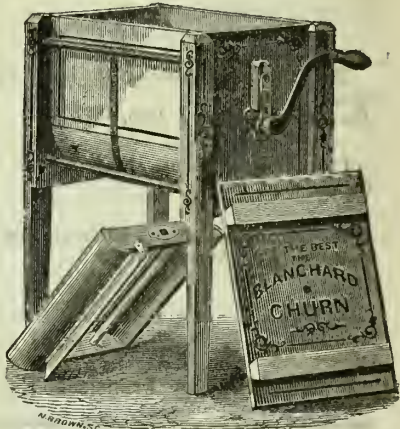
Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

# PACIFIC CORDAGE COMPANY,

MANUFACTURERS OF

## MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES & CO., Sole Agents for this Coast, - - - 118 and 120 Front Street, San Francisco.

Orders from the Country promptly attended to and sent C. O. D.

**Our Motto: "LOW PRICES."**

**PALMER BROS.,**  
726-734 MARKET STREET, S. F.

Ladies' Hats and Bonnets—Latest Styles,  
French Millinery, Flowers, Feathers,  
Human Hair Switches, from \$1.00,  
Laces and Veil Stuffs, Vails,  
Neckties and Fichus,  
Purses, Belts, Fans, Jewelry,  
Collars and Cuffs, Aprons,  
Ruchings, Embroideries,  
Worsted, Canvas, Ties,  
2 to 6 Button Gloves, Gauntlets,  
Handkerchiefs, Stockings,  
Toilet Articles, Face Powders,  
Dress Trimmings, Buttons,  
Sewing Articles—Best in Market,  
Corsets—French Woven, Thomson's,  
Stair and Table Oil Cloth,  
Parasols, Umbrellas,  
Baby Goods of Every Description,  
Ladies' and Children's Suits,  
Ladies' Cotton Underwear of "Sterno,"  
"Merino," "Norfolk" and N.  
Brunswick,  
Morocco Satchels and Valises,  
Gents' Furnishing in all the Best Brands,  
Boys' and Men's Custom Made Suits.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

NO USE FOR ANY ANIMAL  
TO TRY  
THE GLIDDEN FENCE  
I CAN'T GET THROUGH

It makes the fence so strong that it is safe to leave the sheep in the enclosure and the sheep will not break through the fence.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

## NAPA VALLEY PROPERTY.

The undersigned, a resident and practical farmer and horticulturist in Napa Valley for the past twenty-five years, is now making REAL ESTATE in this valley a specialty. Parties contemplating investing in Napa Valley can derive much valuable information relative to true values, seasons, rain-fall, crops, etc., by calling on or addressing the undersigned. Fine Wheat Farms at \$40 to \$60 per acre, on line of RAILROAD AND NAVIGATION. Superior Alfalfa Lands on Napa River; Productive Vineyard Properties; Garden Lands and Villa Residence Properties.

**THOS. H. THOMPSON,**  
Wells, Fargo & Co.'s Building, Napa, Cal.

**CALVERT'S CARBOLIC SHEEP WASH,**  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vitis Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

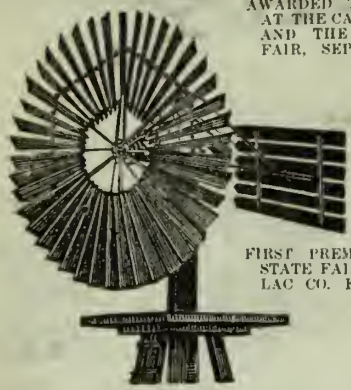
BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

**INTERNATIONAL HOTEL,**  
ALL NEWLY FURNISHED.  
824 & 826 Kearny Street, - San Francisco  
\$1.50 and \$2.00 per day. Free Coach to the House.  
H. C. PATRIDGE, Proprietor.

**DAIRY TENANTS WANTED**  
For two of the best Dairy Ranches in the State. None but thorough dairymen, with California experience, are desired. The ranches are well-stocked, buildings first-class, and the product from them sells at the top of the market. Apply with full statements and references to E. J. WICKSON, Sec'y California Dairymen's Association, Office RURAL PRESS, San Francisco.

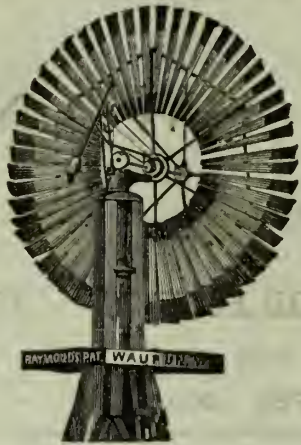


# ALTHOUSE AND RAYMOND WINDMILLS.

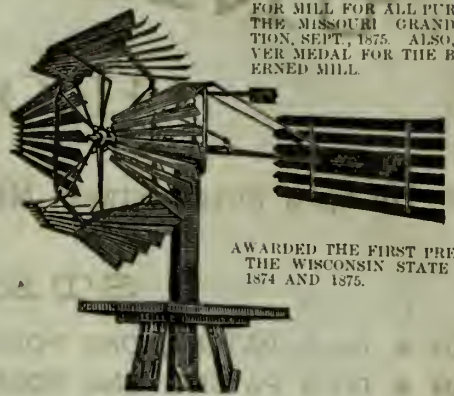


AWARDED THE FIRST PREMIUM  
AT THE CALIFORNIA STATE FAIR,  
AND THE STOCKTON DISTRICT  
FAIR, SEPT., 1875.

FIRST PREMIUM AT THE IOWA  
STATE FAIR, 1875, AND FOND DU  
LAC CO. FAIR, WIS., 1874.



RAYMOND PAT. WINDMILL



AWARDED THE FIRST PREMIUM  
FOR MILL FOR ALL PURPOSES AT  
THE MISSOURI GRAND EXPOSITION,  
SEPT., 1875. ALSO THE SILVER  
MEDAL FOR THE BEST GOVERNED  
MILL.

AWARDED THE FIRST PREMIUM AT  
THE WISCONSIN STATE FAIR IN  
1874 AND 1875.

The Althouse Windmill in a Light Wind.

The Althouse Windmill in a Heavy Wind.

## THESE MILLS SPEAK FOR THEMSELVES.

Run with Uniform Speed in Light or Heavy Winds, and take care of themselves in any Gale.

Perfectly Self-Regulating and Self-Protecting, Reliable, Durable and Ornamental, Cheapest and Best,

For the Reason that they Run in Very Light Wind, work Quietly and Steadily in a Gale, and, unlike Solid Wheel Mills, when properly set up

## THEY NEVER BLOW DOWN.

L. H. WOODIN, Esq., San Francisco.

The Althouse Windmill is the best I have ever seen in use. It gives satisfaction in every respect.

Eureka, Nevada, Jan. 16th, 1877.

EVERETT, Gen. Supt. Eureka & Palisade R. R.

I believe the Althouse Windmill cannot be excelled in any particular.

Colusa, Sept. 5th, 1876.

J. A. WINSHIP.

We are satisfied, after a fair trial, that the Althouse is the best Windmill in use.

Galt, Sac. Co., Aug. 23d, 1876.

WHITAKER & RAY.

My Althouse Windmill has been in use since the 1st of May, and has not failed one day to furnish plenty of water for all my stock and ranch use.

Plainsburg, Merced Co., Oct. 27th, 1876.

R. M. BURCHELL.

I know of no Windmill which I believe to be as perfect a self-regulator, or that will run in lighter wind. No gale can injure it whether running or standing still.

Martinez, Contra Costa Co., Dec. 15th, 1876.

JOHN ROGERS.

Mine, though of smallest size, raises water 85 feet, enough for seven families and their stock, and as much more for irrigation.

San Buenaventura, Aug. 20th, 1876.

S. BRISTOL.

N. B. We sell the Best Self-Regulating Mill in the World. Ten-foot Wheel for \$90.

ORDERS PROMPTLY ATTENDED TO.

SEND FOR PRICE LIST TO

L. H. WOODIN, San Francisco, Cal., Proprietor.

BAKER & HAMILTON, Sacramento or San Francisco, Gen'l Agents.

## INTERNATIONAL

Photographs of many of the finest Horses, Neat Cattle, Sheep and Swine, exhibited at the Centennial. Arabian, Trotting, Thoroughbred, Percheron, Matched Teams, Carriage, Heavy Draft, Agricultural Horses,

## LIVE STOCK

etc. Among the Neat Cattle are Short Horns, Herefords, Jerseys, etc. Among the Sheep are Cotswolds, South Downs, Shropshires, Merinos, etc. Among the Swine, are Chester White, and Small Yorkshire, in

## EXHIBITION

all, nearly 100 specimens, in Cards, Stereoscopic and 5x8 sizes. Will be sent by mail, post-paid, for 15 cents each for Cards, 25 cents each for Stereoscopes, and cents each for 5x8, sizes, on receipt of price. Send

## PHILADELPHIA

green stamp for printed list. Official Catalogue will be sent for publishers' price, 25 cents each. Address,

E. F. HOVEY, 1408 Chestnut Street,

Sole Publisher to the Live Stock Exhibition.

1876.

Buy the N. Y. Watch Co's Superior Watches.

C. H. DEWEY. GEO. JORDAN.  
DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware,  
ETC., ETC.,

No. 433 Montgomery St., near Sacramento,  
SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

American Watches a  
Specialty.

Bottle Rock, Jan. 22d, 1877.  
Messrs. Dewey & Co.—Gentlemen: Our patent papers, drawings and specifications have come to hand. We heartily express our thanks for the prompt and vigorous manner in which you have prosecuted our patent business. Respectfully yours,  
A. H. MARSHALL,  
G. W. MARSHALL.

## "BETTER TIMES ARE COMING!"

THE

# GOLDEN PIANO

—IS—

COMING RIGHT ALONG,

—AND—

WILL BE SOLD

—AT—

## WELCOME PRICES

FOR CASH,

To all who want a good instrument and desire to pay for only what they get. Just wait for the "GOLDEN" PIANO and you can get a good one at a reasonable figure. Further particulars will be advertised soon.

M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas,  
Buff, White and Partridge  
Cochins,  
Spangled, Golden and Silver Polish,  
Spangled, Golden and Silver Hamburgs,  
Pure White-faced Black Spanish,  
White and Brown Leghorns,  
Silver Grey Dorkings,  
Houdans, Silkies, Black-Red Games,  
Bronze Turkeys, Rouen and Aylesbury Ducks,  
All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

THE RURAL PRESS is one of the handsomest, best and most candid journals in California or the Union.—Santa Barbara Press, March 17th.



R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

## SEEDS.

## SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New } Sweet Corn.

Early Canada }  
Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel }  
Yellow Globe } Beet Seed.  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.  
EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

BRAMMAS } \$5.00.

LEGHORNS }



Eggs Shipped to

Any part of the

Coast to Hatch After

Arrival.

Send stamp for Price-List, Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.  
Also, Thoroughbred Southdown Sheep.



# PACIFIC RURAL PRESS

Volume XIII.

SAN FRANCISCO, SATURDAY, MARCH 31, 1877.

[Number 13.]

## Marcus C. Hawley & Co.

As it is our custom when our agricultural implement dealers give new signs of their enterprise and progress, we take pleasure in this issue of telling our readers of the commendable undertaking of Marcus C. Hawley & Co., which has resulted in putting in their possession one of the most complete and convenient headquarters in the country for the sale and distribution of agricultural implements and hardware. The firm found their old quarters too narrow for their business, and so they secured new; and we think the result shows that they made a wise decision when they determined to build for themselves, because, planning from their large experience, they have been able to devote space as most needed, and we doubt if any trade in the city is better suited by its architectural arrangements.

The building, as shown in our engraving is a substantial, three-story structure. It has a frontage of 92 feet on Market street and 137½ feet on Beale street, covering two "water lots." The cost of the building is reported to be \$45,000. It has of necessity been built so as to secure great strength, because of the heavy character of the goods handled by the firm. The land on which the building stands has been leased for 20 years. It is owned by Joseph Enright, of Santa Clara, and was bought by him at a land sale by the Alcalde in 1847 for \$10. Its present value is estimated to be \$150,000 to \$200,000. We do not know of another piece of property which is still in the hands of the original purchaser which can claim so great an appreciation of value.

As one enters the building from Market street, he finds on either side handsome offices, one the main office, the other the salesmen's office, both with subdivisions. From the main office we passed first to the well lighted basement. This, like each of the upper floors, is divided in two parts by the central wall, but the unity of the floors is secured by piercing this central wall with wide arched openings. All through the basement we found lines of tramways, over which incoming and outgoing goods are transported upon trucks. One-half the basement is devoted to the storage of "extras" for all machines and to large quantities of nails, axles, handles, shovels, etc. The other half is the packing and shipping department, and is well arranged for this work. At the rear of the basement is the engine room, in which is a powerful, shapely engine to run the elevators. It is also used to haul the trucks from the basement tramways up an incline to the Beale street entrance, which may be seen at the extreme left of the engraving. Close to this entrance is the shipping office.

Returning to the first floor, we find the left half devoted to racks and counters for the display of hardware, and passing through the arched openings in the central wall one finds the balance of the floor set aside as a sample room

for agricultural implements. The space is wide, the light is excellent and everything may be seen to good advantage. At the rear of this floor is another packing room, from which goods are lowered to the trucks below by a steam hoist.

The second floor is reached by wide stairways from several different points. The space is devoted to the display of wagons, threshers, gang plows, drills, horse powers, cultivators and other like implements. Also on this floor we saw a large supply of belting, the manufacture of the Boston Belting Co., which is one of the largest concerns of the kind in the East. Marcus C. Hawley & Co. have just taken the agency of this line of goods on this coast.

The approaches to the third floor are also ample and easy. A good part of the space is set apart for a "setting-up" floor for the multitudes of machines which are taken down be-

## Railroads to Educate the Legislators.

We are considerably amused at the comments of the railway newspapers on the recent decisions of the United States Supreme Court, which declares that a State has power over the railway corporations operating within its boundaries. They generally accept the inevitable with more or less grace. The *Railway Age* thinks the future of the matter must be as follows:

"The only remaining question that suggests itself is, what will be the attitude of the railway companies? Clearly, they are left at the mercy of each State legislature. Doubtless the law of self-protection will force them into the arena of politics. They must have men within the legislatures who will see that justice is done them; and, as Robert Lowe said when the last

## Irrigation in the San Joaquin.

The experience of this dry year will be such as to force upon the minds of dwellers in the upper San Joaquin valley the extreme importance of a complete system of irrigation. It is at such a time that the report of the late Commission of Engineers will come up for the approval or rejection of the people. The issue will be made on the first Tuesday in May next. We learn from our interior advices that there is something of a difference of opinion concerning the project; some having a distrust of the enterprise. So far as we can learn, however, the feeling is greatly in its favor. Certainly the letters which we receive most frequently on the subject look upon the venture as one which is

of great promise and that upon it depends the question of the value and arability of the lands through which the canal will pass. The *Stockton Independent* says of the cost and of the visible supply of water: "The scheme, although a gigantic one, is certainly practical, and as the cost is distributed among so large a number it is comparatively light. As to the capacity of Tulare lake to supply water, the engineers calculated that it will take 245 days for the proposed canal to lower the lake one foot in depth, provided all sources of supply from drainage of water courses, canals and general seepage were cut off from running into the lake. It is found that the lake averages 45 feet in depth, is 75 miles long and covers an area of 687 square miles."

It is reported that the opposition to the canal is chiefly felt by the

farmers in Contra Costa, who figure that the expenses to them will be out of proportion to the benefits. This will be a fair issue to make at the polls, for the evident intent of the election is to ascertain the wishes of the greatest number, and the good of the greatest number must be the spirit to rule in all public enterprises. We hope the election will truly show the popular feeling. Concerning the result of experience with irrigation on the West Side the *Independent* says: One of the most striking illustrations was afforded by nature a few years ago. In 1870 Corral Hollow creek in this county overflowed its banks and saturated some 3,000 acres adjacent to the stream on both sides. Crops generally were a failure that year in that vicinity, with the exception of this overflowed portion, which yielded a superb growth, the grain standing six feet high. The stalks were strong and the grain berries large and perfect. The contrast between the flood line and the ground immediately adjacent to it was striking, the one being fruitful, the other barren and dry. The next two years were also dry, with little or no crops on the West Side, but that portion that had been overflowed the first year continued to yield well, which goes to show that when the land is once thoroughly irrigated it requires but little water thereafter to maintain the full productivity of the soil.



NEW BUILDING OF MARCUS C. HAWLEY & CO., MARKET ST., S. F.

fore shipment, for economy in freight charges. On this floor there are stored large quantities of hay cutters, wheel barrows, seed sowers, corn planters, and a perfect forest of shovels, hoes, forks, scythes and other lighter classes of agricultural tools.

The building is systematically divided and systematically filled from cellar to roof, and an exceedingly large stock of goods is provided for. Notwithstanding the immense addition to their store space, the firm still have their large warehouses on Brannan street, reaching from Fourth to Fifth streets, filled with the mammoth style of implements which California agriculture requires. As we remarked before, the sample room which the firm has for the display of their goods is very large, probably the largest ever given on this coast to agricultural implements.

We have not gone into the architectural features of this new building because we had little space for them, but we cannot refrain from a note on the roofing, which is a fine piece of work. The roof area is about 13,000 square feet. It is the asbestos roofing, and was laid by Thompson & Upson, of San Francisco. It is a fire-proof roof, is cheaper in many cases than shingles, and is so easily applied that it can be laid by inexperienced men. The prospect is that the asbestos roofing will supersede tin on our city buildings.

reform bill passed in England, they 'will have to educate their masters.'"

The sublime innocence of this paragraph is almost oppressive. It says that the law of self-protection will force them into the arena of politics. One might think from this that a railway never had done anything in politics as yet, but they will now, at the last moment, take up the gavel and the lobby as a man would seize sword and pistol, for their lives. Considering the prominent way in which these corporations have heretofore figured in the elections and the legislatures of almost every State in the Union, this proposition will not startle any one, although the writer evidently thinks it will be a thunder clap.

The railways will have to educate the legislators, intimates the railway writer. This is just the very thing that led to the issue before the Supreme Court. The railways have done too much of their peculiar style of "education." Hereafter we expect far less of it. The style of education which the future will bring will be a better understanding of what is fair pay for service rendered, and just this and nothing more will the "masters" grant. We want education and investigation on the subject, but spare the country from the kind of education which the railways have heretofore inflicted upon our law-making bodies.



## CORRESPONDENCE.

### Siskiyou County—Thoughts of Coming to California.

EDITORS PRESS:—It is raining a little to-day here and snowing in the mountains. It pleases the farmers and miners alike to see the snow pile up on the mountains, for unless they are covered with snow the water supply will run short. The farmer requires water for irrigating purposes; and without water the miner cannot work his mine. Last winter the snow was very deep; this one quite "thin" so far, and faces are growing longer as the season advances, and but a small quantity is to be seen upon those ranges generally covered several feet deep at this season of the year. If snow falls early in the fall or winter, it becomes packed hard and remains until late in the summer; but when it is late in the winter or spring ere it falls, the weather being warmer and more rains it soon melts off. The water supply last summer was unusually large I am informed. Places where the snow was 10 to 20 feet deep last winter can boast of only two or three feet. The stage from Redding to Yreka, via Callahan's ranch, Rough and Ready, Oro Fino and Fort Jones, has not missed a trip this winter. So I am told by "one who thinks he knows."

I do not like to send all the honey without a little beeswax thrown in. I suppose I will displease some, but I am well aware of the fact that it is impossible for a man writing up a county, or portion of one, to please all. One will say he spreads it on too thick; another says it's too "thin." The man whose land is for sale says, "Give the bright side. All sure crops. No failures here. Invite the emigrant here. This is the garden spot of the State," etc. The stock raiser who wants all the outside range says, "No vacant lands here; too many people already. Tell 'em to stay away. No room." And so it goes. Now, the question is, who are we to believe? or how are we to find out the facts for sure ere we inform the public.

A reader of the PRESS in one of the Eastern States sends a glowing account of some particular valley, or county, and says to his "best half," "Ole woman, we've had the 'California fever' for a long time, and now here's just the chance we've been longing for. We can sell, it's true, at a great sacrifice, but what of that, we can do so much better there. Step right into a fortune and a home without labor. At the same time I know we are making a good living, our land is advancing in value, our stock is increasing and we're out of debt, but you know we have to work so hard every day here, but there in the Eden of the world but little if any work at all is required. No I think we had better sell the old homestead we've had for so many years, and upon which we raised our family and enjoyed so many happy hours for just what we can get. Dispose of our stock, they have much better out there; and emigrate immediately."

The "old woman" consents with tears in her eyes as she thinks of leaving the old farm, the children, married and settled in the neighborhood, the old friends, and all else that makes that old place so dear to them, but she thinks it's for the best. An opportunity offers and they dispose of their property at perhaps one-third of its real value, maybe less. The neighbors with astonishment hear that they are to start for the "land of gold." Poor unfortunate couple, better let well enough alone. In a few days (for it don't take as long to make the trip now as it did in the days of '49, when we crossed in an "overland schooner," drawn by oxen), they arrive. With surprise they find the "garden" spot to be some hot, dry desert, or some tract of almost worthless land, or sickly. Not at all as represented by the writer, and held at fabulous prices to our aged couple. Well, they travel around a little, become disgusted and imagine all of California like the part they have seen; they find everything and everybody so much different from what they had expected, or been used to, they return East, (if they have the means or can raise them), utterly disgusted with themselves and every one else. They try to purchase the old homestead, but the present owner is too well satisfied to part with it, or if he does, requires the full value of everything. The old couple is broken down in spirit, broken up in business, but entirely satisfied to remain at home, and not go off on another "wild goose chase" during their lives; but despite their remonstrance, their children and their neighbors go on the same journey, some to have the same bitter experience, whilst others, to the surprise of the "aged couple," and their disappointed relatives and friends, remain and do well. Some acquire snug fortunes in just a few years. Of course the lucky ones will write glowing stories home, and induce all to come here they can, while the unlucky portion breathe only curses upon the land and the people that have beguiled them away from their happy homes and so cruelly disappointed them.

So it goes the world over, some succeed, others fail, and whose fault is it? Partly their own, partly that of the man who wrote the article; perhaps he exaggerated. Then again, Eastern folks cannot see through a Californian's eyes. Things are so much different it generally requires a few years to become accustomed to the change.

People coming here generally have too exalted

ideas of this State, expect too much, and are too oft disappointed. Again, I have yet to see the valley or county that is entirely free from faults, or but that has some good qualities. One place suits one person almost perfectly, while another sees no good quality at all in it. Who's to blame?

But I've wandered off my subject, and as an aged minister, (friend of mine), used to say, "more to the point." I was going to send you a piece of "bees-wax;" the first slice is in the shape of "old" Jack Frost. His visits here are entirely too frequent for the health of those vegetables and crops which he is enabled to nip in the bud or bloom either, for he demoralizes the corn crop I hear, sometimes, and even grain suffers from the effects of his visits. Then I fear there will be trouble about water in some places some of these days; at least it stands a man in hand to look well to his water title. The hills and valleys are looking green and nice, weather warm enough to be pleasant, sometimes frost at night, and in the daytime from 32° to 70° in the shade. Cattle and horses have wintered out and are now looking well.

Since writing the above I am in receipt of the PRESS of the 10th, and read with interest the communication of "San Joaquin," which speaks my views in some respects better than I can express them myself. I would not send this letter, but perhaps there is an item somewhere in it that may be of importance, and I don't know when I shall be able to contribute again. I am very busy planting in my garden and planting orchards and vines, etc.

R. D. NUNNALLY.

French Creek, March 3d.

### Notes in Los Angeles and San Bernardino.

EDITORS PRESS:—A gazetteer of the United States, published in 1853, gives some rather quaint descriptions of California, in contrast with the way we look upon it to-day. It was as trustworthy no doubt as any work at that time published, and even now the geography of the work may be generally relied upon. But who can read what California was then and comprehend what is to-day? San Francisco had scarcely one-tenth the population it now contains; very few buildings better than wood were to be found, while the streets were almost impassable. A great portion of Battery street was built upon piles, and even Sansome street was but partially filled in. Market street, in front of the Palaco hotel, was a mountain of sand, and where the magnificent "Baldwin" now stands was a cross-bordered brook in which a small child was drowned. The locality was "St. Ann's valley," and was unapproachable except by a roundabout way of at least one mile from California street. The changes in the city have scarcely been greater than they have in other portions of the State, all along from San Bernardino to the northernmost counties. What would Fremont think were he to wake up some morning and unexpectedly find himself on the spot once occupied by him as a fort at Los Angeles. Looking to the north, south, east or west, indications of life and enterprise are everywhere present. Stately edifices have sprung up on every hand. Looking down into the valley where there were but a few adobe huts, he would behold splendid buildings. Long rows of brick and stone buildings line the streets, filled with merchandise and goods to supply the demands of the many beautiful homes that are scattered in the suburbs. He would see the smoke of the locomotive as it emerged from the beautiful hills in the east or came screeching and thundering down from the north, where the very mountains are pierced to let the monster pass, or up from the great plains of the south the iron horse pantingly bounds into the city. The beautiful orchards and vineyards fly past on the right hand and on the left. Thousands of acres of oranges, lemons and English walnuts are seen, with almost every kind of tropical fruit that grows, besides apples, pears, plums, apricots, peaches and others of the more hardy, but not less delicious fruits of our land. Extensive vineyards would be spread out before him like vast sheets of canvas a million times enlarged. School-houses here and churches there and the smoke of factories and machinery everywhere. Private gardens abound in orange trees full-fruited or in blossom, and beautiful flowers exhaling perpetual perfume. Such would be the picture that would greet Fremont after only 30 years. The very foundation of his earthworks are being removed to macadamize the streets of the city, or the tracks of the tramways, or the horse railroads that traverse them. Awakening to such a reality would no doubt startle the old "Pathfinder" about as much as did the hurly-burly of the warlike natives at the time of his occupancy.

The people in the southern portion of the State have given much attention to bee-raising, and it is not an uncommon thing to see little villages of hives often numbering into the hundreds sitting all about with their busy tenants constantly coming and going minding their own business. About 60 miles in an easterly direction from Los Angeles is

San Bernardino,

Another garden spot in this great State. This section is destined in our opinion to be the Egypt from whence Arizona will eventually

procure her corn. The soil is fertile, and being on the line of the great Southern Pacific railroad, nothing can prevent it from securing a large portion of the trade of that section of the country, and there is little doubt but what the settlers will avail themselves of the advantages.

Colton is the station nearest to the town of San Bernardino—it being three miles distant—but the residents seem to think it will not be long before another line of railroad will run directly through the village, saving, as they say, 100 miles in distance, which seems to us certainly worth saving, and from their standpoint it does not look unreasonable.

San Bernardino was first settled by the Mormons that found their way over from Utah, but Salt Lake seems to have been more healthy for them and the southern paradise was abandoned to the Gentiles, though we believe a few Mormon families are left; if there is any Mormon doctrine left in them, which is rather uncertain.

The trip by rail from San Francisco to Los Angeles is one of great interest. It is said that more engineering skill was required to cross the Tehichipa pass than anything that has hitherto been attempted in this country. In one place the road penetrates the mountain and winds around and crosses over the top making a complete loop, one track being about 80 feet above the other where they cross. We noticed some spots in the desert being reclaimed, so that by and by we shall expect to see the wonderful phenomena of blossoming we so often hear of; and why not? What has been surely, may be again.

PHILMORE.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Which is the Best Breed?

For eggs the Leghorns stand unrivaled; the Brown perhaps superior to the White. For flesh and as mothers and setters, I have found none equal to Brahmas, unless the Plymouth Rocks may prove so. There is great profit in the Brahma if good stock be obtained and they be properly cared for. Mr. Geo. W. Deweese of Napa has bred them for years and finds them to pay better than any other kind. He has just sold what young ones, (broilers), he had to spare and he obtained \$12 a dozen for his young Brahmas hatched this year. Common fowls, grown, are selling at \$7 a dozen. He shipped his young Brahmas to San Francisco and his returns show sales of all at \$12 a dozen, and his commission merchant wrote him to ship more if he had them. It pays him to keep only Brahma hens and to buy pure Brahma cocks when he desires new blood. If Brahmas be sold at a country store or mixed in with common fowls, the whole will bring but \$7 or \$8 a dozen, but if they be shipped separately they command a ready sale at double these figures.

Mrs. McMahon of Dixon sent several coops to D. E. Allison & Co., San Francisco, and on their arrival the demand for them was so great by the retailers, that Mr. Allison auctioned them off on the wharf at \$18 a dozen. They were all Brahmas and sent in nice coops about four by six feet and 20 inches high, with wire sides and ends. None of her shipments of Brahmas have ever sold for less than \$12 a dozen. It pays and pays well to buy good stock and rear fowls to sell at such prices.

I subjoin a clipping from a poultry journal by a correspondent who raises to sell in market. He seems to prefer the Plymouth Rocks. This is my first year with them and so far I am decidedly prepossessed in their favor.

"We had fair success with the Brahmas, they being hardy, fairly good layers and good setters. The Cochins were nearly the same as the Brahmas in their characteristics, except not being as good layers and inveterate setters."

"About the time we obtained our Cochins we also invested a little in White Leghorns, thinking that as the Brahmas were good winter layers and the Leghorns good summer layers we could average the matter, and have a constant stream of eggs the year round."

"Here again our hopes were dashed to the ground, our Leghorns proving fully as good winter layers as the Brahmas, and establishing a reputation which they have since kept up."

"For some time we had heard considerable about the Plymouth Rock fowls, and a year ago we obtained a cock of that breed, not the best by any means, as we did not care to pay fancy prices for a cock to put with a mixed multitude of hens to raise chicks for the common market; yet he was a very good one withal."

"From what we learned of his characteristics during the winter, together with the hearty and robust appearance of some early chicks of his get, we became satisfied that the Plymouth Rocks would give better satisfaction on some points at least than either Brahmas or Cochins."

"Acting upon these conclusions we obtained a setting of eggs, which hatched very well as to numbers, although not so satisfactorily as to sex as we could have wished—three-fourths of them being cockerels."

"In these and the large number of half blood

Plymouth Rock chicks which we have raised this summer, these conclusions and expectations have been as fully verified as is possible with one season's experience."

"After some years' experience we seem to see our way clear to breed thoroughbreds, and Plymouth Rocks and White Leghorns will be our specialties."

"As we view the matter, the points of superiority which the Plymouth Rocks possess over the Asiatics are these: The chicks feather out younger and better than the Asiatics, a consideration of great importance in raising chicks in early spring, and further, the birds come to maturity much earlier, weighing fully as much at three months of age as the Asiatics have at four months old. This also is a very important item toward making the credit side of the balance sheet give a satisfactory showing."

### Fowls and Their Merits.

EDITORS PRESS:—We have bred fowls for several years, that is the blooded varieties, and have had ample time and experience in which to form an opinion. As for telling "which is the best breed," we answer in plain English all.

We can scarcely pick up a poultry journal, and not unfrequently a farmers' paper, but what that vexed question appears. When in the poultry business in the East seldom a week passed but what one or more inquiries were received, asking us to inform them which was the most economical or best fowl that was raised. Now we admit that we are totally unable to solve such a problem. You might just as well ask a gardener which is the best vegetable that grows, or a florist which is the handsomest flower. What will suit one will not another; the same with poultry. Fowls that one man raises another would not tolerate on his premises.

For convenience we arrange fowls into two classes, the sitters and non-sitters—the former consists of all the Asiatics, which comprises Brahmas and Cochins of the different varieties, Games, Dorkings, Plymouth Rocks, Bantams and a few other less prominent kinds.

The Asiatics are a large bulky fowl with feathered legs, and although they are called good layers, are better fitted for the spit than the egg-farm. When grown they frequently dress six or seven pounds each and over. Thus we see they would make a grand fowl for market. They have the genuine "yellow leg," which is so much sought after in the East, and will find ready sale where other fowls would not.

Games are not a large fowl, nor either are they what would be termed small; they weigh from 10 pounds per pair, live weight, more and less, but are an average bird. They are fine layers and as for mothers are unexcelled. When with chicks they will attack small animals, such as the rat, cat, skunk, etc., and I have seen them chase a good sized dog from the yard, and follow him several rods down the street. Their flesh has the true game flavor and is very fine grained. The cocks are naturally "quarrelsome," and would sooner lose their life than flinch in battle. On a whole the Game fowl is rather plucky, and on this account his friends are numerous.

Dorkings are not extensively bred in America, but in England are very popular. They are a fine table fowl and make good mothers.

Plymouth Rocks stand high in public favor and possess many good qualities and few poor ones. They are good sized and rank No. 1 as layers and market birds.

The Bantams are the pigmies of the poultry yard, although, could they speak, I am certain they would vastly differ from you. They strut around and crow, and invariably feel as though they were the "biggest toad in the pond." We have a little rooster and two hens, and the combined weight of the three will not raise the beam against as many pounds. They are little beauties, and are admired by all who see them.

Should this hastily written article be readable to any of your subscribers, I will, at no very future date, remember the non-sitters.

I. P. LORD.

Reno, Nevada.

CLEANING CARPETS.—The subject of carpets and disease, says a writer in an exchange, is one I am often troubled about. The are so continually quite overlooked in cleaning rooms where contagious diseases have been, and are doubtless the means of carrying disease to others. I use damp cornmeal and salt. To sweep a carpet thoroughly with a broom, take a pint of meal and a half pint of salt and moisten them together with just water enough to keep the meal from flying about, not wet enough to stick to the carpet, sprinkle pretty thickly on one side of the room, and sweep straight across; add a little more meal as the dust begins to fly—this cleans the carpet nicely, too. But for daily sweeping I use a carpet sweeper—this effectually gathers up the dust, shreds, and particles of lint which usually fly furiously, and must settle down onto every particle of furniture in the room, and then be removed with the dusting cloth. I have found the carpet sweeper a grand helper all around, saving dust, labor, and weary backs. Even in the sick-room it can be used slowly, and thus guard against the noise which sweepers make. The cost of it will certainly be made up to the woman who has many rooms to sweep. I think it will sweep a room sufficiently four times out of five; the fifth time I use the cornmeal and salt, and a good broom.



## ARBORCULTURE.

## The "Spanish Walnut."

We noticed in a recent issue of the *Call* an article on Spanish walnuts, and secured specimens at the rate of 50 cents a pound, which price was charged by a greedy retailer because a kind editor had given a notice and thus aroused an interest in the nuts. We bought the specimens in order to send them to Mr. Gillet to get his opinion on the new comer. The following is the notice in the *Call*:

"There was recently received a sack of nuts from Mr. Charles Camden, of Tower house, Shasta county, that are a novelty in this market, and have attracted considerable attention. Thinking that information in regard to it would be of interest to many readers of the *Call*, we requested Mr. Camden to send us the history of the tree. Following is his reply:

Sixteen or eighteen years ago, Mr. Tower, the then owner of this place, planted a variety of nuts in nursery, including the English and black walnuts, butternuts, hickory, chestnut, pecan, and the nut that produced the kind you refer to, but where he procured them I cannot say. He or the gardener at the time denominated them the "Spanish walnut," and we give them the same name still, whether properly or not I cannot say. The tree is a very thrifty grower; one now measures 44 inches in circumference. It develops in very handsome form, after first turning to shape, and needs no pruning, the limbs producing no surplus laterals. The foliage is lighter green than the English walnut, with narrower and longer leaf, bears the fruit in straggling clusters, ten or a dozen to the bunch; matures and bears earlier than the English walnut, and is more productive and regular, and the nut has a thin hull or husk. The flavor, as you observe, is something like the butternut, but it is far less oily and much superior; in fact, a most excellent nut in taste, although hard. The shell is thin, full and sure kernel, and the skin covering free from bitterness and objection. On the whole a fine acquisition of the nut family. The nuts you saw are hardly up to a fair average, the trees having overborne, and they not receiving regular attention as to irrigation. Respectfully yours, CHAS. CAMDEN."

The nut is in shape somewhat like the pecan, but thicker, average specimens being about one and one-half inches in length and one inch in diameter, tapering to a sharp point at the apex. The shell is of the same color, and has the wrinkled surface of the English walnut, though thicker. The kernel is shaped almost exactly like that of the butternut of the Eastern States, and has the same delicate flavor. The pellicle, or skin of the kernel, is very thin, and, as Mr. Camden observed, is free from the bitterness of that of the English walnut. The nut is not recognized by any of the nurserymen who have seen it as belonging to any of the varieties of the walnut family known here.

## Comments by Mr. Gillet.

EDITORS PRESS:—Your sample of nuts, with notice by the *Call* and annexed queries about the value of such nuts, have been duly received, and I will give you my opinion on the qualities and defects of this so-called Spanish walnut, for I am satisfied that Spain, where are raised the same fine varieties of walnut that her neighbors France and Italy are growing, never dreamed to give her name to a species of walnut so inferior to those cultivated all over her territory. However, for convenience sake, we will let that name of Spanish walnut stand, as claimed by the *Call's* correspondent. There is, you must know, a great deal in a name, though some people, skeptic-like, will prefer to be convinced by a more substantial, palpable proof or facts.

I will first say that this Spanish walnut is a handsome little nut, fully one-third to one-half the size of a common English walnut, and having a curious shape; hard as a rock it is true, but nevertheless it is a pretty little nut. The shell is darker than the English walnut, with a somewhat wrinkled surface, and tapering to a sharp point at the apex. That sharpened point, the main feature in the nut, does not, I must say, add a particle more to the bulk of the kernel inside, but gives the nut that curious and respectable appearance which little pecan might envy. If the nut was twice larger, I would be led to believe that it is the "angular" of the French (see description of varieties in the PRESS of March 17th); and if it was likewise both larger and more round, I would call it the black walnut of America. But since the foliage of the tree is similar to that of the European walnut, I have no doubt it is a variety of the angular, the most vigorous member of the *Juglans regia* family. But whether it is that or not and whatever variety of walnut that nut belongs to, I must acknowledge that the kernel has a delicate flavor; the pellicle, besides, being very thin and not the least bitter; but such is the case, too, with the larger nuts of that sort, the "angular" and "black" walnut. On the other hand, the kernel is small, not any larger in bulk than that of a good sized pecan; it looked to me to contain much oil. The shell is very hard, like that of the two above varieties, and one has to hunt up with a jack-knife or a sharpened wire every particle of the kernel into the little cavities it hides itself in.

Those hard-shelled nuts, in fact, large and small, are to the soft-shelled nuts, like the common English walnut, what the hard-shelled almond is to the soft shell or Languedoc almond. If we go in a fruit store and inquire how many sacks of each kind is sold, we will soon find out that hard-shell almonds and hard-shell walnuts are hardly an article of commerce. This ought to be conclusive, I should think, as to the value of those various species of nuts for commercial purposes. The only merits I see in those hard-shell nuts, including our pretty little sharpened nut of Shasta county, Spanish, so-called, is to produce vigorous stocks on which to graft those nice varieties of the *Juglans regia* family, or soft-shell nuts.

I will add that in cities and towns in Europe an immense consumption is made of fresh soft-shell walnuts; in fact, fresh nuts and white chasselas is the universal demand for dessert in Paris restaurants at the time when both are ripe.

I suppose that quite a crop of black walnuts is already raised in this State; couldn't any of your readers tell us what is done with them? Couldn't, too, some of them, living in other parts of the State, give us some information as to the bearing of English walnuts in the counties they live in? In short, are English walnuts raised in respectable quantities on this coast? Those questions are certainly of much import and interest to all, as tending to develop to a larger extent the resources of California.

FELIX GILLET.

Nevada City, March 22d, 1877.

[We hope our nut-growing readers will act upon Mr. Gillet's suggestion and write us concerning their experience with English walnuts.

We hear of large crops in different localities. Will our readers give us definite information?—EDS. PRESS.]

## THE VINEYARD.

## Raisin Making.

EDITORS PRESS:—California is the only State in our country that has a suitable climate for the growth and curing of raisin grapes. In this fact lies our advantage in this industry. We have virgin soil well adapted to the production of the grapes, and in the interior valleys a climate much like that of Malaga, where the best raisins of commerce are made. But the production of raisins in this country is not without its obstacles, which, although they are not greater than in most new industries, should not be ignored. First, we are separated from the great body of the American people by long lines of railroad or ocean steamers, making the freight about equal to the duties on foreign raisins. Second, we are paying more for labor than any other country, several times more than the raisin makers of Europe have to pay for expert help, and we have to educate our labor at the same time that we educate ourselves. Third, we have injured the reputation of California raisins by making too many from inferior kinds of grapes, not having good keeping or other desirable qualities, and are not packed to suit the market. I will try and point out how some of these objections can be (at least partially) overcome.

First, by making a superior article, the value will be so enhanced that it will bear the additional cost of freight.

Second, we must avail ourselves of all labor-saving appliances which the American mind may invent, and, fortunately, in this business they are not necessarily very costly, and they enable us to make into raisins a greater percent. of our grapes than they can in Malaga in the most favorable year.

Thirdly, we should put no merely dried grapes, made from poor varieties, on the market as raisins, thereby injuring the reputation of the whole product; and, lastly, we should pack with care and neatness in such packages as the markets demand. I will now give the leading points, as practiced by us, not claiming that they are by any means perfect.

We use the fruit-tray first introduced by G. G. Briggs, of Davisville, who is the greatest producer of raisins in California. The size of the tray is two by three feet, made of lumber one-half inch thick, weighs five pounds and holds 20 pounds of grapes, which, when dried (with us), make seven pounds of raisins. We pick directly on the tray, in order to save handling and muzzing the grapes, and then leave the tray on the ground between the rows, giving a greater exposure to the sun by placing lumps of earth or other material under the north end. When the drying is about half completed, the grapes are turned thus: two men, taking an empty tray, place it on the one to be turned, then giving it a swinging circular motion, turning it bottom side up, they replace it on the ground and go to the next. It is plain to be seen that in this manner two men can turn more than 10 men in the old way (one bunch at a time). This turning, occupying only a short time, when the dew is nearly gone and the stems tough, does not break up the bunches and make so many loose raisins. When the grapes are sufficiently dry, they can be placed in large sweating boxes, or placed in piles on piles in the packing-rooms while yet on the trays, and, when sweated enough to toughen the stems, they are packed in layers of five pounds each, either in one-quarter, one-half or whole boxes, holding respectively five, 10 and 20 pounds.

As the season advances and it is desirable to hasten the process for fear of rain or any other reason, such as heavy dews, fogs or cold weather, the grapes, while yet on the trays, are taken to the evaporator and placed in the drying-rooms, and then, without danger of loss, speedily dried.

At the latter end of the season we pick and immediately place the green grapes in the drier and complete the whole process without the use of sun heat. We use no alkaline or acid dips, and drying in rapid currents of air, which carry off the moisture as fast as it leaves the grape, we retain the bloom and aroma of the perfect raisin.

The ground best adapted to the growth of the muscatel grape is a deep, rich sandy loam. The vines if possible should be thoroughly irrigated in the winter while dormant and again in the spring after the first crop has—well, got say about as large as green peas. If irrigated before

this the water being cold checks the flow of sap for a time, then as the ground becomes warm a heavy flow of sap takes place, dropping much of the fruit. If the water and earth are warm this result does not follow with us. The amount of raisins per acre of course varies different years and in different places. From 100 to 200 20-pound boxes per acre is as much as it is prudent to expect. R. B. BLOWERS.

Woodland, Yolo county, California.

## HORTICULTURE.

## Apricots on Almond Stocks, Etc.

EDITORS PRESS:—In noticing an article in the PRESS of March 10th, from a Ventura correspondent, in regard to apricots worked upon almond stocks and their consequent failure, permit me, through your columns, to state some of the causes which have led to these experiments as well as their results, which, on careful consideration, can only be attributed to an honest motive on the part of the nurseryman instead of possible fraud, with which he is often charged.

It is a well-known fact that the root of the peach does not penetrate deep, the inclination of the tree being to seek a warmer and more genial soil and to escape the cold and dampness which lie beneath the loose and broken surface of ordinary soils. Now the apricot, which in character is closely allied to the peach, is similar in the tendency of its root growth—i. e., in seeking the warmth of the surface—will not succeed well on either excessive moist or very dry soil. But the almond, strange to say, which is still closer related to our peach than apricot, sends its roots deep and thrives well on moisture derived from below.

The propagator, in order to balance these differences, brings art to the nurseryman's assistance (overlooking the fact that the distinction between apricot and almond is too marked to ever form any but a temporary sap union), reversing nature, and the result is as your Ventura friend has stated.

The same experiment, conducted in the same manner with the plum and apricot, give the same results. Could the plum be made to succeed upon apricot, the suckering nuisance would be obviated and much labor and expense in culture saved. But nature is supreme and we cannot violate her laws without the effort proving eventually abortive.

Take peach stock, and we easily form, either by grafts or buds, splendid unions with almond or apricot, as well as with some varieties of plums. But, as I have already remarked, these roots will not succeed well on cold soils.

Reverse the operation in the case of the peach and work it upon plum stock, and the success is good, but variable in varieties used, as it is in working plum on peach.

It is believed, but disputed, that the plum root endures greater humidity than the peach. My own observations within the past five years note but little if any difference. Permit me in conclusion to state that I do not entirely approve of any nurseryman conducting experiments at the expense of his patrons, nor on the other hand is it strictly right to give him the entire responsibility. Let the producer meet him half way. A. KAMP.

San Jose, March 19th, 1877.

## An Austrian Method of Propagating.

The London *Gardener's Chronicle* says: "It will be remembered that a month or two ago we alluded to an alleged extraordinary secret for propagating trees and grafting roses, whereby much time could be saved, offered for a small sum by an Austrian nurseryman named Bachraty. This gentleman has since communicated an article on the subject to the *Wiener Gartenfreund*. Briefly, his method is as follows: Cuttings of shrubs and trees are taken off at the beginning of July, from six to 12 inches long, according to the kind. The leaves are removed from the lower portion which is to enter the ground, but those which will come above ground are left. Beds are prepared for them in the open air by thorough digging and leveling, and afterwards applying a superficial layer, about two inches thick, of rotten manure from a spent hot-bed. The cuttings are then stuck in about two inches apart and in a somewhat oblique direction. Each bed, when filled, is surrounded with a lath fence, so that shade may be given when the sun is very hot, and the cuttings are well watered with a rose-sprayed can. This completes the operation. The only further care necessary is a sprinkling overhead three or four times a day during the first week, if the weather be very hot, and once a day afterward. In the course of five or six weeks, treated in the manner indicated, the cuttings of most plants will have formed a callus and further shading will be unnecessary. Late in the autumn a layer of rough manure, two or three inches thick, is spread over for winter protection. It also serves as manure when the cuttings start growing in the spring; and cuttings treated thus make extraordinary progress, forming plants equal to two-year-old plants from winter or spring cuttings. Very few, it is asserted, fail. The new method of grafting roses is the insertion of growing eyes early in spring, instead of dormant eyes in the summer. They are inserted in the main stem, one on each side, to form symmetrical heads. These make, it is said, as much growth the first season as the dormant eyes the second season."

## THE SWINE YARD.

## Care of Sows and Pigs.

Joseph Harris, of Monroe county, New York, author of "Harris on the Pig," and one of the foremost breeders of thoroughbred swine, writes to the *American Cultivator* concerning care of the sows and management of the young. We quote as follows: Before farrowing, the main point is exercise and fresh air. You want the sow to have a sharp appetite and vigorous health. Judicious starving is sometimes advisable, but this is only to correct some previous mistake in the feeding and management. The rule is, moderate and regular feeding, and an unlimited supply of fresh water, fresh air and exercise. Starving weakens the appetite; moderate feeding and exercise sharpen the appetite and strengthen digestion. I like to see a sow, when shut up to farrow, able to drink a pailful of slops twice a day, and look as though she wanted more. If you should, by any mischance, give her more than she will eat up clean, remove it at once.

After farrowing, the food should be warm and sloppy. There is nothing better than oat or cornmeal gruel, thoroughly cooked, with a little bit of fat or meat to flavor it. There should also be mixed with it bran enough to keep the bowels opened; the proportion will depend on circumstances. I have one sow in my herd that is such a good milker that she will stand the richest food we can prepare for her. But for the average sow I would, for the first week after farrowing, give three quarts of bran to one quart of corn or oatmeal; for the next week, two quarts of bran to one of meal, and the third week equal parts of bran and meal.

"How much water," asked the Deacon, "and how much food per day?"

I would mix one pound of the bran and meal with four quarts of water, and cook thoroughly. This would give you food containing about as much water as fresh grass. Of this food the sow might have all she will drink. I have known my sows when suckling their pigs to drink, for the first six days, 40 quarts each a day; perhaps 30 quarts per day is about the average. If you have a little milk to give with it, or greasy slops from the house, so much the better.

Your object is to feed so as to enable the sow to give as much milk as possible. If the sow is inclined to fatten I should make the food still more sloppy, say five quarts of water to a mixture of meal and bran. The milk of such sows is apt to be so rich that the little pigs cannot digest it; it comes through them the color of milk. Diarrhea is sure to follow, and this is a serious injury. Warm and excessively sloppy food for the sow is the best preventive I know of.

The pens should be well ventilated and as clean as possible. I have usually chopped the straw for bedding by running it through a feed cutter. It will absorb more liquid than long straw, and there is, perhaps, less danger of the sow lying on the little pigs. But when the pigs are three or four days old there is comparatively little danger of the sow crushing them, and I am inclined to think that the long straw is better, as the pigs can cover themselves up in it. I need hardly say that barley straw should not be used, as the heads irritate the skin of the little pigs and will be likely to get into their eyes and cause some trouble.

## Feeding the Pigs.

When the pigs are two or three weeks old we usually feed them a little cooked meal and milk in a small trough. There are two ways of doing this. The sow may be let out of the pen for an hour or so, and then when the pigs are hungry feed them before letting in the sow. Another plan is to enclose or cover up the pen, and have some vertical slats wide enough apart to allow the little pigs to go through into the enclosure, when they can be fed separated from the sow.

I find that it is quite as easy to teach little pigs to drink milk when they are two or three days old as it is when they are two or three weeks old, and it is best to do so, even though you do not want to feed them. It may tax your patience and ingenuity to teach a little pig to drink, but it can be done. A few tablespoonfuls of new, warm milk three or four times a day is all that you will get them to drink at first.

Of course if you have plenty of skim-milk there is nothing so good for pigs. But if, as is my own case, you have few cows and many pigs, you can make a little milk go a great way by feeding it judiciously.

When pigs get to be a month old, and from that to four months old, it is quite an object to make them eat as much as they can digest. As a rule, well-bred pigs are capable of digesting and assimilating more food than they are disposed to eat; you want to stimulate the appetite. There are many ways of doing this, such as a little out-door exercise, especially on warm days; clean, well ventilated pens; clean troughs, and then by feeding first the food they like least.

In other words, give young pigs, say some cooked oat or cornmeal pudding, containing about 70 per cent. of water. Give just what they will eat up clean. Then give them some more of the cooked meal mixed with a little skimmed milk. In this way you can make a little milk go a long way. I keep 60 breeding sows and only ten cows, and by adopting the plan alluded to above we have milk enough to go round.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will hereafter be held on the second and fourth Tuesdays of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHARD,  
Master Golden Gate Grange, S. F.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Education for Farmers.

EDITORS PRESS:—Of the many practical and vital questions discussed in the interest of agriculture by our Granges, few, if any, are of more importance than education.

The Grange, with its teachings and discussions, has of itself proved to be a valuable educator.

### The Question of Education

Has received due attention in our representative bodies. It is made the duty of the Master of each Grange to look after the education of the children of his jurisdiction. The following words of the now noted Declaration of Purposes of the National Grange, made at St. Louis in February, 1874, give in brief the principles advocated by the hundreds of thousands of farmers now united in the Grange:

"We shall advance the cause of education among ourselves and for our children, by all just means within our power. We especially advocate for our agricultural and industrial colleges that practical agriculture, domestic science and all the arts which adorn the home, be taught in their courses of study."

It is a pleasure to inform your readers that the latter part of this last sentence was embodied in the drafting of that Declaration from the exact words of our present worthy State Superintendent of Public Instruction, in a letter received by the undersigned during that St. Louis session.

The National Grange at its last session in Chicago, devoted considerable time to the subject of education, especially in its relations to our colleges of agriculture and the mechanic arts in different States—the institutions built by the munificent grant of lands by Congress for the express purpose of improving agricultural and other industrial education among our people. A Committee on Education was appointed. On the ninth day of the session they made a valuable report. A general discussion took place on the question of

### "Agricultural Colleges"

The representatives of various States gave instructive summaries of results in applying the Government's funds, donated for industrial education in their States. Without requesting space for their entire report, I beg leave to copy from the journal the following resolutions adopted after that discussion:

WHEREAS, The proper education of our children is a matter of the greatest consequence to us as citizens; and

WHEREAS, The development of the sciences underlying agriculture, and the thorough instruction of our people in the best practical methods of cultivating, saving, and marketing their several products, is of the greatest importance to us as farmers; and

WHEREAS, The Congress of the United States did, in the year 1862, make a donation of lands for the founding of colleges for instruction in the science and practice of agriculture; therefore,

Resolved, That this Grange, the national head of the great organization of farmers, do appoint a standing committee of three members, to be composed of the Worthy Master and two members, to be called a

### Committee on Education,

Whose duty it shall be to inquire into the use made of the donations of Congress above named, in the several States, to enquire what colleges have been established under the said act; what donations have been made to said colleges, other than the donations of Congress, and what success they have attained in the prosecution of the work proposed for them in the law creating them and, in general, to look over the whole ground of agricultural education, and to report to this body at its next session, what has been done and what ought to be done.

### Read This.

The following resolution was also adopted: Resolved, That it is the sense of the National Grange, representing the great farming class in the United States, that the agricultural colleges ought to be under the exclusive control of the farmers of the country, and that it is evident, from the experience of the past, that these colleges ought to be, as far as possible, separate and distinct schools, where science, as applied to agriculture, may be taught to farmers' chil-

dren, fitting them for the high calling of farmers."

This action of the National Grange will, no doubt, be well sustained this year by suitable discussions and resolutions in our Subordinate Granges. Your columns already mention a discussion on

### Education in Golden Gate Grange

At their meeting, Tuesday evening, April 10th. It is hoped Prof. Hilgard, Dr. and Mrs. Carr, and possibly Prof. Joseph LeConte will attend. Those who can be present may expect an intellectual treat from all or some of the noted teachers above named.

The following day, April 11th, there will also be a meeting, in the same hall, of shareholders in the Fruit and Meat Shipping Company, to which more than \$200,000 of stock has already been subscribed. Any of our members who can make it convenient to be in San Francisco at that time and can attend these two meetings, will feel amply repaid. Come one, come all! The fortunate location of Golden Gate Grange enables members of our Order from different Granges to meet and discuss important questions oftener than we can in the annual session of our State Grange, and they can rest assured of a cordial welcome whenever they can attend its meetings. Having been at two such meetings during the past six weeks, I can vouch for these facts. J. W. A. W.  
March 28th, 1877.

### The Worthy Lecturer at Watsonville.

EDITORS PRESS:—Your true farmer's weekly, constant as the sun, reaches its varied and numerous readers to interest, instruct and make wiser and better its patrons, who as constantly are ever anxious to receive it and know what others are doing in the agricultural world.

So with the P. of H., who are now peculiarly alive to the new and more practical workings of the Order, ever on the alert to see and know if others are as busy as themselves in the rapid development of the now more real and genuine benefits attendant upon the special revival the Grange movement is everywhere undergoing.

By special invitation we visited Watsonville Grange on Saturday, the 17th proximo, where three new brothers and as many new sisters were added to their number; after which a harvest feast followed, such as Grangers alone know how to provide and in which the especial work of the sisterhood is most especially noticeable. The genuine fraternal feeling and the flow of matronly good cheer and social enjoyment spoke volumes for the future of the Order, engaging at once each and all in vying with each other to make both pleasant, interesting and instructive so regal a day.

After four hours having been occupied with business, initiations and the feast, the Worthy Master's gavel again called to order the Grange, now filled up with visitors—not Grangers—but invited to hear an address by the State Lecturer on the objects, aims and purposes of this really unique Order of Husbandmen. His address was listened to for one hour and three-quarters with the most profound attention, interrupted only by demonstrations of approbation of the salient points made on Grange history, Grange progress, the Grangers' new work in education, co-operation, finance, equal taxation, national currency, and to accomplish the whole of which the Matrons of the Order had a work, a duty and an interest equally great with the Patrons, and that they were as much if not more in earnest in the accomplishment of the same.

At no period in the past has the Grange movement promised so much as now. Never before was its practical aims, objects and purposes so well understood and so thoroughly desired and being worked for. Not only is this true with the Order of Grangers, but with the Order of the Sovereigns of Industry, whose objects to a great extent are one with the Grange, and between whom there must at no distant day be formed a strict alliance, as with their united powers they are destined to revolutionize our corrupt system of legislation and give to the producing and labor element equality before the law in all things. Being as they are seven-tenths the voting population and four-fifths of the tax-paying community, they will demand their God-given rights, immunities and equalities in all legislation and such a reform as to place labor on an equality with capital, and the acknowledgment that in labor mostly consists a nation's wealth, prosperity and success.

B. PILKINGTON, S. L.

Santa Cruz, March 19th, 1877.

### Election of Officers.

MERRITT GRANGE, No. 7, MASON VALLEY, NEVADA.—K. Cleaver M.; W. B. Sanders, O.; J. B. Gallagher, L.; J. J. Fox, S.; C. J. Martin, A. S.; H. M. Schooley, C.; W. H. Spragg, T.; J. D. Mickey, Sec'y; B. H. Reymest, G. K.; Mrs. Zine A. Cleaver, Ceres; Miss Annie Webster, Pomona; Miss Ella Webster, Flora; Miss Alice Spragg, L. A. S.

LECTURE AT TEMESCAL.—Prof. Hilgard writes us as follows: "I will take as my topic for the proposed lecture at Temescal on April 17th, evening, 'Soil Improvement and the Maintenance of Fertility,' a subject which, I think, it is none too soon to take seriously in hand even in California." We trust a full meeting will greet the Professor.

### Fruit and Meat Overland.

EDITORS PRESS:—I notice in your issue of the 24th inst. a report of a meeting at Grange headquarters to organize a company for the purpose of handling fruit and dressed meats by the refrigerator process. This is a move in the right direction, and, if carried out, will go far toward relieving the local markets for these important products. The fact is, our fruit product is entirely too much for our local markets, and, as for beef and mutton, there appears to be, comparatively speaking, no market at all for the live stock at present. The fruit growers recognized the great difficulty of disposing of their surplus last summer, when they organized the California Fruit Shipping Company and engaged in supplying the far Eastern markets with fresh California fruit in refrigerator cars. Should this business ever grow to the proportions that its importance would seem to merit, we shall hear no more of fruit rotting in the orchards, or being dumped in the bay from the wharves of this city for want of a market. It is the same way with fresh meat. Combinations exist to keep the retail meat market at a high, and, in fact, a ridiculous figure, when the cost of the animals is considered. But this does the stock raiser no good. With beef retailing from 10 to 25 cents, and mutton from six to 10 cents a pound, stock men have to sell their beeves at about four cents on foot, and their sheep net them less than one and one-half cents a pound alive. It is evident that something must be done if the stock raising industry is to continue even reasonably remunerative. The invention of refrigerator cars and the practical and successful test of their merits by the California Fruit Shipping Company last season, is destined to revolutionize the fresh meat market. As I understand it, it is proposed to kill the animals at the various railroad shipping points in the grazing districts of California and Nevada. The meat, having been properly dressed, is hung up in refrigerator houses, where, when the animal heat has been removed, it is ready for shipment. To my view this method has many conspicuous advantages. Any one who has ever seen a band of cattle arrive at the slaughter houses of San Francisco must have noticed the evidences of extreme hardship, hard driving, beating, lack of food and water, and general ill usage which the animals exhibited. Strictly speaking, such animals are unfit to kill for human food. By the refrigerator plan all this is avoided. The cattle being taken direct from the pasture are in the best possible condition, and the time taken for transportation by rail is just sufficient to fit the meat for the palate of an epicure. However, one of the greatest advantages of the refrigerator process to fruit and stock men is the fact that it guarantees them a market for the products of their time and labor which, except in a few isolated instances, cannot be found under the present condition of things. Had this scheme been in working order last winter, before the drouth became so disastrous, our sheep men might have shipped millions of pounds of mutton to the Eastern cities; thus realizing handsome returns, instead of seeing their sheep die, or killing them by thousands to get rid of them. An enterprise of this kind once established will effectually keep down overproduction of fruit and meat, and secure fair prices for the surplus.

We have found a market for most of our staple products, such as grain, wine, etc.; but for perishable commodities it is necessary to take something more than ordinary measures. That our fruit and stock men are alive to their interests is evidenced by their promptitude in taking stock to the amount of \$200,000 in the California Fruit and Meat Shipping Company, whose meeting was reported in the RURAL of the 24th inst. It is to be hoped that this grand project will be brought to a successful issue this season. Happily it has passed the experimental era—all that now remains is to put it into permanent practice. I would say in this connection that I have heard several dealers and other interested parties pooh, pooh! this new departure, but where it is for the manifest good of all concerned, it is as useless as it is impolitic for old timers to endeavor to prevent desirable innovations or to impede progress.

VAQUERO.

San Francisco, March 28th, 1877.

### Grange Progress.

All great reforms are of slow growth. People are slow to admit the necessity of reform and slower still in devising a remedy, and when they set about applying what they deem reform measures, time is necessary to develop the full idea, and to fit it to the exigencies of the occasion. Now, the necessity for some such Order as the Patrons of Husbandry has been recognized and felt for ages, and many have been the crude but earnest efforts of agriculturists to fashion out of the necessity and the material in hand something like the great farmers' combination which is popularly called the Grange of to-day.

The Grange of to-day is making but little noise in the world, but all who are close observers of its workings see that it is doing a better and healthier work now than it did in the earlier days of its history. It is slowly but surely

educating the farmer to the point of co-operating in those ways and by the only means by which that principle can do him, in its application, any real good. The over-sanguine—and perhaps this class contained the only element in the Order which would seek to obtain its ends by doubtful, or indeed unworthy means—are learning that the great farmers' Order must not displace or supersede any other legitimate object or honest purpose of society.

The Order is learning that its own true welfare and hope in the future is best secured and served by building up all other interests, by making all men purer and better, and by co-operating with any and every other influence which is calculated to lift the burden of misery, thriftlessness and despair from the shoulders of all "who labor and are heavy laden."

The farmers as a class are not selfish. Their daily intercourse with nature, their daily sacrifices, and indeed, their pursuit is all against the development of the quality of selfishness, and thus when they originate a protective society like the Grange it reaches out to and embraces all who are within reach of its beneficent scope. Indeed the Order is progressing in this way and its devoted men and benevolent women are reaping a two-fold reward, money and satisfaction in its better successes.—*Examiner and Patron.*

### From the Granges.

#### Tehichipa Grange, No. 214.

EDITORS PRESS:—As it has been some time since I wrote you, I thought I would give you a hint of what is and has been going on here. Our Grange is still alive and doing pretty well; as well as could be expected with times so hard. No rain has fallen, to speak of, and as we have no facilities for irrigation crops will be light.

Some excitement has been created by the reports of valuable mines having been discovered at Resting Springs, some 70 or 80 miles southeast of Death valley and about 140 miles from Mohave. Mr. Burke of San Francisco has purchased the steam saw-mill of Brite & Co., which was shut down some months ago owing to some difficulty with the United States Marshal. Mr. Burke has made arrangements that enable him to work the vast amount of timber near the mill, which he intends to start to sawing in a few weeks.

Sickness and death have visited us quite often lately. In December last we had the misfortune to lose one of our most zealous members and upright citizens, in the person of Bro. J. E. Williams, who died of pneumonia. Bro. Williams moved to this county while it was in its infancy and witnessed its growth and prosperity with a keen sense of gratification. He it was that built the first house in our village. His demise is deplored by all who knew him and his family have the sympathy of the entire community.

On the 2d inst. two horse thieves, who were being pursued by officers from Bakersfield, murdered in cold blood one of our esteemed brothers, Geo. Reeg, who was always known to be a quiet, peaceable citizen. The only motive that can be assigned to the perpetration of this heartless deed is robbery, as his house had been ransacked throughout.

Scarlet fever has visited our community with sad results. On the 12th inst. Bro. W. C. Wiggins lost two children and on the 16th a third from the malady. The family of Mr. Collins was attacked with it but, thanks to the skill of Dr. Bachman of Bakersfield, they are now out of danger. The members of this Grange offer to Bro. Wiggins their sincere sympathy in his bereavement. As we have no resident physician here we are in a poor condition to combat such a violent disease as the scarlet fever. Should this meet the eye of a good physician out of a location he will know where to go to do a practice of from \$2,500 to \$3,000 a year.

P. M. N.

#### Watsonville Grange.

EDITORS PRESS:—Not having noticed our names in the Grange directory list, I herewith present them: W. G. Hudson, Master; J. J. Roadhouse, Secretary.

J. J. R.

### In Memoriam.

SUISUN VALLEY AND ROCKVILLE GRANGE CONSOLIDATED, No. 9, Rockville, Solano county.

WHEREAS, The relentless hand of death has removed from our midst our beloved sister, EMMA C. ABERNATHIAIR, of Suisun valley, Solano county; Therefore

Resolved, That in the death of Sister ABERNATHIAIR this Grange has lost a worthy and efficient member, and her family has suffered an irreparable loss.

Resolved, That we tender her bereaved family our heartfelt sympathy in their deep affliction.

Resolved, That these resolutions be entered on the minutes of this Grange, a copy sent to her afflicted family, also published in the RURAL PRESS.—Committee: Mrs. C. M. Baldwin, Mrs. M. Hatch, Mrs. O. Tisdale.

LODI GRANGE, No. 92, San Joaquin county.

WHEREAS, It has pleased Almighty God to remove from our midst, DELLA R. LELU A., and BERTIE A., only children of Brother and Sister Andrew J. Nelson, therefore,

Resolved, That we as members of Lodi Grange, and dear friends, tender our sincere and heartfelt sympathy to our well-beloved Brother and Sister, in this, their great bereavement.

Resolved, That a copy of these resolutions be sent to the family, also, be placed upon the records of the Grange, and a copy forwarded to the RURAL PRESS for publication.—Committee: Mrs. A. T. Ayres, Mrs. C. P. Affison, Mrs. Eva S. Morse.



## AGRICULTURAL NOTES.

## California.

## AMADOR.

**NOVEL RECLAMATION.**—*Ledger*: Thomas Jones, of Jackson, has about an acre of made land on the margin of Jackson creek. It formerly constituted a part of the bed of the stream, but by building a stone wall he contrived to confine the water to narrower limits, and rescued the acre for cultivation. By allowing the creek to flow over it occasionally, it became covered to a considerable depth with the rich alluvial soil from the gravel mines, held in solution by the waters. Two years ago he planted this patch with alfalfa. Its productiveness is a matter of astonishment to all. There is, perhaps, not another piece of land in the county so prolific in its yield. Five crops are gathered every season; each crop making upwards of two tons of the finest hay. Encouraged by this result, Mr. Jones is now redeeming three or four acres more in a similar fashion.

## COLUSA.

**CROP PROSPECTS—THE MILDEW.**—*Sun*, March 24: We cannot say that we are pleased with the crop prospects at this writing. The grain is further advanced than ever known before in this county. Club wheat was the latest variety, heading out in many places before the middle of March. The summer-fallow looked splendid, and before the discovery of mildew, mentioned in the *Sun* last week, the prospects were never better. Some of the early winter sowed grain is looking well, but even that is being attacked by the mildew, from Cache creek to Stony creek, and we have no doubt but that it extends north and south of these points. A week ago we could not hear of it along the river, but we have set men to looking for it everywhere, and we find that it is gradually showing itself along the river lands where winter sowing predominates. The worst we have seen, or, in fact, the worst we have heard of, is along Cortina creek, beyond Williams. There the wheat, in spots, is dying, and proves that it will kill. While it exists in the upper end of the county, it is not as bad there as in the lower end, and in Yolo county. We think it will not necessarily kill the wheat, and the extent of the damage will depend upon the character of the weather we have in the next fortnight. We are just, as it were, on the turning point now. This county may have four millions of bushels surplus, or it may have very little. It tried to rain Wednesday, but there was not enough fell to make a measurement.

## CONTRA COSTA.

**CROPS.**—*Gazette*, March 24: The crop prospects in all the western section of our county were never finer than now, though we can't feel entire confidence that the present promise can be fully realized on the small measure of rain we have had this season. It is to be remembered, however, that none of our rains have fallen faster than the earth could take them. There has been no waste, and the condition of the ground is more favorable than in any previous season for retaining the store it has taken in for service of the plants.

## FRESNO.

**SHEEP.**—*Republican*, March 24: Sheep are being sheared throughout the county as rapidly as men can be obtained to do the work. The majority of the bands are sheared late in the fall and now have less than six months' fleeces, which are shorter than usual on account of dry weather and poor feed. At White's bridge about 40 men are shearing 2,000 sheep a day. The bands leave immediately after shearing for either the Coast range or the Sierra Nevadas. At Mr. Dusy's place between here and Kingsburg, forty Chinamen are shearing about the same number as at White's. Besides, those who are prepared to shear at their own camps are doing so, and preparing to go into the mountains. The majority of sheep owners intend to drive directly across the mountains into Nevada to remain during the next winter and return to California only after grass grows again. Up to the present time the loss of sheep in this county has not been very great except in a few bands that were poor in the fall. Wool, however, is very short, many bands are getting poor, and the loss must be considerable before the snow melts sufficiently to let stock into the mountains. Wool is very low, mutton is not salable, there is no feed on the plains, sheep cannot be sold at any price, and labor is as high as in flush times. The outlook for stock men is anything but flattering, and it is not surprising that many find it difficult to pay the taxes now being levied upon sheep. Mr. Whitlock, Deputy Assessor, we are told, has several bands of sheep attached for taxes, on the west side of the slough, the owners declaring their inability to pay. There can scarcely be said to be a value to sheep now, and if the Assessor can have any discretion in the matter the assessment should be much less than last year. A year like the present comes but once in a decade, and those who can fight through this season may reasonably hope for better returns in the sheep business. Even the tax gatherer should be lenient with the sheep men this season.

## HUMBOLDT.

**POTATO CROP.**—*Times*, March 15: While the farmers in this county have been unfortunate with respect to their last season's potato crop, they look forward to that which they are now entering with encouragement. On every hand and from all parts of the county we hear but

the one report, that never before at this time of the year, have the crops thus far put in looked so well, or given such flattering promise of such bountiful harvests as now. A much greater acreage of the small grains has been planted than in former years, and from what we can learn, there has been a wider departure from the practice that has obtained of depending upon a single or perhaps two articles. This is certainly the more prudent course, for if one fails another may prove remunerative, and save cost of a season's labor.

## KERN.

**EDITORS PRESS:**—I would rather see more actual facts given in relation to the state of things as they are, in this and the more southern and western portions of this State. The truth is told when we say that most stock of all kinds are being starved to death, and the owners too, many absolutely ruined by this universal 12 months' drouth. We have letters from near El Paso Robles springs stating that the mortality, or starvation, has reduced some flocks one-half, and they don't know what to do to save the balance. The same or similar accounts come up from San Diego county. Here, in Kern county, many once valuable flocks are starving. Several thousand head have changed hands since shearing at 25 cents per head, and stout wethers by the thousand are shorn and sold at 50 cents and less. I can now see, on the lookout from this window, 4,500 old wethers passing along the highway, that were fattened for market this past winter on alfalfa hay, with grain, and disposed of last week to S. F. butchers. The whole lot went at 50 cents each. Can the Kern county assessor estimate common lots this spring at two dollars each on his assessment books to be taxed?

Very little snow in the mountains and cold water will command ready cash this season. Fruit-bearing trees look promising and all crops that have had plenty irrigating showers from the side ditches. Livermore & Co. have commenced a 40-foot ditch, which leads from Kern river past Summer station. May success reward this laudable enterprise.—S. W. JEWETT, Bakersfield, California.

## LOS ANGELES.

**THEN AND NOW.**—*Herald*, March 24: There is a movement all along the line among our sheep men. "Fresh fields and pastures new" are the universal demands of the hour, and they are being sought for with an eagerness and energy which ought to be rewarded with success. Common breeds of sheep are doomed; but, while this will result in temporary distress, the ultimate effect will be beneficial. Poor sheep no longer pay in Los Angeles county. When the fleeces brought here from 17 to 20 cents a pound, they paid handsomely. At 10 cents a pound for wool there is nothing in sheep. We can carry our fine grade sheep through very well, and we can save all our cattle. Away back in 1863-64 the county was literally covered with cattle. Nothing was inclosed. When the grass was all eaten up on the mesas and ordinary pastures the famished cattle, dying by the thousands, could not be kept out of the moist pastures about the Monte and other places, and the grass was soon eaten up. The numbers of cattle which perished that year was astonishing. Don Abel Stearns and Mr. John Temple each lost 30,000 head. Other rancheros lost in proportion. The bones of the dead animals cumbered the ground. Nothing of that kind will occur this year. We have immense inclosed pastures and we have a good stock of hay. Both together are amply sufficient to preserve the cattle and the finer sheep.

## MONTEREY.

**GOING TO BRAVE IT THROUGH.**—*Salinas Index*, March 24: So far as our own locality is concerned, people are here and they must eat, drink and wear clothes; consequently business will go on as usual, although, of course, money will be tighter and scarcer for the time being than with the prospect of a good crop ahead. Be not discouraged; a few months will tide us over the worst of it, and then people will be rustling to put in another crop, which will be doubly abundant as the result of a season's rest for land.

## SACRAMENTO.

**PROSPECTS.**—*Folsom Telegraph*, March 24: The prospect for a year of plenty in this section was never better. The young grain that is now seen covering acres of land in every direction, looks thrifty and advances in growth with a rapidity that gives promise of a sure crop even should there be but little more rain. The farmer with the present prospect of fair prices for the coming harvest, feels far more comfortable than through the late drouth. The effects of the late drouth that is so much complained of in the south-western portion of the State, will not be so severely felt should other parts afford a fair supply of what is needed. Fruit will be plenty, the season having advanced beyond the period when frost can effect it. Herds of cattle and sheep are thriving upon the bountiful supply of grass now afforded them, while numberless young calves and lambs will bring future profit to the stock raiser. Bountiful nature supplies with no niggard hand the beautiful State in which we live, all that is requisite for the comfort of the prudent and industrious.

## SAN BENITO.

**NO CROPS THIS YEAR.**—*Hollister Enterprise*, March 24: That we are to have no crops of grain in this section this year, is now a question concerning which there can be no dispute. We are brought face to face with the stern reality, and no amount of puffing or bolstering will

change the decree. Except on a few spots in the vicinity of San Juan and San Felipe, there will not be a head of grain or spear of hay raised in the county, and these spots are exceedingly limited. The young grain and vegetation, which the light showers of the season have brought to the surface, are fast withering for lack of moisture in the ground, and in three weeks the whole face of the country will be as brown as a berry. The season has too far advanced to hope for rain enough to do any material good, and the people had as well make up their minds that home-produced bread this season may be ranked with the improbabilities. Some of the farmers have feed enough to keep their stock, and those who have not feed are generally sending their horses and cattle north, or to the mountains. The most of the sheep ranges are still holding out, but very few of them will be able to carry the animals through in any kind of condition.

## SAN JOAQUIN.

**TAKING CATTLE TO THE TULE.**—The proprietors of the tug *Frolic* and barges *Commerce* and *Excelsior*, have a contract to transport 15,000 head of cattle for Miller & Lux from Stockton to the tule lands. Messrs. Miller & Lux have leased land on the different islands of the San Joaquin delta, and their cattle are now being driven from their lands in Merced, Fresno and Tulare counties to this place.

**NAVIGATION.**—The navigation of the upper San Joaquin river the coming season promises to be of very short duration, and indeed, from present indications, it may not be possible for boats to ascend the river at all. The snowfall in the mountains is said to be less than usual and the warm weather coming so much earlier than usual is likely to dissipate it gradually, sending the water to the sea without making a very perceptible rise in the streams. In ordinary seasons the boats would have been running before this on the flood from the rainfall alone. Captain Hamilton's steamer *Clara Belle* and barges *Merced*, *Stanislaus* and *Grayson*, are tied up in port awaiting an opportunity to ascend the river for the merchandise awaiting river transportation. They have been thoroughly repaired and are looking as good as new in their shining coats of white paint.

## SANTA BARBARA.

**EDITORS PRESS:**—Unless we get rain soon, much of the grain sown will be a failure. We will have to depend on our corn crop mostly for stock feed. There is time yet for plenty of rain, and we hope it will come.—O. N. C., Carpinteria.

## SANTA CRUZ.

**BEETS ON THE PAJARO.**—The Santa Cruz beet sugar mill owners have made arrangements with many of the farmers of Pajaro to raise beets on their land, and, from appearances, the amount of sugar to be made this season will outstrip that of any previous year.

**GRAIN WAIST HIGH.**—*Courier*, March 24: Along the coast road to Pescadero grain is waist high, and a large part of it is fully headed out. Having been all over the country in the last week we can say the coast section is far ahead of any other part. Only a small part of the land up that way is under cultivation, the rest being left in its wild state and consigned to pasture ground for the immense herds of cows belonging to the numerous dairies. Some dairy-men neglect to sow alfalfa or some similar evergreen feed, or their stock might fare better during the latter part of summer and just before the rains. The fogs and moisture from the ocean would keep such feed in splendid condition the year through.

## SONOMA.

**EARLY TOMATOES.**—*Russian River Flag*, March 22: John Flack, of Magnolia farm, informs us that he has tomato plants now in blossom, and had he not retarded their growth, could have had plenty of young tomatoes. The course pursued by him to insure tomatoes from six weeks to two months earlier than by the ordinary method is to examine his vines late in the fall, and when they rest on the ground and have thrown out roots (such instances are plenty), he cuts out a section of the vine containing a sprout (which always starts on the upper side of the vine). When the rooting process commences, he plants the cuttings in boxes and places them on the south side of some building or close fence, where they can be easily protected by some slight covering at night until all danger from frost is over. The plants are then transferred to the open ground without perceptibly checking their growth.

**FRUIT, ETC.**—The almond trees are laden with nuts, so far advanced as to be out of danger from frost; peaches are set with favorable indications for an abundant crop; pears, plums and prunes are in blossom, buds on the grapevines are just bursting into leaf, oaks are in full leaf, strawberries in the market at 25 cents per box, the whole city embowered in roses and scores of other flowers to attest that spring has come to tarry with us.

## SUTTER.

**SHIPMENTS OF WHEAT.**—*Banner*, March 24: As Sutter county has been persistently ignored in reports of crops and other produce of an agricultural nature by papers of the coast, which in the meantime are filled with reports of the same nature from other sections, no better entitled to notice than we are, we desire to call attention to the following facts and figures as furnished us by the firm of Wilcoxon & Co., of Yolo City, who have dealt in wheat the past season, as the sum of their transaction. Commencing to buy on the 29th of July, 1876, their purchases

ended on the 5th day of the present month. In that time they bought 133,320 sacks, or the enormous total of 8,640 tons of wheat, at prices ranging from \$1.10 to \$2.07½ per cental. All this grain was bought of Sutter county farmers, raised on land in this county. It may be interesting to our readers to know at what time the highest figure was reached. According to the record kept by the gentlemen the highest figure paid was only given during the five days between December 25th and January 5th. This grain was principally shipped from Yuba City and Feather river landings, small lots only being taken from the Sacramento side by boats, and from Gridley by rail. These shipments are all outside of those stored at the Farmers' Union warehouse, a matter of 5,000 tons, and also of numerous large lots that found their way to market through other hands.

**THE LOWER END.**—A trip during the early part of the week, down the river nearly to Nicolaus, and back again by the way of the Slough road, discloses the fact that everything is in a prosperous and flourishing condition. We never saw finer looking grain than is to be found between the two rivers, and not only in one or two places, but we did not see a single field, either winter sown or summer fallow, that was not in a condition to gladden the heart of its owner. Unless something should occur between this and harvest to prevent, the crops this year will be as abundant as any former season, if not more so. Fruit, too, is abundant and forward, and we anticipate a superabundant harvest of all kinds.

## TULARE.

**DAMS TORN AWAY.**—*Delta*, March 24: On Monday last about 100 men, representing ditches that take their water out of the St. John's, or main Kaweah, went up the stream and tore out the dams. The first one torn out was the wing dam, kept up some time by the People's Consolidated Ditch Company, and at the present time, it is said, kept in repair and strengthened by what is termed the "Long Cut" Company; the second one destroyed was at the head of the old Bostwick cut, which had not been used for several years; the third, a wing dam, at the head of what is known as the Ketchum ditch; the fourth, a wing dam, at the head of Crossmore ditch, and the head gate shut down; fifth, wing dam at the Ray ditch cut in various places; sixth, Fowler & Maples's dam at Sand slough; seventh, upper Elbow dam, owned by Meadows, Fisher & Co. The parties owning other dams on the St. John's tore them out themselves, or promised to do so. Some of our stock owners who are not possessed of range of their own, are offering 50 cents a head per month for the care of them till October. Parties are now in the mountains in search of range, with a view of taking charge of some of this stock.

## VENTURA.

**FOGS.**—*Free Press*, March 24: The heavy fogs of the past ten days have been of incalculable advantage to the growing crops. The blades of grain in the mornings are found to be dripping with moisture, to such an extent that some of the needful fluid runs down and moistens the ground. As usual, it will turn out that the bad accounts of crops were much exaggerated. The fogs, however, have not reached either the Ojai or Conejo valley.

**ITEMS.**—*Free Press*, March 17: The "sober second thought" is convincing most of our farmers that they are not nearly so badly off as they thought they were. Sheriff Stone, who rides around a good deal, says he has more than once seen the crops looking worse than they are now, and yet a fair return was received for seed and labor. With the ditches all running full, a great deal of grain can be raised in this valley. The work of clearing out old ditches and excavating new ones for irrigating purposes, is being actively prosecuted in different parts of the county, and none too soon either. All the available Chinamen have been employed, and the farmers themselves are all busy—such of them at least as can get water to their land. By this means a large amount of grain will be raised in the valley of the Santa Clara. But it would have been better if the work had been done a month ago. One result of a dry season will be to more fully develop the latent water resources of this county. We are informed that several wells will be sunk for artesian water east of the Santa Clara river during the summer. Mr. George Recde was in town on Monday to procure pipe for a well to be commenced immediately near Hueneme. Sinking for artesian water is a certainty in that section, as no one, we believe, has ever yet failed to obtain a good supply of water who has put down a well. The Matanza, at Hueneme, commenced work on Tuesday last, and is now steadily working up the *boregas*. One man, Mr. William Buttner, killed and dressed 87 head of sheep in seven and a half hours—rather lively work.

## YOLO.

**BEAUTIFUL PROSPECT.**—*Mail*, March 24: Passing along the way on a visit up the canyon last week, we took in all the evidence of thrift on the way. We saw some beautiful fields of wheat on either side of the road, but were especially attracted to one or two fields just at the hills six miles west. The wheat we mention is on the Huntley and Gibson ranches, and there is a large area of it—all summer-fallow. It stands between two and three feet high, looks very thick on the ground and thrifty, and is just beginning to head out. On up the valley we noticed everything still and the scenery lovely; wheat looking well, and everybody busy.





### The Troublesome Misses.

Mis(s) Take was a kind-looking lass,  
But her errors were grievous, indeed,  
So I in despair left her side,  
To seek a true friend in my need.

Mis(s) Fortune now reached me her hand,  
But ne'er from a trouble would save;  
For her heart is as hard as a stone,  
And as cruel and cold as the grave.

Mis(s) Lead soon came to my side,  
And I begged her to show me the way;  
Brightly smiling, "with pleasure," she said,  
But the jade only led me astray.

Mis(s) Rule proved a very poor friend,  
Her conduct almost drove me wild;  
I was glad to escape from her power,  
And I pity her ill-managed child.

Mis(s) Spend would soon beggar one quite,  
Though one's purse was as deep as the sea;  
So I quietly told her one night,  
I prefer'd she would not advise me.

Mis(s) State, oh! beware of the maid,  
She was false in the days of her youth;  
Since then, not much wiser has grown,  
She has little regard for the truth.

Mis(s) Use never treated me well,  
No joy in her presence you'll find;  
Forever her purpose is wrong,  
And her nature is hard and unkind.

Mis(s) Trust ever walks in a cloud  
Of blinding suspicion and doubt;  
And in spite of all efforts employed,  
None can ever her settled thoughts rout.

Mis(s) Print I have met on my way,  
And oft she has troubled me sore;  
Now, to her a kind word I will say,  
And hope she will do no more.

### Did Rosy Propose?

"Rosy, is Mr. Weaver in earnest?"  
"Don't know. I'm not."

She didn't mean to be actually impertinent, this Rose Goldey. That was her usual way of speaking. A snap-short way it was, too, thoroughly in keeping with her quick decisive movements, close-cut hair, bird-like glance, and little round red mouth. A month that could make "no" the crispest and "yes" the sweetest of mortal words.

"Rosy, don't be rash," replied Aunt Clarissa, following up a preconceived purpose. "It strikes me he is in earnest, in dead earnest too. If ever you intend freeing yourself from the attentions of a man too cowardly or too cold to declare himself, now is your opportunity."

"Auntie, Rothwick Le Brunt loves me. I'm as sure of it as if he'd told me 20 times over."

"Why does he not tell you, then? How dare he presume to dally around year after year, without explaining his intentions?"

"That's a question I never dreamed of asking him."

"If your father was living depend upon it he would ask him. I've been endeavoring this six months to persuade your mother to take that step, but she persistently refuses." Mrs. Goldey, sitting by sewing, indicated a faint negative with her bent head. "If you, Rosy, can't contrive to make him speak out, he'll go on precisely the same, three, maybe 12 years longer."

"I contrive to make him speak out!"  
The heartsome red flashing out on Rosy's cheeks made Aunt Clarissa's tingle, still she was not to be deterred.

"Certainly. With proper management you could bring about a declaration without exciting the slightest suspicion on his part that it did not originate with himself."

"I maneuver to catch a husband! Aunt Clarissa, I'm both angry and ashamed."

Rose's face was like a forest on fire, as she turned swiftly and sought her favorite nook in the bay window.

"Don't fly off, Rosy-posy. Many a good, modest, sensible girl as ever breathed has extended a helping hand to a bashful suitor without in the least degree compromising her dignity or self-respect. You have sufficient tact and delicacy to do the same. I like Rothwick Le Brunt very much indeed. If he perseveres in his determination never to quit business for the purpose of dabbling in colors, neither your mother nor myself could desire a better match, yet he delays, and delays are dangerous, Rosa."

"He seldom delays his semi-weekly visits, any way," answered Rose from her window-perch. "Here he comes, with a new picture under his arm."

Sure enough, the painting was new, and, although the artist was not a professional, well calculated to create a sensation wherever it went. Mrs. Goldey and Aunt Clarissa fell into transports on the shortest of notices, never observing that Rosy stood apart holding no share in the "ohs" and "ahs" pelting like hail about her. Her young heart throbbed hard and heavily, painfully conscious that art was Rothwick's only acknowledged love, and that every square of canvas over which he fondly labored, hung like a dark curtain between it and happiness. She was not to be told, but the picture was intended for a birthday present, yet there she stood, hotly jealous of that bit of summer's glory hedged

with trees and crowned with fleecy cloud and sky.

"Step nearer, Rose, there's a good light on it here; no, that's better. Mother says this is the best yet, and Rilla declares it a perfect gem. Now we have the exact position required to bring out every point. Come around, Mrs. Goldey and Mrs. Leach, examine it in this light. I thought of you when I dropped in the wild roses," with an eloquent glance at the younger lady. "Rose, rose, what's that about wood-roses, Mrs. Leach?"

"I don't remember exactly," answered Aunt Clarissa, lowering her eyes lest they should meet a lightning stroke from her niece's, "but of one thing I'm certain, the poet expresses a very special desire to make the rose his own."

"Of course. Rose, you're not altogether satisfied. I was in great hopes you'd like this little summer landscape."

Like it! She was enraptured with that sweet entanglement of rock and branch, fern and flower, around a waveless lake; still, the old resentment strong upon her, she refused to acknowledge it, even to herself.

"I'd rather see a road looking as though it led somewhere," she answered, turning to the piano, and fluttering the chords as if to wing picture and artist out of sight and mind.

It was a difficult matter for Rothwick Le Brunt to break that Sabbath stillness with a road leading somewhere, yet he did it. A rough, sparsely-traveled wagon road skirted the lake on the left, and buried itself in overhanging rock and vine, as if ashamed of having got there and intent upon hurrying out of sight as fast as possible. It was one of the prettiest things Le Brunt ever painted, his masterpiece, in fact, yet Rose gave it a second careless inspection, and remarked, coldly: "A landscape without a human figure is like a book without words—emptiness."

"Rilla, you know how I toiled over that picture; it cut me to the heart to have her say anything like that."

"Never mind," replied Rilla Le Brunt, cheerily. "Do you know, I've more than half a fancy she's desperately jealous of your paints and brushes?"

"Rosy Goldey jealous of my paints and brushes? How absurd! What reason has she for imagining for a moment that I think more of all my colors put together than I do of the tiniest lock of hair on her darling head?"

"Have you ever told her you loved her?"

"Why, no," and the great honest eyes opened in wide surprise. "What's the use? She knows it."

"How?"

"I haven't paid her the closest attention these three years?"

"And left her in the dark as to your intentions. Roth, I was afraid of this. You're doing wrong. No wonder poor, little kitteny Rose scratches—"

A summons from junior members of the family took Rilla away and left Roth to work in the human figure, and work out the problem of his position.

That picturesque girl-figure sitting by the roadside was Rosy's own. She recognized it on the instant; knew well that jaunty hat with its clover wreath, that plum-purple dress, and the gray shawl with scarlet fringes trailing over those sun-kissed rocks. She knew, also, that Roth was bent on pleasing her, and she determined not to be pleased.

"If the picture suits me I may take it out in pictures," she thought; then, seizing on the first objection that presented, said: "Ma, give me a pencil, I want to write under it 'Alone and from home.' There's not even the peak of a chimney in the distance, or a curl of smoke to prove that this solitary old lady has a roof to shelter her."

"The kitten's claws again," reflected Rothwick, and never winced.

"Rose Goldey, I am absolutely ashamed of you!" "After all Roth's kindness, too," exclaimed Aunt Clarissa, warmly. "Old lady indeed! It's yourself, you ungrateful child, and you're in a perfect paradise."

"Paradise wasn't made for one," answered Rosy, and could have bitten her tongue off the next moment.

"Rosy, you're right," spoke up Rothwick, manfully. "Paradise certainly never was made for one. There were two in it to begin with. Suppose, now, I paint a cottage just where this road loses itself, and suppose I wait you there, will you rise and come? Say, Rosy, rose of my heart, will you come to brighten my hearth and my home?"

Mrs. Goldey overturned the piano-stool, while Aunt Clarissa made the sewing machine fairly dance, and Rosy's answer came under cover of a rumble and clatter like the fire of mimic musketry. From what happened afterward, I infer it was satisfactory to all concerned.

It was Rose Goldey's nineteenth birthday. The picture, restored to its original form and color, a tangle of sky, forest, fern, lake and flower, hung against her chamber wall. Aunt Clarissa had just added a pair of scarlet tassels, and Mrs. Goldey stood back to survey the effect.

"Don't ever whisper it," said Mrs. Leach, scarcely above her breath, "she'd be shocked beyond measure; but, didn't you notice, Rosy proposed after all?"

Did she?—*Arthur's Home Magazine.*

CELERY is good for the nerves, but salary is better.

### Good Manners Necessary to True Success.

It is the bearing of a man towards his fellows which oftentimes, more than any other circumstance, promotes or obstructs his advancement in life. Among the many good qualities of mind and heart absolutely necessary for a merchant to insure worldly success, there is no one the importance of which is more real, yet which at this day is so generally underrated by many of our business men, clerks and salesmen, as courtesy—that feeling of kindness, dignity, and love for our fellows which expresses itself in pleasing manners. It is an undeniable fact that many of us are unfortunate in not being the happy possessors by nature of this desirable and charming quality, good manners. For all such it is an imperative duty to study, to cultivate, and improve themselves in this qualification, by keeping a vigilant and watchful care over all their actions and transactions in every-day life with their fellow-beings. History is crowded with examples showing that, as in literature, it is the delicate, indefinable charm of style, not the thought, which makes a work immortal.

Emerson says: "Give a boy address and accomplishments, and you give him the mastery of palaces and fortunes wherever he goes; he has not the trouble of earning or owning them; they solicit him to enter and possess. Among strangers, a good manner is the best letter of recommendation, for a great deal depends upon first impressions, and these are favorable or unfavorable according to a man's bearing, as he is polite or awkward, shy or self-possessed. Manners, in fact, are minor morals, and a rude man is generally assumed to be a bad man."

Lord Chesterfield wrote to his son, "You had better return a dropped fan genteelly than give a thousand pounds awkwardly; and you had better refuse a favor gracefully than grant it clumsily. All your Greek can never advance you from Secretary to Envoy, or from Envoy to Ambassador, but your address, your air, your manner, if good, may."

When we come to look into the history, past and present, of some of our best and most successful business men of the present day, we find that nine out of ten are men of pleasing manners, and that they owe in a great measure their success in life to this important trait of character, for by it they have made friends and customers, though they may not have had a dollar of capital to commence life with. Their good manners and pleasing address made capital for them, or brought it to them. As Chesterfield said of the Duke of Marlborough, "his charming manner often changed an enemy into a friend, and to be denied a favor by him was more pleasing than to receive one from another man."

A true gentleman is recognized by his regard for the rights and feelings of others, even in matters the most trivial. In society he is quiet, unobtrusive, putting on no airs, nor hinting by word or manner that he deems himself better, wiser, or richer than any one about him. He is never "stuck up," nor looks down upon others because they have not titles, honors, or social position equal to his own. He prefers to act rather than to talk, to be rather than to seem; is distinguished by his quick perception of and prompt attention to those little things that may cause pleasure or pain to others. Honesty of purpose, frankness and cordiality mark all his intercourse with his fellows, and however high his station, the humblest man feels instantly at ease in his presence. Almost every man can recall cases within his knowledge where pleasing manners have made the fortunes of lawyers, doctors, divines, merchants, and, in short, men in every walk of life.

THE LADIES OF THE WHITE HOUSE.—The New York Tribune says: The present is an era of kindly sentiment, and, as one token of it, we are happy to observe in more than one journal pleasant notices of the late lady of the White House. Mrs. Grant seems to retire from a position of considerable responsibility with the best wishes of all who know her. Undoubtedly she is not sorry to go. As a good housewife she has not probably found the Executive Mansion a very convenient place of abode. All reports concur in representing that renowned edifice to be in a condition somewhat dilapidated and actually verging on the shabby. In fact for eight years Mrs. Grant has had no house of her own, and has really been at the head of a large office maintained for the use and benefit of the American people. The modest little structure which she left at Galena was doubtless far pleasanter and in a great deal better repair. We are inclined to believe that Mrs. Hayes will also think with some regret of her snug, elegant and commodious Ohio home, as the auction advertisements say, "with all the modern improvements." We know at least from her correspondence that such was the homesick feeling of Mrs. John Adams, who was always longing for the old fashioned residence, half villa and half farm house, which she had left in Massachusetts. We think it creditable to the character of American women, and an evidence of their tact and ability gracefully to adapt themselves to circumstances, that no President's wife has shown any particular incapacity for the position through want of good breeding and dignified manners.

A PHILOSOPHER who went to a church where the people came in late said, it was "the fashion there for nobody to go till everybody got there."

Do not forget that while you fold your hands time folds not his wings.

### Washington's Dinner.

Twenty to twenty-five years ago it was our pleasure to visit at times an old homestead in Rhode Island, where lived in the household an old lady, since passed away at the ripe age of nearly 100 years. She took great pleasure in relating events in the early history of this country. Her father kept for many years a country tavern in Rhode Island. At one time word came to them that Gen. Washington and his officers would arrive there on a given day and dine with them. They began immediately to make preparations to receive their distinguished visitors, and all were determined that the dinner should be the very best which could be provided. Game and delicacies in great variety were obtained, without regard to trouble or expense. The day arrived, and Washington and his officers reached the tavern at the expected time. At the appointed hour for dinner the distinguished guests were invited into the dining-room, where their eyes fell upon tables loaded down and presenting, as the family all confidently felt, a most appetizing appearance. Washington and his officers were seated, members of the family were in attendance to wait upon them in the most polite and attentive manner. But great was their disappointment when Washington turned his head and spoke to her mother, and asked the question: "Have you plenty of milk in the house?" Upon receiving an affirmative answer, he then said: "If you can, I wish you would give me a bowl of hasty-pudding and milk." The hasty-pudding and milk were furnished, and of these he made his entire dinner. After dinner was over, one of the family, in their disappointment, said to Washington: "Your work is so hard, we should suppose you would need something more hearty than hasty-pudding and milk for your dinner." Immediately placing his hand upon his head, he replied: "Here is my work."—*Boston Transcript.*

### Mother Goose.

Dear old Mother Goose! Which of us have not enjoyed her melodies? It seems she was not a myth, but a real woman, mother of six and stepmother of ten children. She wrote, and no wonder—

There was an old woman who lived in a shoe,  
She had so many children that she didn't know what to do.

The Rev. J. M. Manning, of Boston, told the Sunday school of the Old South church, on Christmas day, that she had once been a member of that communion. Her maiden name was Elizabeth Foster, and she married Mr. Isaac Goose. She lived to be 92 years old. One of her daughters married Thomas Fleet, a printer, who lived in Pudding lane. This gentleman wrote down the rhymes and songs he heard his mother-in-law sing as she stepped briskly to and fro about her work, and after awhile he printed them in a little book which bore this title: "Songs for the Nursery; or, Mother Goose's Melodies for Children. Printed by T. Fleet, at his Printing House, Pudding Lane, 1799.—Price, two coppers."

Mother Goose! Dear old friend! How little you knew how many dimpled faces would laugh over your songs! Blessings on your memory!—*Christian at Work.*

WOMEN AS BULL FIGHTERS.—After the season of the principal bull fights is over, a second series is inaugurated in Madrid, and in this stout young Amazons take the place of the hardy brutes who usually play the matadors. These heroines bind up their abundant hair with long ribbons, and around their bodies wear a wicker bottomless barrel, which protects them against the more furious assaults of the tormented animals. These women, when dancing before the bulls and inciting them to combat, look more like turtles walking on their hind legs than human beings. They are frequently thrown high in the air, and now and then come crashing in their osier barrel down upon the spectators. The animals chosen for this minor series of combats are ordinarily young, and their human tormentors avoid killing them if possible. The rings are frequently invaded by crowds of amateurs, who are provided with long flexible poles by the aid of which they leap over the backs of the maddened bulls that rush at them. A few years since, children were introduced in the rings in combat with bull calves, in which the poor, little, misguided human creatures were sometimes crippled for life by the calves, whose play was too rough for them.—*Lippincott's Monthly.*

TRIBUTE TO MRS. POLK.—The widow of President James K. Polk has just been formally called upon in Nashville by the Tennessee Legislature, which adjourned for that purpose. This is a ceremony which each Legislature goes through. J. F. Stokes made, on the part of the Legislature, this speech to Mrs. Polk: "We thank you for granting us this desired pleasure. We cherish with patriotic ardor the virtues and fame of the distinguished man with whom your life is so tenderly linked. The memory of him is a rich heritage to us and those who come after us. But we beg you not to think this simply a visit of formal courtesy. While we honor the memory of that illustrious statesman, we also regard with deepest reverence the companion of his greatness, and desire to know personally a lady of such excellent worth. We cherish you as one in whom womanly worth and rare graces find bright expression, to be honored and admired by all who know you." One of the lady's neighbors responded for her.



### The Earth Drying Up.

One of the most curious and we believe well substantiated inferences, drawn by those geologists who have devoted attention to the chemical metamorphoses which the rocks composing the crust of the earth are subjected to, says the *Polytechnic Review*, is the conclusion that the earth is gradually losing its water, or drying up. It is generally assumed that the evaporation of the water from the surfaces of our oceans, lakes, rivers, etc., is practically balanced by the various forms of precipitation, rain, snow, hail, etc., from the clouds, by which it finds its way again to the earth. This is strictly true in the sense that not a particle of water passes beyond the limits of our atmosphere, and all that finds its way into the atmosphere by evaporation sooner or later is returned again. Nevertheless, the water supply of our earth is slowly but steadily diminishing. It is not destroyed, but is so modified as to be no longer available for the sustenance of animal or vegetable life; since it is absorbed and bound up in the rocks. This disappearance of water is to be accounted for partly by mechanical absorption, partly by the hydration (or binding of water), which is generally one of the phenomena attending the superficial weathering of the rocks, and partly by the crystallization and recrystallization of the constituents of many of the rocks, and the extensive chemical changes going on at unknown depths within the bowels of the earth, as manifested in the phenomena of volcanoes. In the course of time, though happily many ages from the present, the combined result of these several causes of desiccation must be the complete absorption of all the water, and its disappearance from the surface of the earth.

The estimate has been made that about one-seventeenth of the original quantity of water the earth was provided with has already been bound up in the rocks or absorbed beyond the possible reach of the organisms living upon her surface.

**SEARCH FOR WIVES.**—Where do men usually discover the women who afterwards become their wives? is a question we have occasionally heard discussed, and the custom has invariably become of value to young lady readers. Chance has much to do in the affair, but then there are important and governing circumstances. It is certain that few men make a selection from ball-rooms or any other places of public gaiety, and nearly as few are influenced by what may be called "showing off" in the streets, or by allurements of dress. Our conviction is that ninety-nine hundred parts of all the finery with which women decorate or load their persons go for nothing, as far as husband-catching is concerned. Where and how, then, do men find their wives? In the quiet homes of their parents or guardians, at the fireside, where the domestic graces and feelings are alone demonstrated. These are the charms which most surely attract the high as well as the humble. Against these all the finery and airs in the world sink into insignificance.—*Dr. E. H. Gibbs.*

**MILLIONS IN BUTTONS.**—The first manufacturer of buttons in America was one Samuel Williston. While he was dragging along as a country storekeeper—his eyes having failed him while studying for the ministry—his wife be-thought that she could cover by hand the wooden buttons of the time, and thus earn an honest penny. From this the couple advanced in their ambition, until they had perfected machinery for covering buttons, the first employed for the purpose in America. From this sprang an immense factory, and then others, until Samuel Williston made half of the buttons used in the world. His factories are still running at Easthampton, coining wealth for the proprietors, and known to every dealer in buttons all over the world. Samuel Williston is now between 70 and 80 years of age and is worth from five to six millions of dollars, and has given \$400,000 to Easthampton for a seminary and churches, \$200,000 for the founding of a female seminary and \$200,000 to Amherst College, besides lesser gifts to other kindred institutions.

**EDITING NEWSPAPERS.**—Horace Greeley once said: "There is nothing easier in this wicked world than to edit a blackguard paper, and nothing more difficult than to get up a newspaper free from foulness and blackguardism. Fish women and bar-room loafers are skilled in the art of bandying epithets and be-spattering each other with dirty words—it requires no brains to do this; but it does require both heart and brains to print a newspaper that a decent man and woman can read without a blush."

An American lady who had been visiting Canada courteously invited the customs officer to examine her baggage. "There is nothing but wearing apparel in the trunks," she remarked, with a pretty smile. The officer unlocked the largest trunk and pounced upon a dozen bottles of French brandy. "Do you call this wearing apparel?" he asked sternly. "Why, yes," replied the lady, "they are my husband's night-caps."

**A TRANSIT VISIBLE IN CALIFORNIA.**—*Nature* says: The next transit of Mercury across the sun is to take place on May 5th, and is to be visible in California. MM. Andre and Sugot, already celebrated by their work on the last transit of Venus, ask of the Academy that they be placed in charge of future observations. Up to this moment they have continued their studies of the physical conditions of the phenomena which they have so well re-commenced at the observatory.

### Young Folks' Column.

#### Letters to Boys and Girls—No. 17.

[Written for the RURAL PRESS by J. E. JAMESON.]

DEAR CHILDREN:—While I write I hear the solemn clang, clang, clang of the fire bells. I suppose many of the boys and girls who read the RURAL PRESS have never heard this dread sound. Sometimes in the country we hear the shrill cry of "fire! fire! fire!" and all the fathers and brothers within hearing distance, and sometimes the mothers and sisters, have to run to the rescue, with pails and buckets, that they may pour on water and put out the fire. But in cities and many villages there are fire-engines which are very much better than hand-power and tin pails. There are different arrangements in different places for giving the alarm. Here there are fire-alarm boxes from which the alarm is sent to the headquarters at the City Hall by means of a telegraph wire, and from that place the alarm is struck from all the large bells in the city. There is such a box upon the house in which I am writing.

We went to the fire-engine house the other day. Master Bertie, a four-and-a-half-year-old, had been teasing for a long time to go and "see the hosses come out," as they do at 12 o'clock every day for practice. We were there 10 minutes before 12, and had time to look at the hose carriage, with its long, long hose, through which the water is forced, and thrown upon the burning buildings, and the hook and ladder carriage, loaded with very long ladders, before the hand of the great clock drew very near to the hour. When they did we thought "discretion was the better part of valor," and drew as near the wall as possible, that we might not, by any means, be in the way when the powerful fire horses came out of the stables; for at 12 the alarm strikes and the stroke pulls a cord which is attached to the stable doors at the farther end of the room, and opens them, at the same time letting the horses loose. The alarm struck, the doors swung back, and out came the great noble animals, as though they had been sent by something pretty forcible. The clean, white floor shook beneath their tread as they rushed forward and took their places before the carriages.

They knew as well as we did—the old wise-heads—that there was no fire, and they were doing this only for practice. But the habit is formed, and when there is a real alarm, they are ready to go to the fire in the shortest possible time. The men who ride upon these carriages sleep overhead in a large and well furnished room. The beds are dressed in white, and adorned in with nice ruffled pillow-shams. The floor is partly carpeted, and there are many pictures upon the walls. If these men are asleep when the alarm strikes, it awakens them, and at the same time opens the stable doors, and unfastens the horses, so, by the time the men reach the lower floor the horses are in their places. They hitch them, mount to their places, pull tassels, which hang just above their heads and are attached to cords connected with the great front doors, and when they swing open, out they go, sometimes into storm and dense darkness, but on errands of mercy. Woe betide any one who comes in the way of those great horses then, for they rush on and on, and sometimes it is almost impossible to stop them.

It requires considerable courage to be a fireman, and to them the people owe a great deal. I have been in villages where the rum-sellers, those servants of the evil one, would keep their shops open, and call the firemen in, when they were returning, tired and thirsty from a fire, so that they might rob them of their money and sense. The temptation was very strong, perhaps more so than at any other time, and many poor fellows broke the pledges they had tried hard to keep. I am very glad to tell you that in that place, where one could count a dozen rumshops within sight from one house, a temperance reform club has been at work, and now nearly all, and I think every one, of the buildings are used for other and better purposes. The place, which is a point of land between two villages, was formerly called "Hog Point," but now rejoices in the peaceful title of "Happy Valley."

The men whom we saw in the engine house are not allowed to drink intoxicating liquors. If one is found to have that terrible habit he is discharged from the service immediately, for it would never do to have valuable property, and precious lives left to the tender mercies of drunken men. Men who use intoxicating liquors ought not to be trusted, for people are never sure that they are in their right minds.

Some tell us they only drink a little, but we must remember that people do not become drunkards all at once. Thousands reel into drunkards' graves every year, and their places are filled! Did you ever ask, "Who fills them?" Who, indeed! but the moderate drinkers? It would give me great pleasure to know that every one who reads this letter would scorn to touch, taste or handle anything that would intoxicate.

**AN OLD FLAME.**—Travelers tell a great many strange stories. I heard one telling, not long ago, of a fire in Persia that had been kept steadily burning by the Fire-worshippers for over 3,000 years, without being allowed to go out during all that time.

### Good Health.

#### Vegetable Diet.

EDITORS PRESS:—The writer has well considered the subject of sickness and health for many years past, and one of the many duties in our daily life is the question of diet, the most proper food, to promote health and longevity in the human race. And now as the question is up for discussion, allow me to join hands and state my experience:

Some 20 years since, I fell in company with a gentleman from Michigan, on a Mississippi boat, bound for St. Paul. I was attracted to the man on account of his freshness, fine health, active and youthful appearance. I did not judge him to be over 40; but when I learned that he was full 20 years above those figures, I had the curiosity to enquire of his mode of life; he informed me, that strictly, he was a vegetarian, with the exception of butter, fish and eggs, and no intoxicating drinks or other narcotics; never had a day of sickness; in fact, he was a perfect picture of health.

I came to the conclusion that whatever a person eats and drinks is done to satisfy the craving of his body, and that as edibles are applied to sustain the constituent parts of the whole system, every function is maintained from the food taken up, from the earth and the elements. It is allowed that this body is rejuvenated once in every seven years or less, that which makes up the bodily frame to-day, passes away, and within the seven years a new one supercedes the old. And supposing that by ill health, or any cause, you lose 30 pounds of flesh, and, again, in a brief period, this falling off has been more than fully restored again unto you. And during this time of gain, what was your principal diet? "Hog and hominy" is the response. Then, of course, you replace this loss by a draft upon cooked corn and hog. One-half of this new flesh is laid on from the consumption of the flesh of the swine, and here is where scrofulous and other loathsome skin diseases take their rise. The pork boils out in a natural way to relieve you from sudden death. How little thought is given to this important subject.

I would simply question the reader, who feels interested in the best method to promote long life and enjoy good health for himself, and his or her family and who is ascending the ladder of life, whether he ever paid any attention to the life and habits of swine? Have you ever witnessed their greed in gobbling up food, scattered carelessly upon a manure heap, or in a pool of filthy mud? or have seen them ravenously devouring some dead animal, which might have been as blue as a fishing-hook? at the same time, perhaps, holding your breath as you pass by, to keep off the stench. Ah! vultures could do no less. Remember those great swine shepherds, "out in the West," who have been losing their porkers by the hundreds, dying with a disease called the "hog cholera," and is it not supposable that all of these swine shepherds are suffering this dead loss to pass without some gain?

The United States Agricultural Commission reports, that in some counties—where great attention is given to the raising and fattening of swine—that 95% have died by cholera. Even if you were living upon the five per cent. saved, how could you feast upon it quietly and with a relish?

The writer who now stands at the foot of his 70th year, apparently in perfect health, claims that he has suffered but little—perhaps one per cent.—from sickness or prevailing epidemics, from his youth up. His simple and regular diet has been of a vegetable nature mostly; one-third of his food, at least, has been bread, milk and fruits. Up to 28 years of age, his living consisted most wholly upon bread and milk, with apples baked or in pies. At this age he was told that he "looked like a great baby;" and he takes up this philosophical reasoning thus, that the child-like countenance was the result from living as the child lives, always eating and sleeping at regular hours, doing all his business and labor by sunlight. At 45, he carried as youthful, as healthful and fresh-looking face as others at 30 years of age. He has never been addicted to the common use of tobacco or spirituous liquors and tea or coffee.

It is very uncommon to find a vegetarian's clothing saturated with a tobacco stench, or caught unloading the filthy juice of tobacco upon others carpets and floors.

Why is not that food which comes directly fresh from the products of the earth as palatable, useful and healthful as that which is first modified by the animal creation?

Is it not a mistaken notion, that mankind must daily devour meat to bring him the strength and health to endure labor? The stomach assimilates and accommodates itself to the uses to which it is obliged to yield to satisfy the whims of its master or gormandizer.

Rice has been for ages the principal food of the Chinese. You find them generally looking hale, stout and cheerful, and they subsist upon and require less food than the average American; the cause of which may be solved in this wise: Like any person who lives mostly upon one kind of food, the demands of his stomach are satisfied and require less to satisfy his hunger; and then again, instead of scooping up his rice and forcing downwards, without proper time given to masticate, the Chinese takes up his food with a pinch, between two long sticks, and but very

little at a time, which food is mixed with the gastric juices before it leaves his tongue. Nature, in this case, governs the quantity, not the "appetizer," which the epicure has to call in, as "side issues," and this is the secret of the Chinaman's "living so cheaply." They look more fat and fair than our American born people do.

If you care to live a long life, with health as an accompaniment, you will do the best to discard the flesh pots of Egypt, in the main, and choose more from the grains, fruits and vegetables. There is no grain diet more healthful than oat-meal, properly cooked and prepared. When properly served up it is delicious; and even buttermilk has its votaries, its strong, healthful, old and honored friends. Tropical fruits are good and useful in their seasons.

As a rule, those who eat the least meat and drink the least stimulants will be less troubled with the gout, ruptures and skin diseases of every nature. In fact, vegetarians usually escape fevers and other ailments, and with regular outdoor habits, are generally the longest-lived and the most happy people.

SOLOMON W. JEWETT.

Merino Farms, Kern Co., March 20th, 1877.

[There are strong points in favor of Mr. Jewett's position, and he is a grand "living example" of a life of temperance and moderation. The subject is, however, possessed of a negative which can be strongly fortified.—Eds. Press.]

### DOMESTIC ECONOMY.

#### Remarks and Rules for Good Bread.

With good flour, a good oven, and a good, sensible, interested cook, we can be pretty sure of good, wholesome bread. Yeast bread is considered the standard bread, and is, perhaps, more generally found on every table than any other kind. Hence it is important to know how to make good, sweet, wholesome, yeast bread. Good flour is the first indispensable, then good, lively yeast, either yeast cakes or bottled, the former is preferable in all respects. Then, of course, there must be the proper materials to work with. A bread bowl or pan—the pan is easiest kept clean—a stone or earthen jar for setting the sponge; a sieve—flour should always be sifted before making bread of any kind; first, to be sure that it is perfectly clean, secondly, sifting enlivens and aerates the flour, and makes both mixing and rising easier and quicker; a clean, white cloth to cover the dough, and a woolen blanket to keep the dough of even temperature while rising; baking pans, deep and shallow, a large, strong spoon for stirring, and a little melted suet or fresh butter for oiling the pans; never use poor butter. If you want shortening, rich milk or cream scalded and cooled will answer the purpose and be most wholesome. But thorough kneading is better still, and should always be done effectually. Scalding a portion of the flour makes a sweeter bread and speeds the work. Water, milk, or butter—milk may be poured boiling hot on a quart or two of the flour, stirring well, and cooling to a moderate temperature before adding the yeast—this makes the sponge. Scalded flour always makes a little darker bread, unless we use buttermilk, which makes a rich, creamy, white bread. Yeast is fermented flour or meal—the first stages of decomposition or decay. Understanding this, every baker will comprehend the necessity of regulating the extent of the fermentation with the greatest care; for a sponge or bread fermented or "raised" too long is decomposing, spoiling—actually rotting! This is the language of an experienced English baker to us only a few days ago, during a talk about the delicate, foamy loaves "yeasted to death," which so many families are eating and calling "the staff of life," quite discarding the firm, sweet, substantial, home-made loaf which our mothers and grandmothers kneaded with their own skilled hands. Bread making should stand at the head of domestic accomplishments, since the health and happiness of the family depends incalculably upon good bread; and comes a time in every true, thoughtful woman's experience when she is glad she can make nice, sweet loaves, free from soda, alum, and other injurious ingredients, or an earnest regret that she neglected or was so unfortunate as not to have been taught at least what are the requisites of good bread making.—*Dr. Holbrook.*

**BEST TIME TO EAT FRUIT.**—Most writers advise that fruit should always be eaten as a part of the regular meal; but we believe that from an hour before to an hour after quite as good a time as any. Fruits do not need much digestion and need not interfere with the digestive process. Do not mix fruits with roots, such as potatoes, for instance. In good health they may be eaten moderately at any time when they are demanded. Fruits are more of a drink than food. Children in health may have fruit most freely, but should not eat it just before going to bed. If it causes flatulence, eat less of it.—*Dr. Holbrook.*

**POTATO SALAD.**—Cut six or eight cold potatoes into even, thin slices, and put into a salad dish. Cut fine and sprinkle over the potatoes a teaspoonful of parsley, and a little salt and cayenne. Stir half a tea-cup of good cream until it is very smooth and foamy; pour over the potatoes, and mix carefully, so as not to break the slices. A little prepared mustard, and a few stalks of white celery chopped fine, is an addition. This is a good dish for a hearty lunch.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
Advertising Rates: 1 week 1 month 3 mos. 12 mos.  
Per line.....25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00  
Four weeks are rated a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

Address all letters to the firm, and not to individual members, or others, who may at any time be absent from our office.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, March 31, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Marcus C. Hawley & Co.; Railroads to Educate the Legislators; Irrigation in the San Joaquin, 193. The Week; Shipping Fresh Meat Overland; Was it a Mistake, 200. The Mountain Meadows Massacre; Work in the Tules; Agriculture in Public Places; A Rumor from the Isthmus, 201. Patents and Inventions; Notices of Recent Patents, 204.

**ILLUSTRATIONS.**—Marcus C. Hawley & Co.'s New Building, 193. Perils of Crossing the Plains in Early Days; Monument at Mountain Meadows, 201.

**CORRESPONDENCE.**—Siskiyou County—Thoughts of Coming to California; Notes in Los Angeles and San Bernardino, 194.

**POULTRY YARD.**—Which is the Best Breed; Fowls and Their Merits, 194.

**ARBORICULTURE.**—The "Spanish Walnut," 195.

**THE VINEYARD.**—Raisin Making, 195.

**HORTICULTURE.**—Apricots on Almond Stocks, Etc.; An Austrian Method of Propagating, 195.

**THE SWINE YARD.**—Care of Sows and Pigs, 195.

**PATRONS OF HUSBANDRY.**—Education for Farmers; The Worthy Lecturer at Watsonville; Fruit and Meat Overland; From the Granges; In Memoriam; Election of Officers, 196.

**AGRICULTURAL NOTES** from the various counties in California, 197.

**QUERIES AND REPLIES.**—Curious Hole in a Tree; Rust on Wheat; Butterfly Eggs; Black Tooth in Swine, 201.

**HOME CIRCLE.**—The Troublesome Misses (Poetry); Did Rosy Propose? Good Manners Necessary to True Success; The Ladies of the White House; Washington's Dinner; Mother Goose; Women as Bull Fighters; Tribute to Mrs. Polk, 198. The Earth Drying Up; Search for Wives; Millions in Buttons; Editing Newspapers; A Transit Visible in California, 199.

**YOUNG FOLKS' COLUMN.**—Letters to Boys and Girls—No. 17; An Old Flame, 199.

**GOOD HEALTH.**—Vegetable Diet, 199.

**DOMESTIC ECONOMY.**—Remarks and Rules for Good Bread; Best Time to Eat Fruit; Potato Salad, 199.

**SHEEP AND WOOL.**—Sheep as Grubbers, 202.

**GENERAL NEWS ITEMS** on page 204 and other pages.

**MISCELLANEOUS.**—Cleaning Carpets, 194.

## NEW ADVERTISEMENTS.

Straw-Burning Engines, H. W. Rice, S. F.; Tule Lands, McAffee Bros., S. F.; Turnip Seed, Toronto, Canada; Orange, Lemon and Lime Trees, Henry Shaw, Ventura; Advertising, Rowell & Chesman, St. Louis.

## The Week.

Notwithstanding the notes of disaster which come from the dry counties to grieve the sympathetic heart, there are many notes of cheerful activity reported from the fields of the State. There are spots here and there which wet years turn into marshes, which are now promising production to furnish cheaper food for those whose upland crops will be naught. There are quick efforts to gain every possible advantage from all accessible water. Wells are being sunk where artesian wells have been looked upon as curiosities. In this way there is activity which promises to reward the effort.

So far as we can ascertain, the fruit crop of the State promises exceeding well. It has been a very early spring, so early that strawberries, which last year at this date were worth \$1.25 per pound, now bring but 10c, and yet no frosts have yet come to blight the blossoms which turn our orchards into a sea of bloom. Vines also promise well and vegetables are abundant and cheap.

There is little prospect at this time that food will be excessive in price. If the splendid counties in which wheat now promises well but do their duty to the year, there will be abundance for all the mouths in the State, and though a full remuneration will be given to the grower, there will be no famine price to those who have to purchase what their fields deny. In potatoes and other vegetables, too, the outlook for an abundant supply is good, for in addition to the large production in the upper counties, there will be the almost untold acres of the tules which this year will be seeded as never before.

## Shipping Fresh Meat Overland.

In our last issue we gave a report of a new organization which designs to ship fresh meat as well as fruit across the plains to the Eastern markets. The opportunity which is now described in the line of fresh meat shipments is of course found in the great movement of carcass beef and mutton from the Atlantic seaboard to England. We do not suppose that the shippers have any idea of putting California or Nevada beef in the London market, but expect that the drain upon the Eastern markets to supply the immense English demand will open the way for the sale of our western meat at remunerative prices. This seems on the face of it a fair presumption. First, because the English are not taking dribbles, but have an appetite which shows no signs of surfeit although the animals have been thrown upon the English palate by the thousands per week. This must exert a marked influence upon the Eastern price for meat, and an uplifting of this price gives the chance for selling the immense herds which can be grown and fattened cheaply on the pastures of Nevada and the Territories which lie within easy reach of the overland road. The area which can be thus turned to profitable grazing account are exceeding wide. No one who has crossed the continent can have failed to note this fact and to have concluded that nothing but the lack of sufficient market has prevented the peopling of the vast green stretches with lowing herds. The chances of opening a broad trade avenue, not only for the surplus of our coast, but also for the great central regions of our country, seem to contain an element of progress which will mark this progressive age.

Of the quality of meat which is now furnished England from this country we could not have better evidence than the following from the London *Agricultural Gazette*: "Certainly the quality of the meat is good, and hitherto it has sold for about 1d. per lb. less by the carcass than the corresponding quality of English produce. Leaving out of the question the choicest Scots and Herefords, the simple fact remains that the Americans have been beating Short Horns and the crosses by 1d. a lb. in the English markets. Then, again, the quality, hitherto, has been very uniform; the Americans do not send anything but their very best, and they intend making it better still. The meat is well dressed and very clean, presenting a striking contrast to that sent from the Continent. We are informed that second and third-rate stock are at a discount in America, and that quality is the order of the day. England will have to follow suit here. After all the sayings and doings of the Short Horn world, and of pure bred cultivators generally, a large proportion of our home-bred cattle is sadly below par; and one of the first lessons this American trade will force upon the British farmers is, that if their stock is to pay it must be good. It is the inferior class of meats that will be beaten, and (whatever its price may be) that is really so dear. We were particularly impressed with this when looking through the Cross Lane market, at Salford, a few weeks since. The Manchester people may well be jubilant at the prospect of a regular supply from America."

The English critic is very kind to give us such high credit for the quality of our beef cattle as compared with England. He has doubtless seen the best we can do in the line of beef cattle, and very little of the poorest. We have no doubt he could find as choice scrubs in both Eastern and Western States as in England if he had the opportunity to examine. The lesson which he reads to English beef producers is just as pat to American. If we expect to satisfy the roast beef proclivities of John Bull, we must be awake to the gain from breeding our animals up to the standard which has characterized the early shipments.

Speaking of the chance of shipping cattle from the plains and the Pacific coast to the Atlantic seaboard, it is interesting to note what is now being done in the movement of live stock in the same direction. The year 1876 has shown a wonderful increase in the live stock receipts at Omaha; being 44,000 head, or an increase of fully 100 per cent. over 1875. This traffic is confined almost exclusively to the line of the Union Pacific railroad. The traffic of that road for the 11 months ending with December 15th, 1876, amounted to 2,182 car-loads, or 43,600 head. The distribution of the sources of supply are shown by the records of that company to have been as follows: California shipments, 10 car-loads, 200 head; Montana shipments, 147 car-loads, 2,940 head; Wyoming and western Nebraska, 1,772 cars, 35,440 head; Central and eastern Nebraska, 253 cars, 5,000 head. The above have been received at Omaha in the period specified; the total receipts being nearly 50,000 head, worth nearly \$2,000,000.

**CATTLE BREEDERS' MEETING.**—The annual meeting of the California Thoroughbred Cattle Breeders' Association will be held at room 24, up stairs, Young Men's Christian Association building, San Francisco, at 10 o'clock a. m., Wednesday April 4th, 1877—being the day before C. Jones & Co.'s sale of Short Horns. A full attendance of those interested in stock breeding is desired.

**ON FILE.**—"Fruit Tree Suckers," W. P. G.; "Mexican Agriculture," G. K.; "Hanford," G. H.; "Century Plant," F. G. C.; "River-side," D. W. L.; "Successful Experience," "San Joaquin County," G. C. H.

## Was it a Mis'take?

We alluded recently to the increased purchasing power of greenbacks in this State, because of their near approach to the gold value. The question naturally arises in this connection, did we make a mistake when we adhered to the gold basis?

In 1864 greenbacks were worth but 40 cents. At that time it is estimated that California had \$20,000,000 in gold, and this amount would have purchased \$50,000,000 in greenbacks. This sum, invested in U. S. bonds, would have brought 6% gold interest on the currency, or an equivalent of 15% on the gold we had at that time. This interest would have increased the amount of money in the country. Of course there are other considerations to be taken into the account, if one enters into an accurate analysis of the subject, but upon the face of the matter there is ground for the question whether we did not make a mistake when we see to-day that the greenbacks we might have bought for 40 cents are now worth 96 cents, both figures in gold.

If greenbacks had been introduced in 1864, our banks would have been enabled to do business on a basis of 6% interest, and this low rate would have fostered investment in farms and factories. It is true that the purchasing power of the dollar would have been lessened, but at that time the prices of the products of farms and factories were at a higher mark, and a certain balancing of conditions in that respect would have prevailed.

Although these questions may serve as an interesting topic for the studies of the financier and political economist, the most practical question to-day is whether we are not now making a mistake in not adopting the national currency as a circulating medium. Does it pay us, as a small minority, to stand out from the adopted currency of the country? Has it not been the banking and speculating interests which have been most instrumental in the retention of the "gold basis"? Has it not benefited them and stood in the way of the productive enterprises of the State, both in land and manufacture? Has it not immeasurably retarded the development of our resources and held back from our fields and towns a class of fore-handed men, who would have brought capital to work out their progressive ideas? Does it not now support an unnecessary class of brokers and money changers, who would have been otherwise forced to put both their time and money to more productive efforts?

The medium of exchange in this State has of late been subject to grievous fluctuations, and the result is a chipping of a corner from the greater part of the return which the producer receives for his labor. This condition of affairs gives opportunity for the smallest kind of money changing and forces a man to pay tribute to a class of idlers before he can settle an account with his neighbor. This fact gives zest to all inquiries concerning our circulating medium, and makes us wonder whether we have not somewhere made a mistake.

## Our Russian Scholar.

About a year ago, as our readers will remember, the wheat growers in southern Russia awoke to the fact that America was far outstripping her in the grain trade with England.

Recent news is that Russia believes that inasmuch as America beat her, America can tell her the requisites of success. The Centennial was a fitting time to take a lesson, and Russia came to Columbia's school. The lesson was that Russia must introduce better implements and adopt a more thorough system of cultivation, and thus increase her yields from fields which rendered but unwilling tribute to the husbandman. The point turned upon plows, and the committee entrusted with the study of the question on the part of the Russians could not from mere inspection decide whether America or England could do the more for her in this particular. When the decision seemed about to turn in our favor, the English made such loud objection that the matter was brought to a climax which has some picturesque features. When Mr. Kolyszko returned from the Philadelphia exhibition and told what he had seen, the English dealers in Russia became alarmed, and began a newspaper campaign against American implements. They especially attacked our plows, and said that English plows would be used throughout the whole continent of America were it not for our tariff. Mr. Kolyszko challenged them to a trial, and the day and place were appointed. The English went to the spot a day ahead of time and plowed a piece of soft ground. Mr. Kolyszko arrived next day with American plows and experts. He found that what was left to him was land of the worst nature, covered with shrubs and very uneven. Knowing what American plows were, however, he went to work at once and showed the Russians and English what they had not seen before. With these plows he cut the earth and matted roots with the greatest ease, very much to the surprise of all spectators, who decided the victory for the American plows complete.

Thus it appears that Russia will enter the lists with us with the advantage of our best plows, and if thorough cultivation fits the Russian soil, we may expect to find her a more formidable rival than heretofore.

## QUERIES AND REPLIES.

### Curious Hole in a Tree.

**EDITORS PRESS:**—As your valuable paper takes a great deal of interest in everything that belongs to the works of nature, I desire to inform you of a very interesting tree, that was recently cut down for lumber on the "Los Aguilas ranch," in San Benito county. The tree is an oak, perfectly sound throughout, about four feet in diameter, and age approximately a hundred years old. In cutting this tree two feet from the ground, a hole six inches square was found in the trunk, penetrating upwards from six to seven feet and downwards to the main root. The distance of the hole from the outer bark measures fully six inches, its sides perfectly smooth, as if worked by an edged tool or chisel. It is a mystery to everybody how this hole could have been worked into the trunk of the tree in hard wood without any outlet, either by branch or root. To judge by the outer rings, counted from the center of the hole to the bark, it must have been there for upwards of 30 years. To add a little zest to the mystery, the Mexican laborers on the ranch believed that a big treasure was buried underneath, and hunted for it at the ghost hour for several nights. The foreman of the ranch, Mr. G. Stoller, a highly educated gardener and farmer, gives the most probable explanation by attributing this excavation to a large caterpillar, by his description of the hole to the genus *Bombix*, which lays its eggs in the bark of the tree, and heat and water hatches them in the course of from two to three years. The young worm, perhaps closed in by the rapid growth of the tree, lived for who knows how many years in the wood and on the same and by traveling up and down the trunk formed this strange hole. The tree is such a curiosity that the owner of the ranch has given orders to preserve the piece for the inspection of any one who desires to look at it. I may state that the Los Aguilas ranch presents, so far as pasture is the question in this dry year, the fairest aspect one may see in a circumference of 100 miles, and, although losses in stock have been sustained, it will not be in comparison to others. The hay and barley especially look splendid. It is safe to estimate a yield of 600 to 800 tons on the farm. —CARLOS E. KRAHN, Tres Pinos.

This tree is indeed curiously marked. We are free to state that we cannot give any certain reason for the peculiar opening. Perhaps a closer examination of the sides of the aperture would disclose something; but from the description we can propose nothing which would be more than guessing. If the sides of the opening were examined closely with a microscope of moderate power, the traces of insect work would clearly appear, if they were the architects of the cavity. The hypothesis of Mr. Stoller is open to some objections. The insects of the genus *Bombix* are chiefly leaf eaters. There is a closely allied class of insects which are voracious borers and his presumptions concerning the hatching and so forth are, perhaps, within the possibilities. But we know of no boring insect which makes a large clean cut of the kind described. They make short work of woody fiber, but they work in galleries here and there until the wood is honey-combed. According to our correspondent the cut presents no such appearance as this. Upon the face of the matter, if it is to be attributed to insect work it would nearer resemble that of the white ant (*Termite*); but this has some objections and could be determined by an examination of a debris which would exist. We leave the topic as a matter of interest until we hear more about it.

### Rust on Wheat.

**EDITORS PRESS:**—Having read your article on fungus on Wheat in Yolo and Colusa counties, I would inform you that the grain in this county is affected in the same way. The first noticed of it was the blades began to turn yellow and the grain to lodge. On examination, it proved to be covered with mold. It seems to be getting worse and the mold is attacking the stalks, while the ground seems to be covered with dust from the mold. The stalks also have a number of small green lice, commonly known as cabbage lice. It affects grain that has not been sown on summer-fallow land. It seems to affect the grain most that is very thick and rank. We are very much afraid that it will do a great deal of damage. Can send you specimens if you desire them. —G. M. B., Suisun Valley, Cal.

We should be pleased to receive the specimens. From some of the indications mentioned by our correspondent, we should think his grain was affected by the genuine "rust." This will be determined if we are furnished with the specimens.

In this connection we would state that we have just received a call from Mr. Kinne, of the Microscopical Society. He informs us that he has found the true rust (*uredo*) on some samples of grain received from Valley Ford, Sonoma county. The fungus had penetrated the substance of the plant and had destroyed the cuticle. The orange-red spores were abundant. These form the reddish dust, from which the name rust is derived. We may give a fuller description of this fungus in connection with other specimens if they should show the disease.

### Butterfly Eggs.

**EDITORS PRESS:**—I have been setting out a young orchard, and I have discovered something on the under side of the limbs which looks like some insect's eggs. Will you please tell me through the RURAL PRESS what they are, what will drive them off, and if they will hurt the trees if let alone? They are found on young trees only. I send you two specimens, one from White Winter Pearmain and two from peach trees. —CONSTANT READER, Santa Monica, Cal.

The twigs contain a very beautiful specimen of the eggs of some small butterfly. The exact species could not be told without hatching out the eggs. It is not likely that the insect will do any particular injury, except eating a few leaves perhaps. They can be destroyed with strong soapsuds, but we do not think they promise injury enough to warrant the trouble.

### Black Tooth in Swine.

**EDITORS PRESS:**—In reading in your paper that a person in Los Angeles county was losing a lot of hogs by their going blind, and he asking for advice, I wish to state through your valuable paper the disease is known by the name of black tooth or blind tooth. By opening the pig's mouth he will find a small black tooth under the eye, and by pulling the same out or knocking it out the pigs will soon recover. —S. H. WEBB, Guadalupe, Cal.



### The Mountain Meadows Massacre.

One of the events of the past week has been the execution of John D. Lee, in Utah, for his share in the brutal massacre of a train of emigrants which was crossing the plains for California in 1857. The incident calls to mind, not only the terrible crime which was perpetrated on the Mountain Meadows, but brings up a thought of the many hardships and deaths which were almost milestones on that overland trail which the early comers followed. Our illustration aids to impress the thought. A wagon of emigrants has been attacked by the Indians and a desperate struggle is being waged for life by the brave men and women who have left their homes to seek the western El Dorado. We confess there are few subjects which excite our sympathy more readily than these oft-repeated experiences on the plains.

A hundred times worse than the scene shown in our engraving was the terrible massacre in Utah 20 years ago. That had all the intensifying elements of treachery and outrage. It has been in the thought of the people for all these years, and but last week justice overtook one of the leading perpetrators. In order that our readers may the more fully appreciate the sad spectacle shown in the engraving we quote from a description of the massacre which was written according to the testimony which was brought out at the trial of Lee, as follows:

In the summer of 1857, a train of emigrants, hailing from Arkansas, and bound for California, entered Salt Lake City. It was a wealthy and populous train. There were in it 150 persons, men, women and children, 400 head of cattle and 70 or 80 fine horses.

Suddenly at daybreak Monday morning, September 7th, 1857, the emigrants were attacked, and at the first fire seven were killed and 15 wounded. Unprepared, and, while most of them were yet asleep, they fell helplessly before the bullets of their unseen foes. With a promptitude unparalleled in the history of Indian warfare, these emigrants wheeled their wagons into an oblong corral, and with shovels and picks threw the earth from the center of the corral against the wagon wheels. In an incredibly short time they had an excellent barricade. So rapid was their work that the plans of the assassins were turned.

They were too strongly fortified to be attacked again without loss of life. The plan resolved upon was to decoy the emigrants out under a white flag protection, and the plea that it was necessary to save them from the Indians. But all this recruiting had taken time, and the emigrants held their ground all the week. Their camp was in a hollow overlooked by low hills, and from there and from behind stone breastworks Lee and his men kept them under constant fire, killing the cattle, wounding and killing emigrants and making the corral a veritable death pen.

Water was the great need of the emigrants. Every attempt to go to the spring was met by death. A tunnel was started to reach it, but never completed. A woman who stepped outside the corral to milk a cow fell pierced with bullets. Two innocent girls, clothed in pure white, were sent down to the spring. Hand in hand, tremblingly, these dear little rosebuds walked toward the spring. Their tender little bodies were fairly riddled with bullets. The old breastworks still remain, in places, and no one can visit the spot without being surprised that the emigrants held out so long.

Meanwhile the decoy plan at the camp was put into effect. A white flag was displayed, and Lee marched under its cover and met an envoy from the beleaguered camp. He promised the emigrants protection if they would lay down their arms and march out. They could do nothing else, and acquiesced. The arms, the wounded and the children were put into two wagons, driven by Mormons; behind them came the women, marching in single file, and a little back of them came the men, unarmed, starving, many wounded, and utterly despondent. On went the mournful procession. Lee marched between the two wagons. Suddenly he brought his gun to his shoulder and fired at a woman in the forward wagon, killing her instantly. It was the signal for the massacre. Indians rose from behind bushes, painted Mormons stepped from behind concealments, and all along the line the men and women were shot down like cattle in the shambles, while Lee and his aids dragged women and youths from the wagons and cut their throats from ear to ear. It is the most heartless, cold-blooded deed that ever disgraced the pages of history. The cowardly assassins could not have performed one single act that could have added to the blackness of their perfidy. They feigned friendship and sympathy, they induced these brave men to lay aside every weapon, and then shot them down like dogs. The venerable gray-headed clergymen, the sturdy farmers, the stalwart young men and

the beardless youths, all were cut down, one by one, and above their dead bodies waved the stars and stripes.

### The Execution of Lee

The execution of Lee occurred on Friday morning, March 23d, on the spot where the massacre occurred. The picture presented was weird and strange beyond description. The wagons and troops, the officers of the law and representatives of the press, all seen from an overlooking promontory, marching solemnly through the meadows, was a sight not dissimilar to that other one, nearly 20 years ago, on the same spot. Arrived within a few yards of the monument, which is shown in the engraving on this page, and which was a huge irregular pile of stones, whereon the cross stood erected to the memory of the butchered emigrants and which the Mormons subsequently tore down and defaced, the Government wagons were placed in line together, and the six men who had been selected for the execution were posted, armed with needle-guns. Lee came forward. After allowing the prisoner to say his last words, Marshal Nelson partly faced the condemned and gave the word "ready!" The guns were dropped. "Take aim!" The guns were leveled on the victim. Then after a silence which seemed an age of duration to the bystanders, the word "fire!" rang fatally on the air. Six simultaneous reports followed and John D. Lee fell backward on his coffin, his feet remaining on the ground. There was no quiver or struggle. Five balls had passed through his body in the region of the heart.

### Work in the Tules.

This year bids fair to bring to light many latent points of value in the tule lands. No portion of our State can now show such activity

15,000; Swamp Land District, No. 17, on the east side of San Joaquin river, south and west of Stockton, 15,000; Bacon island, 2,000; Venice island, 2,000; other districts along the San Joaquin river north of Stockton, 12,000; total, 106,000 acres. When cultivated no one will deny that the lands are worth \$50 an acre. They certainly could not be bought for that price, and should be classed as high as the choicest land in the country. At that price, however, they add a valuation of \$5,300,000 to the property of the county, more than the assessed value of the real and personal property in the city of Stockton. As they may be expected to yield 50 bushels of wheat per acre, another five millions is annually added to the wealth of the country by their cultivation.

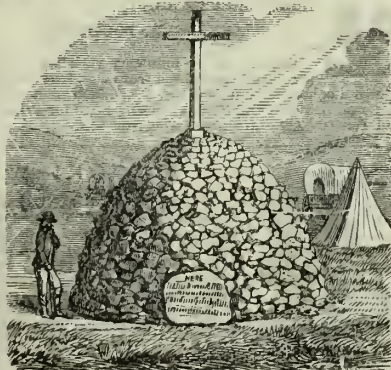
It will be interesting to our readers who are at a distance from the scene of action in the tules to be possessed of some of the facts relating to the labor necessary to reclamation and cultivation on the reclaimed land. The levee constructed by General Williams on the portion of Union island owned by him is a remarkable structure. It is not less than ten, and in some places 12 and 15 feet high, with a base 60 to 70 feet broad, and a road bed or surface wide enough for a railroad embankment. No such levee has ever before been built in the State. General Naglee, who is reclaiming not only his portion of the island, but also the main land, has constructed a levee on both sides of Old river, averaging from four and a half to six feet high, with a surface six feet in width and a base to correspond with the flat side slopes of two to one. These levees are placed on the highest land, usually 50 feet or more from the river and three to four feet above high water mark.

After the levees are constructed the land is left to dry until fit to plow. This is no light task. We read as follows: The heavy tule sod makes very tough plowing, the roots being



PERILS OF CROSSING THE PLAINS IN EARLY TIMES.

in agricultural work. All during the very favorable winter the large, low islands of the central rivers have been the scenes of such favorable work as has never been done before upon them. We have, from time to time, alluded to the mammoth and peculiar machinery which has been especially built for the purpose of dredging, levee building and pump-



Monument at Mountain Meadows.

ing. The result is now that barriers have been erected around the fertile stretches which bid defiance to the encroaching of the waters and the work of cultivating the reclaimed soil is being pushed with an army of men, teams, plows and harrows. Although there are enterprises of this character in several counties, the great field for the work has been in San Joaquin county. The Stockton Independent has been favorably situated for noting and reporting the facts concerning this work, and we are free to testify that our contemporary has displayed much commendable enterprise in this direction.

The tule land already reclaimed and in process of reclamation, in San Joaquin county, is about 106,000 acres, divided as follows: Union island, 40,000; Pescadero grant, main land,

woody and thick, requiring the plowshare to be kept as sharp as a knife to cut them off successfully. The plows used are those made for that especial purpose by Matteson & Williamson, of Stockton. From four to six horses are required for each plow. The sod is cut about four inches thick and when turned over is very moist. A week or two serves to dry it out, when it would burn very readily if a fire was set to it, on account of the great amount of vegetable fiber of which it is composed. The roots are matted so closely together in a portion of the land that even when the sod is dry the process of harrowing is a very harrowing one to both horses and men, the ground being rough to walk over and requiring frequent repetition before becoming pulverized. It costs \$4 an acre to plow the land and \$6 to harrow it. When once well harrowed and pulverized the whole operation is done for all time. The ground comes under easy subjection at once, and future cultivation becomes a simple matter.

There is a far greater diversity to the soil than is generally supposed. Instead of being a dead level plain like a house floor, as is generally imagined, the land is quite rolling. Numerous sloughs and water courses have ramified through the land and have conveyed sediment to the adjacent banks, raising them by Nature's process of levee building; several feet above the general level. The sloughs sometimes drain lakes of greater or less size, ranging in area from one acre to 200 acres. These shallow lakes have all been dried off by drainage or evaporation and their beds are generally but a foot or two lower than the surrounding land, and as level as a house floor. They are of the very finest kind of sediment soil, and having no roots of tule or other plants growing in them, can be plowed and cultivated at once with the greatest ease. There are hundreds of these small lakes.

Experience seems to warrant the large investments which are now being made in this class of lands, and now that the levees are made adequate to the strength of the water we look for still greater tule triumphs than have yet been announced.

### Agriculture in Public Places.

No thinking man can doubt that the place which agriculture occupies in the public mind, and especially in the mind of those who rule in public affairs, is in no way commensurate with its claims to public recognition. The proposition set on foot by two large agricultural bodies last summer, that agriculture be given a voice in shaping the policies of Presidents and that a chair in the Cabinet be occupied by a Secretary of Agriculture, is one which seems fairly demanded by the immense interests involved in the industry. Until this is done, there seems little hope that development of our agriculture will receive from the law makers the recognition which is freely given to science, to trade and to other branches of human investigation and labor. The Department of Agriculture at Washington has been little more than a name, because no adequate funds were appropriated for the prosecution of the work which the progress of the industry demands. Our farmers have been a first-class taxpaying body of our population; but little of their money has been returned to them in national efforts in their behalf. We knew the appropriation was a mere pittance, but we had no idea it was so comparatively small as J. R. Dodge, statistician, shows it to be in the following, which we quote from a circular received from him:

"It is a well-known fact in the history of agricultural appropriations, that \$100 has been given in the aid of commerce to every dollar appropriated for the promotion or protection of agriculture. There is no lack of provision for investigation in aid of other industries. One of the geological explorations of the Rocky mountains in 1876 obtained \$75,000; another \$40,000; a third \$25,000, and \$40,000 more were given for illustrations of two of them. In the same year the appropriation for the observation and report of storms was \$470,000, for the benefit of commerce. There was appropriated for clerical service in compiling commercial statistics, during the same year, \$59,440, and additional fund of \$20,000 for special investigation. There was also a large sum appropriated for the preparation of a single annual of mining statistics, in the same year, as was given for all the operations of the statistical division. And yet there is no government publication for which the popular demand is so imperative and public appreciation so marked as for the reports of agriculture.

"In the present year of pinching economy, there was appropriated for rivers and harbors \$5,015,000; and for the light-house establishment \$2,375,800. For Custom-houses and other public works appropriations have averaged \$12,000,000 annually for the past five years.

"The amount appropriated to the Treasury Department for postage in 1877 exceeds the expenditures of the Department of Agriculture in six months of the present year.

"The amount appropriated for fuel, lights and water for the buildings under the control of the Treasury Department, is nearly double that of the present appropriation for the Department of Agriculture.

"Half the legal interest on the amount annually appropriated for commerce would suffice for the customary annual dole to agriculture.

"Even the interest on the cost of supplies to Indians for fulfillment of treaties would more than equal the current appropriations of the current year."

This is indeed a pitiful showing for agriculture and should be made very different.

**A RUMOR FROM THE ISTHMUS.**—The latest newspapers from Central America contain the following rumor concerning a new route for the canal to cut the Isthmus: Intelligence of the utmost importance has been received from one of the gentlemen prominently connected with the party of exploration, now in the Darien. The following is a translation: "The examination of the Cacarica pass is nearly terminated, although, as the work has been sub-divided, and a part of the engineers have not returned from Cacarica, all the data upon the verification of the exploration of 1866 are not yet known. Altogether, as already seen, although made in a great hurry and under conditions very different from the present, it may be considered in the main exact, and the facts indicated at that time as to the execution of the great work are now very valuable. Notwithstanding some difficulties which have presented themselves, it is certain that the Commission will return with a favorable solution, and that the canal will be executed at the Darien. The labors of the exploration will not be ended before the end of March.

ALMOST the entire business portion of Humboldt Wells, Nev., was burned up on the 25th inst. The railroad depot was also burned, but the round-house was saved.

RUMOR has it at Lagrange that three Celestials, who have been mining at Don Pedro's Bar, struck it last week, taking \$5,000 out of a small crevice in a few hours.



## SHEEP AND WOOL.

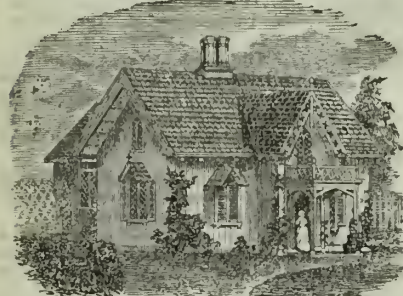
## Sheep as Grubbers.

Mr. Pottorff writes to the *Willamette Farmer* to show that he can grub land cheaper with sheep than with Chinamen. He says: As there is abundance of brush land in Western Oregon, I will pen the following method of getting rid of it, as tried by myself: Five years ago this winter, I cut the brush off of about 12 acres. I raised a stump crop on some of it the first year; the remainder had so much oak and hazel on it that it would not burn well enough to make a crop. The next summer I put 40 head of sheep on it, but not sufficient to keep the sprouts down well, but the next year they and their increase kept it down well. The third year I had to sell a part of the band, as this amount of land, with the weakened sprouts, would not support them all. They were kept on this ground the whole of the three summers, but run on other pasture the balance of the year. This winter I fenced off nine acres of this land, and broke it up with a span of small horses, and it looks like old ground, except a few of the larger fir and oak stumps, all of which might be turned out with three good horses; the fir stumps would average about six inches in diameter, the oak about four inches, all of which are rotten or in a rotting condition; the hazel entirely gone. I believe the ground will now raise a better crop than it would had it been grubbed three years ago, and broken in a green state (notwithstanding the few remaining stumps), as sheep leave the ground in much better condition than the mattock.

Yes, some say, you can kill grubs with sheep, but you will kill the sheep also. Yes, I will say, you can kill sheep or any other stock, on grub land, or any other, if you will, but I have had good mutton any day during the time my sheep were killing these grubs, as many of my neighbors will attest, who got mutton sheep occasionally during these summers. I did not pay \$20, \$25 or \$30 per acre to Chinamen to grub this land, but, contractwise, sold wool and sheep to the amount of \$300, and now have 66 head instead of 40 head three years ago. So I conclude that sheep are the best Chinamen we have, as they easily and profitably reduce our brush land to prairie. Some say the grubs in the hills are not so easily killed, but of this I am not apprised.

SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

**WANTED.**  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.



## RUPTURE CURED

Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.

Send for Illustrated Circular and Price List.  
MAGNETIC ELASTIC TRUSS CO.,  
609 Sacramento Street, San Francisco.

Engraving done at this office.

## ARITHMETIC MADE EASY.

ROPP'S  
EASY CALCULATOR

Is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can instantaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months. The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Cribbs; a Time, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightening calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided. The work is nicely printed on fine tinted paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.  
Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY & CO., San Francisco.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

## The Nurseryman's Directory.

A REFERENCE BOOK  
OF THE  
NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsman in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,  
Publishers, Galena, Illinois.

Buy N. Y. Watch Co's  
Superior Watches.

C. H. DEWEY. GEO. JORDAN.  
DEWEY & JORDAN,  
DEALERS IN  
Watches, Jewelry, Silverware,  
ETC., ETC.,  
No. 433 Montgomery St., near Sacramento,  
SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

American Watches a  
Specialty.

## PACIFIC RURAL PRESS.

A first-class 16-page Agricultural Home Journal, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Subscription, \$4 a year.  
DEWEY & CO., Publishers.  
No. 224 Sansome Street, SAN FRANCISCO

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmans and B. B. Red Game Bantams. Also Eggs.

## Poultry.

## PLYMOUTH ROCKS.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. I offer for sale a few sittings; price, \$12 per sitting of thirteen eggs. Eggs always fresh and well packed. Orders accompanied by the money will be filled in the order in which they are received. Send money by postoffice order, registered letter or by express.

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

## WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

I. P. LORD,  
BREEDER AND SHIPPER OF PUREBRED  
AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*



## LOOK!

ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc. Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## B. B. RED GAMES

A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular.

J. G. ANNEAR,  
Ceres, Stanislaus County, Cal

## Stock Notices.

## BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Polson, Cor. Ninth St., S. F.

## A JOINT AUCTION SALE

—OF—

## Blooded and Graded Stock.

—ALSO—

## A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville,

Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

## ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

## LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

## PACIFIC,

By Red Cloud, out of Reta, two years old. (Herd book No. 24,249.)

## PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of imported Cows.

Also, four head of Thoroughbred Cows and Heifers. Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows.

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers. Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums under \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

## THE BENNER RANCH

Will also be sold at Public Auction, consisting of 500 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

## SALE POSITIVE, IN GOLD COIN.

## Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,  
HENRY PRESTON,  
DAVID S. BENNER.

Feb. 24th, 1877.

## PUBLIC SALE

—OF—

## SHORT HORN CATTLE,

TO BE SOLD

On Thursday, April 5th, 1877,

AT THE

Fair Grounds, near San Jose,  
CALIFORNIA.

CIRCUMSTANCES RENDER IT NECESSARY FOR US  
TO CLOSE UP OUR PARTNERSHIP AFFAIRS;  
WE SHALL THEREFORE SELL, AT PUBLIC  
SALE, THE ENTIRE AVENUE RANCH  
HERD OF SHORT HORN CATTLE.

The proprietors believe that this will be one of the most attractive sales that has ever been held on the Pacific Coast. We shall thus offer to the public all the Choice Animals we have bred and collected at an immense cost, including those fine Show Bulls, Mason Duke, 14,875, Oxford Duke and the fine Rose of Sharon, Bull Master Maynard, 14,881, and in fact the entire herd, without reserve, to the highest responsible bidder, giving a rare opportunity to Breeders, and all parties wishing to purchase high bred Short Horns.

At Sale Catalogues furnished on application.

CYRUS JONES & CO.



## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating. Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



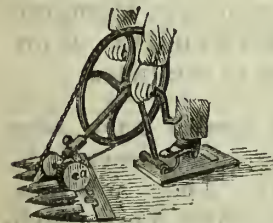
GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required.

The knives can be sharpened without taking them out or unhitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, *a*, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address, WILSTER & CO.,  
17 New Montgomery St., San Francisco.

## Fraud! Fraud!!

COLLINS &amp; CO'S

## CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

## LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

Call and See them or Send for Description and Prices. Sent by Express to any part of the Pacific Coast.

DEWEY &amp; JORDAN,

No. 433 Montgomery Street, San Francisco.

## NEW YORK WATCH CO'S

FIRST CLASS AMERICAN WATCHES, FROM SPRINGFIELD, MASS.

THE BEST AND MOST REASONABLE PRICED WATCH IN THE MARKET.

## FOR SALE.

ENGLISH PATENT

## Straw - Burning Engines.

At the Vienna Exhibition, the Diploma of Honor, Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, Manufacturers of

HEAD &amp; SCHEMOITH'S

## PATENT ENGINES

For

Burning Straw, Reeds, Corn-Stalks, etc.

These engines for burning straw and other vegetable products have been tested for some time in Russia, on the banks of the Danube, in Egypt and India, and have been found to effect a

GREAT SAVING OF FUEL,

Enabling steam power to be introduced into countries where it was formerly impossible to use it.

## The Expansion Engines

Of this firm ARE CELEBRATED FOR THEIR SMALL CONSUMPTION OF FUEL and do not burn more than about three to three and a half pounds of coal per indicated horse-power per hour. This Engine was on exhibition at the Mechanics' Fair last fall in San Francisco. It is the

Only Fire-Box Straw-Burning Engine on the Coast,

And is without doubt the BEST PORTABLE ENGINE ON THE COAST; Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT.....GILBERT W. COLBY.  
MANAGING DIRECTOR.....C. J. CRESSEY.  
CASHIER.....ALBERT MONTELLIER.  
SECRETARY.....F. A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Cuts, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

DAVIS &amp; SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, *Harper's Weekly* and *Scientific American*, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, DEWEY & CO., Publishers, San Francisco.

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING,)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76. . . \$6,202,435.00	\$136,622.13
Less Amount Canceled . . . . . 435,419.00	9,503.33
Amount in force, Dec. 31, '76. . \$5,767,016.00	\$127,053.80
Losses paid . . . . . \$16,330.00	

## CASH PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76. . . \$9,605,935.00	\$71,865.16
Less Canceled and Expired . . . 1,587,246.00	28,585.16
Amount in force, Dec. 31, '76. . \$2,018,689.00	\$43,280.00
Losses paid . . . . . \$12,718.71	

## OFFICERS.

J. D. BLANCHARD.....PRESIDENT  
I. G. GARDNER.....VICE-PRESIDENT  
G. P. KELLOGG.....TREASURER  
A. W. THOMPSON.....ATTORNEY  
FERD. K. RULE.....SECRETARY

## TRUSTEES.

J. D. Blanchard.....San Francisco  
G. P. Kellogg.....Salinas  
I. G. Gardner.....San Francisco  
Chas. Laird.....Salinas  
Uriah Wood.....San Benito  
A. B. Nally.....Santa Rosa  
A. W. Thompson.....San Francisco  
G. D. Logan.....Colusa  
I. C. Steele.....San Mateo  
G. W. Colby.....Butte County  
A. Wolf.....Stockton  
C. J. Cressey.....Oakland  
J. C. Merryfield.....Dixon  
E. W. Steele.....San Luis Obispo  
C. S. Abbott.....Monterey  
Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

GREAT  
IMPROVEMENTS

ARE NOW

BEING INTRODUCED  
IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

## MUSIC BOOKS

—FOR—

Schools, Academies &amp; Seminaries.

THE HIGH SCHOOL CHOIR, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Rhin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON &amp; CO., Boston.

C. H. DITSON &amp; Co.,

J. E. DITSON &amp; Co.,

711 Broadway, New York. Successors to Lee & Walker, Philadelphia.



## General News Items.

The proposed building for the deaf, dumb and blind asylum is to cost \$79,652.

The geographical limits of the military divisions and departments of the United States are about to be rearranged.

A PENNSYLVANIA correspondent of the New York Herald says that 400 collieries and 60,000 men are idle in that State.

LARGE Catholic colleges will be erected at Omaha, funds for the same having been bequeathed by the late Edward Creighton.

GOVERNOR HENDRICKS, of Indiana, the defeated candidate for Vice-President at the late election, has been in San Francisco for several days.

MESSRS. ROTHSCHILD telegraph from London that the Syndicate are ready for another call of \$10,000,000 for the redemption of United States six per cent. bonds of 1865.

A DISPATCH from Red Cloud agency says: Spotted Tail has been heard from. He was going on to complete his mission of peace to the hostiles. He had been delayed by the bad weather and poor condition of his horses.

A DISPATCH from Rome announces the arrival of congregations to counsel the Pope to fulminate the great excommunication against Victor Emmanuel, should the clerical abuses bill pass.

Two charges of forgery and one of misdemeanor, for obtaining goods under false pretences, are recorded at the city prison against A. Blacklock, alias McCaw, President of the Gulf of California Oyster and Canning Co.

THE President has appointed Samuel B. McLean Associate Justice of the Supreme Court of New Mexico, and Wellington Bird, of Iowa, agent for the Indians of the White River Agency, Montana.

ABOUT 800 tons or 16,000 bunches of bananas are now shipped monthly from Aspinwall to New York, worth, when delivered there in good order, at the rate of \$600,000 a year. This industry is constantly increasing.

ADVICES from Congo, west coast of Africa, state that the British war steamer *Arcon* had destroyed seven villages on the Congo river and killed three natives as a punishment for plundering the American schooner *Thomas Nickerson*, of New York. This vessel had been captured by the natives and about 30 tons of coffee were carried off. She was fired by the *Arcon* in order to prevent further plunder.

WASHERWOMAN'S bay, that nucleus of pestilence back of the city, is to be cleansed at last. To perform this Augean task 100 prisoners will be chosen from the county prison, and will be kept busily at work until the bay is filled up. The residents of the neighborhood have subscribed \$1,200 for the purchase of the necessary tools.

ANOTHER disaster through the breakage of a dam is reported. This occurred this week at Staffordville, Conn. There was plenty of time for the removal of property before the dam burst, as it had leaked and every effort was taken to mend it. The dams of the Phoenix company, the Howe company and the Valley company were destroyed. The damage is estimated at \$350,000. About 1,000 hands are thrown out of work.

THE persons who committed the outrage of killing four Chinamen on Lemm's ranch at Chico, Butte county, last week, have all been arrested. There are five of them; they have confessed to the outrage and also to others which have been committed in the vicinity. They have been taken to Oroville to await the action of the Grand Jury. There is considerable excitement over the matter, and the citizens of Chico are determined to go to the bottom of it, there being a suspicion that other persons are implicated as well as those already arrested.

THE Spring Valley Water Company intend to follow the example of the gas companies here and elsewhere, and measure the quantity of water used by its purchasers. They contemplate attaching meters to all the connections with their pipes, and if more than 3,000 gallons are used during any month the consumer will be obliged to pay for the excess at the rate of \$1 per 1,000 gallons. Manufacturing houses and hotels now receiving water at the rate of 50 cents per 1,000 gallons will continue to pay so much a month for that privilege, and if they use in excess of their allowance will pay for the quantity so used, at the rate of 50 cents per 1,000 gallons.

ORANGE TREES.—We had a call on Tuesday from Henry Shaw, of Ventura county. Mr. Shaw brings up with him a choice lot of orange trees, with which he proposes to fill the desires of those in our northern counties who wish to try the fruit. He will place his trees on sale at several points in the interior and in the city seed stores.

GOLDEN ITALIAN CYPRESS.—We have seen a tree of this variety at Mr. Pryall's nursery in Oakland. It seems brighter and more striking than the golden arbor vitae and the effect of the golden marking is peculiar and pleasing.

EUCALYPTUS GROWTH.—We learn that J. D. Darby, of Antioch, planted 2,000 gum trees which are now one year and one month old and are all from 15 to 18 feet in height.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

FOR WEEK ENDING MARCH 6TH, 1877.

- 188,042. THILL COUPLING.—J. L. and W. E. Crist and G. H. Smith, Sacramento, Cal.  
188,059. GRAIN-SEPARATOR.—H. Kelly, East Portland, Ogn.  
188,098. SHAFT FURNACES FOR TREATING ORE.—N. D. Brett, Boulder, Col.  
188,100. AWNINGS FOR BIRD CAGES.—S. P. Burton, S. F.  
188,124. EXPLOSIVE COMPOUNDS.—J. Goetz, S. F.  
188,152. SAWING MACHINE.—F. W. Krogh, Tulare, Cal.  
188,167. CAR-SEAT.—J. L. Mitchell, Pueblo, Col.  
188,169. TOBACCO PRESS.—B. Moon, S. F.  
188,191. HORSE COLLAR.—A. Rutherford, Walla Walla, W. T.  
188,206. BURTON FASTENINGS.—J. C. Teters, S. F.

DESIGNS.

- 9,770. COMBINED MATCH-HOLDER AND FRICTION MAT.—P. L. Davis, S. F.  
9,846. CENTER-PIECE.—S. Killeit, S. F.

TRADE-MARKS.

- 4,434. TRAS.—Walker Bros., Salt Lake City and Ogden, U. T.

FOR WEEK ENDING MARCH 13TH, 1877.

- 188,255. EXTENSIBLE WAGON BODIES.—F. Oppenheim, S. F.  
188,341. MILK COOLERS.—H. Clifford, S. F.  
188,345. GRAIN SEPARATOR.—W. Edris, Eugene City, Oregon.  
188,348. DAMS FOR STORING AND UTILIZING TIDE POWER.—W. H. Foster, Kelsey, Cal.  
188,369. DREDGING.—W. B. Hyde, Oakland, Cal.  
188,374. DEVICE FOR UNLOADING AND STACKING HAY, ETC.—G. F. Kelly, Susanville, Cal.  
188,375. WINDOW-SASH HOLDER.—J. Kelly, S. F.  
188,376. METAL WEDGE.—J. Kelly, S. F.  
188,379. COMBINED HARBOR AND CLOD-CRUSHER.—W. H. Kuhn and S. Miller, Albany, Oregon.  
188,397. TOBACCO CUTTER.—B. Moon, S. F.

TRADE-MARK.

- 4,439. WATCHES.—J. Gordon, S. F.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

"COMPENSATING CRANK."—Robert D. Milne, Santa Barbara. The object of this invention is to provide a novel method for the conversion of reciprocating rectilinear motion into rotary motion by a mechanism, by means of which the inequality of crank power is equalized and balanced in such a manner that the direct pressure of a piston or other motor is transferred to the crank with greater uniformity of action than in the case of an ordinary crank. The mathematical principle of the invention consists in producing a series of changes in the line of direct propulsion, as it affects the crank, so that the point of impact or force approaches or recedes from the center of the crank during its revolution; this point of impact being furthest from the center of the crank at the beginning and end of stroke and nearest at the middle of the stroke. The invention is also designed to utilize the independent motion of the connecting-rod thus acquired, by bringing it to bear upon the crank at such angular inclination as to be equivalent to direct propulsion in a line varying from the line of force inversely as the angle which the connecting-rod makes with the crank varies from a right angle. The novel points of the invention are the applications of the mathematical principle defined above to the matter of crank motion, and also the mechanical means which are employed to accomplish that end.

UNLOADING AND STACKING HAY.—Geo. F. Kelly, Susanville, Lassen county. This invention relates to a novel mechanism which is designed to expedite the unloading and stacking of hay, grain, straw, etc., so that as the teams come from the fields they are relieved of their load at once and can return; and those in charge of the stacking apparatus can transfer the load to its proper place in time for the next team. It consists of a platform mounted upon wheels and having a proper mechanism so that it may be inclined to either side to dump its load when it has arrived at the proper point. The wagons are provided with a netting into which the load is placed and when the wagon arrives at the platform the load is rolled out of the wagon upon the platform. This latter is then hauled up an inclined tramway and when it reaches the top the load is dumped and a stack is thus formed in better shape than can be made by ordinary pitching, and much more expeditiously. The details of construction would be difficult to describe without the aid of engravings.

TOBACCO PRESS.—Bong Moon, S. F. The patent covers an improvement in a machine for compressing leaf tobacco into plugs or cakes, so that it can be readily cut into what is known as long-cut tobacco, for smoking purposes. The device is quite simple and takes up but very little room; it can also be cheaply constructed. The device not only presses the plugs flat but also presses the edges smooth.

SAWING MACHINE.—F. W. Krogh, Tulare City, Tulare county. This invention relates to a novel portable device for sawing logs and heavy timber, working upon uneven ground and in places which are difficult of access. A triangular frame is mounted upon suitable wheels so that it can be easily drawn from place to place. It is made to rest on three wheels in order to accommodate it to uneven surfaces, in such places as are most likely to be occupied by fallen trees. On this frame are all the contrivances necessary to accomplish the objects of the device. The saw and pitman are raised by a rope; the frame is moved forward on its wheels parallel with the tree or log to be cut, and when the proper point is reached the frame is secured by pins. The saw, pitman and guides being next lowered to the log, the guide is secured by driving a pin or spike into the log, as this steadies the log and prevents vibration. By the peculiar construction, the sawing frame can always be supported solidly at any point upon inclined or uneven ground, the motion of the saw itself will be steady, and by a cam action, the most favorable movement for sawing will be given it.

EXPLOSIVE COMPOUND.—Julius Goetz, S. F. This is a novel method of forming explosive compounds and rendering them safe from accident or explosion under ordinary circumstances of handling or transportation. It consists in the employment of glucosides, whether in the form of ordinary molasses or the syrup of glucose of commerce, or any solution of uncrystallizable grape sugar, when mixed with compounds of gas-producing or explosive substances. These syrupy solutions when mixed in suitable proportions with chlorate of potash and other combustible and explosive substances will form a permanently plastic mass, the elasticity of which prevents explosion under ordinary circumstances and requires strong concussion under suitable confinement to explode it. The proportion of the ingredients may vary and the ingredients themselves may be replaced by others which are well known as equivalents, but the essential feature of all the compounds covered by the patent is the employment of the uncrystallizable solution of sugar.

BIRD CAGE AWNING.—Susannah P. Burton, S. F. This patent covers certain improvements in awnings or shelters such as are used to protect birds in cages from the wind, rain and particularly the sun. As usually made they have a hole made to fit closely over the knob at the top of the cage, and the awning thus fits closely down over the cage, so that when a hot sun beats upon it the air is confined and the heat of the interior of the cage becomes unendurable and is sometimes fatal to the birds. This invention consists in constructing an awning-frame with standards, which elevate the awning some distance above the cage, thus providing a free circulation of air, and not only sheltering the bird from the direct action of the sun's rays but protecting it from the fatal results of over-heating and sunstroke.

UMBRELLA RUNNER.—Adam Good, S. F. The patent covers an improved runner for umbrella handles, and the invention consists in a novel arrangement for connecting the ends of the wire braces which spread and strain the ribs of the umbrella when it is open, with the upper end of the runner, so that they can be easily attached to or detached from it when desired. This runner will be both convenient and ornamental, and by its use the owner of an umbrella can easily relax the parts by releasing the brace wires, so that any part of the umbrella can be readily repaired.

SKIMMING MILK.—Hiram Clifford, S. F. When cream is removed from the surface of milk by the usual method of skimming, either much of the cream is stirred into the milk again or a quantity of milk is taken up with the cream; and besides this, much time and labor is required to collect the cream where the milk from a large number of cows has to be skimmed daily. This invention contemplates the separation of the cream from the milk by drawing the milk off underneath the cream, so as to leave the cream in the vessel from which the milk was withdrawn.

RE-SAWING MACHINE.—Samuel Putnam, Emigrant Gap, Placer Co. This invention relates to an improved machine for accomplishing that class of work known as re-sawing, in which ordinary boards such as are turned out by saw-mills are split into thin boards for special uses, such as for making boxes, etc. The improved machine is adapted for accomplishing the work with a circular saw and the operation is automatic and continuous; this is accomplished by a combination of devices.

MATCH SAFE.—(Design). Percy L. Davis, S. F. This is a design for a combined match holder and a friction mat. It consists of a flat diamond-shaped block of wood. To the front side of the block is secured a star-shaped glass mat, the outside face of which is roughened to form a friction surface to scratch matches upon. On each side of the star, near the acute angles of the diamond-shaped block, is secured a semi-oval box for the reception of matches. This design is very pretty and ornamental.

THE GOVERNMENT GEOLOGICAL SURVEY.—Plans for the coming season's explorations by Professor Hayden's geological survey have all been arranged, except as to minute details. The work will be conducted during the coming year north of the Union Pacific railroad, commencing at the 40th parallel explored by Clarence King, and continue north and west in the Territories of Idaho, Wyoming and Montana. The corps will be arranged in five divisions. First, on triangulating, the party will be under the direction of A. D. Wilson, who will carry forward the system of primary triangles in the same manner as they were employed in Colorado, and all the higher peaks will be located in this way. The western topographical division will be in charge of Henry Garrett, who will explore that region of country from Ogden, eastward and northward. The eastern division will be directed by George B. Chittenden. This party will explore the country along the Sweetwater and Wind river. The northern division will be under the charge of G. B. Beckler and will occupy the country about the sources of Snake river and along the borders of the Yellowstone and the National park. It is intended to have the party reach the field by the 15th of May, where they will remain about five months. Each division of the survey will cover an area of about 10,000 square miles. The region to be worked and mapped this year is but little known geographically, and it is expected that the results of this season's work will add much to our geographical knowledge of the Rocky mountains region.

ALCOHOL FROM BEET LEAVES.—Pierre, assuming that the sugar found in the beet root must be elaborated by the leaves, has examined these leaves for sugar. Owing, however, to the difficulty of preparing the sugar as such, he subjected the juice expressed from these leaves to fermentation, and from the alcohol obtained, estimated the quantity of sugar. The leaves employed were collected in November, and weighed 158 kilograms. They yielded 34 to 35 liters of juice, which after fermentation, gave 275 cubic centimeters of alcohol of 68 per cent. Calculating from these data, each hectare of land would furnish about 173 liters of absolute alcohol, as a minimum.

A NEW IDEA IN PAPER.—The *Papier Zeitung* remarks that it would be an advantage if wall papers could be had which would adapt themselves to the degree of illumination, becoming darker with a greater brightness, and brighter as the darkness increased. The proposal has been made to coat the walls of rooms with oxalate of copper, which becomes dark in light, and bright again in darkness. By combination with other colors wall papers might be obtained which would present an agreeable variation in colors.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.

Dewey & Jordan have been at 433 Montgomery street, S. F., for 13 years. They are reliable—like the "New York watches" they sell.

Choose a good companion only—one of Dewey & Jordan's "New York watches."

We can recommend the New York watch, of Springfield, Mass., as A 1.

SUBSCRIBERS not properly credited on their printed address labels within two weeks after paying, should notify this office.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

WILL T. Johnson of Modesto please inform us what the money is for he sent us by Wells, Fargo & Co. about Sept. 30th, 1876?

A BOOK to sheep-growers will be sent free by addressing James Moore & Co., San Francisco.

FITZGERALD'S Home Newspaper and Educational Journal is the title of a new San Francisco weekly issued by Rev. O. P. Fitzgerald.

THE RURAL PRESS is one of the handsomest, best and most candid journals in California or the Union.—*Santa Barbara Press*, March 17th.



# S. F. MARKET REPORT.

## Weekly Market Review.

### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, March 28th, 1877.

More than the usual interest has been exhibited in the Produce market. Most grains sustain a slight advance or else have maintained old prices with firmness. Dairy products and some other specialties show signs of improvement, as will be noted under the proper headings below.

The English Wheat market has advanced again. Various reasons are given in the foreign review from the *Mark Lane Express*. The effect on our market has been an elevation of holders' feelings and a slight advance in rates paid, although the trade is very quiet and transactions in small amount. The course of the Liverpool market may be seen by the following:

#### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	10s	5d	10s	8d	10s	9d	11s	—
Friday.....	10s	5d	10s	8d	10s	8d	11s	—
Saturday.....	10s	5d	10s	8d	10s	8d	11s	—
Monday.....	10s	7d	10s	9d	10s	9d	11s	—
Tuesday.....	10s	7d	10s	—	10s	10d	11s	3d
Wednesday.....	10s	7d	10s	—	10s	10d	11s	3d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	9s	3d	9s	7d	9s	5d	9s	11d
1876.....	10s	2d	10s	6d	10s	6d	11s	—
1877.....	10s	7d	10s	—	10s	10d	11s	3d

#### The Foreign Review.

LONDON, March 26th.—The *Mark Lane Express*, in its weekly review of the British Corn trade, says: During the past week, prices were lower for some time previous. The temperature and drying winds have enabled farmers to make steady progress with spring plowing and sowing. There have been some sharp falls of rain, as well as snow and sleet. These have not injured the growing Wheat, the condition of which is satisfactory, but have stopped the sowing of Barley and delayed agricultural labor, especially on heavy lands, which are too sodden to be workable. Advices from Scotland state that fair progress has been made with the sowing of Oats, Beans and Peas; but a short acreage of Barley is expected, owing to the unworkable state of the heavy lands. Altogether the season has been more favorable than last year at this time. Little alteration is noticeable in the country trade, which is steady but inactive. The markets continue moderately supplied with home-grown grain. Malting Barley has advanced one shilling, both in the country and in Mark Lane. The week's imports of foreign Wheat into London have been light, principally from the East Indies and Germany. About 2,500 quarters came from France, and it is possible that the wants of our near neighbors may have been overrated. The continued supply from Germany is also remarkable, after the reports of a deficient harvest last year. Notwithstanding the report that the Australian harvest has completely failed, we shall probably get all the white Wheat required this year from California and India. Spot business during the week has been quiet and without special interest, being confined to supplying special requirements. The consumption has not yet reached the extent when the depletion of granaries exercises an influence over prices. Indecision has been noticeable throughout the trade, by no means an unusual feature at this time of the year, when importers and consumers alike must measure their requirements against the probable supplies, and estimate the imports which may be expected. Ports on the seaboard are almost clear of cargoes of Wheat. To Russian descriptions, prompt shipments have attracted more attention. California rules steady. Sales of English Wheat last week were 44,717 quarters, at 51s 3d, against 45,048 quarters at 42s 9d last year. Imports into the United Kingdom during the week ending March 17th were 958,310 cwt. Wheat and 198,859 cwt. Flour.

#### Freights and Charters.

A small wooden vessel has accepted a charter for Wheat to Liverpool at £1 17s, the lowest rate in years. The *Commercial News* says the general freight market has not been so low for many years. Ships are trying to get something to do on the outside, and many, failing in this, are leaving in ballast to seek cargoes in other ports. The outlook is not encouraging, and is preventing many vessels from coming to San Francisco. There has nothing yet been made public about engagements of tonnage for next season, and in the absence of state of affairs, we do not believe that shippers could be persuaded to go further than that required by their immediate wants. We have now in port 9,983 tons of tonnage, secured for Wheat and 8,210 tons for miscellaneous. Following were the engagements of the week: Ship *Huguenot*, 1,187 tons, Wheat and mds to Liverpool, £1 17s; Br ship *Isle of Butte*, 930, salmon, etc., from Portland to Liverpool, May loading, £3; Br ship *Langdale*, 1,202, Wheat to Cork for orders—chartered in England.

#### New York Grain Market.

New York, March 24th.—The Wheat market has ruled firmer, and prime spring advanced 23c per bushel, with but slight business, principally in low grades. The improvement is due to the light and gradually decreasing supplies, the apprehension of a partial failure of the California crop, low stocks in Europe and the reappearance of the war cloud. No 2 spring has sold at \$1.42 to \$1.46, in store; No. 1, \$1.47 to \$1.50; No. 3, \$1.34 to \$1.40. Flour has advanced 15c to 25c per barrel. Corn is steady at 54c to 56c, and Barley lower, ranging from 46c to 95c, the higher price for No. 1 Canada.

#### Chicago Grain Market.

Chicago, March 24th.—The week closed with a firmer feeling in the Grain market, and with an active trade. Since last Monday the feeling has gradually been strengthened and higher prices would be reached within a month, and the presence in New York of a well known and prominent Bull operator was taken as an indication that some developments would result before long. The month has been wintry and snow has fallen nearly ever since it set in. This, while it is good for the winter Wheat crop, is bad for spring Wheat, which is the principal crop of this section. Plowing, which should begin soon, has been delayed at least two weeks by this unusual weather. Reports of small crops in store continue to come in, and are not balanced, as is generally the case, by contrary reports. Wheat closes at \$1.26, cash; Corn, 39c; Oats, 32c. Provisions have been rather firmer on the whole. Pork closes at about 14c; lard, \$9.40. Receipts for the week were: Wheat, 44,000 bushels; Corn, 395,000 bushels; Oats, 104,000 bushels. Shipments were: Wheat, 53,000 bushels; Corn, 149,000 bushels; Oats, 69,000 bushels. Receipts the same time last year: Wheat, 106,000 bushels; Corn, 246,000 bushels; Oats, 124,000 bushels; shipments of Wheat, 113,000 bushels; Corn, 146,000 bushels; Oats, 49,000 bushels. The opening of navigation, the natural effect of which is to make higher prices, seems at least six weeks off.

#### Eastern Wool Markets.

New York, March 24th.—The Wool market was exceedingly dull all through the week, buyers rather avoiding the market, owing to the unsatisfactory condition of the goods. Dealers generally exhibit a disposition to force

sales, and, in consequence, no dependence can be placed on the published quotations. The supply of Fall California in this city would, without doubt, foot up 1,500 bales, and Boston and Philadelphia each hold a liberal share. Prices for that description are lower, but it is impossible to find a buyer that has courage to enter the market as a speculator. Fleece of the finer grades is to an extent neglected; but prices have not varied during the period under review. The Liverpool sales of coarse opened on the 20th inst., and the cable reports a decline of 7s 1d per cent. on White East India. Sales for the week are 40,000 lbs Mexican, at 15c; 150 bbs Fall California, 15c to 20c; 198 do Spring do, 20c; 20 do Colorado, 20c; 12,000 lbs Oregon, 33c; 3,000 do Montana, 25c; 4c; 2,000 do Western Texas, 18c; 3,000 do fine Eastern do, 21c; 35,000 do fine Washed Delaine do, 50c; 5,000 do long Combed, 45c; and 21,000 do Spring California, 2,000 do pulled do, 15c; 15,000 do Domestic No. 1, 5,000 do Scoured Oregon, 6,000 do Western Texas, 115 bbs Super Pulled, 50 do Combing do, 16 do X do, 12,000 do United Western Fleece, 3,000 do X do, on private terms. The failure of the Norwalk Mills, with liabilities amounting to \$35,000, has had no important effect on this market.

Boston, March 24th.—Wool dull and weak; prices in favor of buyers; fair business doing. Sales of fleeces, 205,000 lbs No. 1 and X Ohio and Pennsylvania, 40c to 42c; XX, 44c to 46c; although some very desirable XX is still held at 48c, and XXX at 49c. Michigan, New Hampshire and Wisconsin fleeces, medium and X, have been selling at 37c to 42c, mostly at 37c to 38c. Combing and Delaine are in fair demand. All lots offered are taken at previous prices. Supplies of this description are sold up close. Pulled Wool is in fair demand. Sales, 21,000 lbs. Choice lots Eastern Superbs sold at 44c to 45c; but sales of Superbs and X have been principally in range of 35c to 40c. Several samples of new California Spring have been received, the condition of which is inferior to last year. Sales new include 155,000 lbs at 16c and 30,000 lbs at 22c. Prices irregular and unsettled. There has been a fair business in old California Fall and Spring. Sales 890,000 lbs, mostly in range of 16c to 20c.

#### Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK March 7.	WEEK Mar. 14.	WEEK Mar. 21.	WEEK Mar. 28.
Flour, quarter sacks.....	69,220	13,171	96,541	44,121
Wheat, centals.....	236,948	60,291	112,748	106,653
Barley, centals.....	10,416	8,750	8,546	10,018
Beans, sacks.....	1,726	1,021	883	1,742
Corn, centals.....	3,860	7,653	3,661	967
Oats, centals.....	1,285	1,116	3,672	8,550
Potatoes, sacks.....	9,754	15,132	11,793	10,920
Onions, sacks.....	1,503	931	1,469	974
Wool, bales.....	346	885	1,572	3,796
Hops, hales.....	167	35	20	—
Hay, bales.....	955	1,168	1,149	1,322

**Beans**—We remove the outside prices from our jobbing rates for Wheat Beans. The demand is small and wholesale lots can be bought at a concession for cash. Last night a ship arrived from Calcutta with a large cargo of Beans. These were bought in part to arrive, but the complications into which some dealers have brought themselves makes it probable that there will be a disposition to realize on the Beans, and this will bring them on the market and cause lower rates if sales are forced. This is the latest gossip in the trade.

**Barley**—The demand has been good and trade active at advanced prices. We note sales: 1,000 sks Bay Brewing, \$1.45; 500 do Coast do, \$1.45; 240 do Coast Feed, \$1.45, silver; 400 do fair Chevalier, \$1.47, silver; 100 do do, \$1.40 per cwt, gold; 8,000 cts Coast Feed, in two lots, at \$1.35 per cwt, gold; 1,500 sks do at \$1.45 per cwt, silver; 1,700 do do at \$1.37, gold; and 250 do do at \$1.40, silver; 800 sks Bay Chevalier, \$1.50, silver; 900 sks Fed at \$1.50 @ 1.52, silver; 4,000 cts good Coast Feed, \$1.45, gold; 3,000 cts fair Bay Brewing, \$1.50, gold; 1,750 sks Feed at \$1.40 @ 1.45 per cwt, silver; 9,700 do \$1.35 @ 1.37, gold; 2,000 cts fair Chevalier, \$1.42, gold; 300 do Chevalier, \$1.55, silver; 2,000 cts choice Bay Brewing, \$1.55, gold; 2,000 sks Coast Feed, \$1.42; 2,000 sks Bay Brewing, \$1.55, both lots payable in gold coin; 300 sks Bay Chevalier, \$1.55; and 800 sks do, \$1.60, both lots payable in silver.

**Beans**—There have been several changes in Bean prices. Red, Pink and small White have advanced. Limes have sold at a decline.

**Buckwheat**—Buckwheat is unchanged.

**Corn**—Corn is scarce and in sharp demand. An advance is seen in the following sales: Two lots, amounting to 4,000 sks large Yellow, sold last evening at \$1.70; 200 sks do, 1.67 per 100 lbs. These are gold rates.

**Dairy Produce**—The extensive packing and the fears of the result of the drouth have accomplished an advance in prices, as may be seen in our quotations. The supply of Butter is still large, but the trade is looking up in price. Cheese is unchanged.

**Eggs**—Eggs have advanced to 22c to 24c.

**Feed**—Ground Feeds show a considerable advance. Bran moves from \$16 to \$20 per ton, Middlings from \$27.50 to \$30, and Oil Cake Meal from \$32.50 to \$36. Hay is unchanged. We note sales as follows: 270 bales choice Wheat at \$18 per ton, and 250 bales choice Wheat and Clover mixed, \$14.25. A cargo of Cow Hay sold at \$13.50. 44 tons good Wheat and Oat, \$16.50. The best Wheat sells at \$18 per ton.

**Hops**—There is nothing new in Hops. No receipts have been received during the week and the trade is without life. A similar stagnation is reported from New York, the telegraph quoting sales of California Hops as low as 15c. We have no more explicit information at hand.

**Fruit**—Strawberries are becoming abundant, 150 chests were received Tuesday and the price falls to 10c to 12c per lb. About 800 boxes Oregon Apples sold at auction at 75c to \$1.05 per box. A private circular speaks of other Fruits as follows: "The Apples arriving are generally of inferior quality, and many lots have sold as low as 50c @ \$1; there is a fair inquiry for extra choice Pippins and E. Spitz; sales have been made up to \$2, and for a few very extra, as high as \$2.50 has been obtained by the box from store; the Oregon steamer brought down 878 boxes, sales from wharf ranged from \$50c to \$1.60 per box, the average quality was good, and they generally obtain preference over California stock. Oranges are having a good sale at about steady prices. Tahiti will arrive within ten days. Limes of all kinds are plenty California notably lower."

**Oats**—Oats are steady at former prices. The week's receipts are swelled by a large shipment from Oregon. We note sales of 110 sks choice Bay Surprise, \$2.40—an extreme price.

**Onions**—Onions are unchanged.

**Potatoes**—Potatoes are indescrable. The receipts continue heavy and the demand is light. We note a sale of 150 sks choicest Tomatoes at \$1.55. Our quotations for

old Potatoes are reduced. New Early Rose and Sweet Potatoes have advanced a little.

**Provisions**—Beef is a shade firmer in tone for the best qualities. Mutton is weak and the supply large. Hogs are weak and in tight demand. The market for Cured Meats is dull and shows a wide decline in quotations for Eastern Hams, which are in hand in excess of demand.

**Poultry and Game**—Hens, Roosters and Broiler show an advance. Turkeys have been scarce and higher. Ducks have fallen off. Game is stationary and in small variety. Some common Snipe sell at \$1 per dozen.

**Vegetables**—There are no new Vegetables reported for the week. There is a considerable cheapening of Asparagus, Green Peas and Rhubarb. New Potatoes, also, are more accessible. Full prices may be found in our tables.

**Wheat**—The advance in Wheat comes chiefly in selections for Milling, which have reached \$2.17 per cwt. Shipping does not advance as yet, though it would be difficult to purchase except at an advance. The shipping request is slight. We note sales: Millers are securing small lots at \$2.10 @ \$2.17, having just purchased 1,000 sks good at \$2.10 @ \$2.12, and 1,000 sks choice at \$2.15; 4,800 sks choice Milling at \$2.15, 800 sks choice Milling at \$2.15; 400 do fair do, \$2.10; 400 do Superfine, \$2.

**Wool**—Receipts of Wool are more abundant and some dealers report a better quality in their consignments than was expected from the bad year. The Wool now in market is not, however, fitted to name top price for the season. We note sales of 175,000 lbs Spring, 1 1/4 @ 19c; 50,000 lbs Spring, 1 1/2 @ 18c; 100,000 lbs Fall, 10 @ 12c. It is announced that Falkner, Bell & Co.'s new warehouse at the corner of Sixth and Townsend streets is now open for the storage of Wool. Their first auction sales will be held on April 17th, and all Wools intended for the sale must be here by the 10th of the month. As readers remember, we stated some weeks ago it was the design of this firm to inaugurate auction sales of Wool like those in London.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., March 28, 1877.

**BEANS.**  
Bayo, cts..... 3 1/2 @ 12 1/2  
Butter..... 1 1/2 @ 20  
Pca..... 2 1/2 @ 25  
Red..... 3 1/2 @ 25  
Pink..... 3 1/2 @ 25  
Sun White..... 2 1/2 @ 25  
Lima..... 2 1/2 @ 25

**BROOM CORN.**  
Common, lb..... 2 @ 25  
Choice..... 3 @ 4

**CORNFLOUR.**  
California..... 6 1/2 @ 4  
German..... 6 1/2 @ 4

**COTTON.**  
Cotton, lb..... 15 @ 18

**DAIRY PRODUCE, ETC.**  
Butter..... 25 @ 26 1/2  
Cal. Fresh Roll, lb..... 25 @ 26 1/2  
Point Reyes..... 27 1/2 @ 28  
Fickel Roll..... 27 1/2 @ 28  
Pickin..... 27 1/2 @ 28  
Western Reserve..... 16 @ 20  
New York..... — @ —

**CHEESE.**  
Cheese, Cal., lb..... 12 1/2 @ 15  
Old..... — @ —  
Eastern..... 12 1/2 @ 15  
N. Y. State..... 19 @ 20

**EGGS.**  
Cal. fresh, doz..... 23 @ 24  
Ducks..... 22 @ 23  
Oregon..... 19 @ 20  
Eastern..... 19 @ 20

**FEED.**  
Bran, ton..... 20 @ 26  
Corn Meal..... 34 @ 35  
Hay..... 10 @ 18  
Middlings..... 30 @ 40  
Oil Cake Meal..... 36 @ 40  
Straw, bale..... 75 @ —

**FLOUR.**  
Extra, bbl..... 6 50 @ 67 00  
Superfine..... 4 75 @ 50 00  
Graham..... 5 50 @ 66 00

**FRESH MEAT.**  
Beef, 1st quality, lb..... 7 @ 9  
Second..... 6 @ 7  
Third..... 4 @ 5  
Mutton..... 3 @ 4  
Spring Lamb..... 8 @ 10  
Pork, unpressed..... 6 @ 8  
Dressed..... 7 @ 9  
Veal..... 7 @ 9  
Milk Calves..... 9 @ 10 1/2

**GRAIN, ETC.**  
Barley, feed, cwt..... 1 45 @ 50  
Brewing..... 1 45 @ 50  
Chevalier..... 1 50 @ 60  
Buckwheat..... 1 80 @ 90  
Corn, White..... 1 52 1/2 @ 55  
Yellow..... 1 52 1/2 @ 55  
Small Round..... 1 55 @ 60  
Oats..... 1 70 @ 80  
Milling..... 2 25 @ 40  
Rye..... 1 85 @ 90  
Wheat, shipping..... 2 05 @ 22  
Milling..... 2 12 1/2 @ 17

**HIDES.**  
Hides, dry..... 17 @ 18  
Wet salted..... 7 1/2 @ 9

**HONEY, ETC.**  
Beeswax, lb..... 25 @ 27  
Honey in comb..... 10 @ 15  
Strained..... 6 @ 8

**HOPS.**  
California..... 15 @ 18  
Twelve mos. Burry..... 12 @ 16  
Six mos. Burry..... 12 @ 14

**NUTS—Jobbing.**  
Cal. Walnuts..... 8 @ 10

**OLD FRESH.**  
Apples, bx..... 50 @ 2 50  
Coral, lb..... 2 @ 3  
Bananas, bnch..... 2 @ 3 50  
Cocoanuts, 100..... 5 00 @ 6 00  
Limes, Mex..... 5 00 @ 12 50  
Cal..... 10 00 @ 15 00  
Lemons, Cal M..... 10 00 @ 15 00  
Sticky, bx..... 10 00 @ 11 00  
Oranges..... — @ —  
M..... — @ —  
Tahiti..... 12 50 @ 35 00  
Pears, bx..... 1 00 @ 2 50  
Pineapples, doz..... 6 00 @ 8 00  
Strawberries, lb..... 10 @ 12 1/2

**PRUNES.**  
Prunes..... 12 1/2 @ 17  
Raisins, Cal, bx 1 50 @ 2 50  
Malaga..... 3 00 @ 4  
Zante Currants..... 9 @ 10

**VEGETABLES.**  
Artichokes, doz..... — @ —  
Asparagus, bx..... 50 @ 1 00  
Beets, cts..... 60 @ —  
Carrots, 100 lbs..... 35 @ 37 1/2  
Cauliflower, doz..... 50 @ —  
Celery..... 50 @ —  
Garlic, lb..... 1 @ 2  
Peas, Green..... 2 @ —  
Sweet..... 3 @ 4  
Lettuce, doz..... 10 @ 12 1/2  
Parsnips, lb..... 1 @ —  
Rhubarb..... 1 @ 3  
Horseradish..... 4 @ 5  
Squash, Marrow-fat, tn..... 20 @ 25 00  
Tomatoes, lb..... 15 @ 20  
Turnips, doz..... 50 @ —  
White..... 75 @ —

**WHEAT.**  
Wheat, 1st quality, lb..... 12 1/2 @ 17  
Choice..... 14 @ 16  
Northern..... 17 @ 21  
Burry..... 10 @ 16  
Oregon, Eastern..... 20 @ —  
Valley..... 25 @ —

**WOOL, ETC.**  
Short Fre..... 14 @ 18  
Long Fre..... 18 @ 20  
Twelve mos. Burry..... 12 @ 16  
Six mos. Burry..... 12 @ 14

**FRUITS AND VEGETABLES.**

[WHOLESALE.]

WEDNESDAY M., March 28, 1877.

**FRUIT MARKET.**  
Apples, bx..... 50 @ 2 50  
Coral, lb..... 2 @ 3  
Bananas, bnch..... 2 @ 3 50  
Cocoanuts, 100..... 5 00 @ 6 00  
Limes, Mex..... 5 00 @ 12 50  
Cal..... 10 00 @ 15 00  
Lemons, Cal M..... 10 00 @ 15 00  
Sticky, bx..... 10 00 @ 11 00  
Oranges..... — @ —  
M..... — @ —  
Tahiti..... 12 50 @ 35 00  
Pears, bx..... 1 00 @ 2 50  
Pineapples, doz..... 6 00 @ 8 00  
Strawberries, lb..... 10 @ 12 1/2

**PRUNES.**  
Prunes..... 12 1/2 @ 17  
Raisins, Cal, bx 1 50 @ 2 50  
Malaga..... 3 00 @ 4  
Zante Currants..... 9 @ 10

**VEGETABLES.**  
Artichokes, doz..... — @ —  
Asparagus, bx..... 50 @ 1 00  
Beets, cts..... 60 @ —  
Carrots, 100 lbs..... 35 @ 37 1/2  
Cauliflower, doz..... 50 @ —  
Celery..... 50 @ —  
Garlic, lb..... 1 @ 2  
Peas, Green..... 2 @ —  
Sweet..... 3 @ 4  
Lettuce, doz..... 10 @ 12 1/2  
Parsnips, lb..... 1 @ —  
Rhubarb..... 1 @ 3  
Horseradish..... 4 @ 5  
Squash, Marrow-fat, tn..... 20 @ 25 00  
Tomatoes, lb..... 15 @ 20  
Turnips, doz..... 50 @ —  
White..... 75 @ —

**WHEAT.**  
Wheat, 1st quality, lb..... 12 1/2 @ 17  
Choice..... 14 @ 16  
Northern..... 17 @ 21  
Burry..... 10 @ 16  
Oregon, Eastern..... 20 @ —  
Valley..... 25 @ —

**WOOL, ETC.**  
Short Fre..... 14 @ 18  
Long Fre..... 18 @ 20  
Twelve mos. Burry..... 12 @ 16  
Six mos. Burry..... 12 @ 14

**FRUITS AND VEGETABLES.**

[WHOLESALE.]

WEDNESDAY M., March 28, 1877.

**FRUIT MARKET.**  
Apples, bx..... 50 @ 2 50  
Coral, lb..... 2 @ 3  
Bananas, bnch..... 2 @ 3 50  
Cocoanuts, 100..... 5 00 @ 6 00  
Limes, Mex..... 5 00 @ 12 50  
Cal..... 10 00 @ 15 00  
Lemons, Cal M..... 10 00 @ 15 00  
Sticky, bx..... 10 00 @ 11 00  
Oranges..... — @ —  
M..... — @ —  
Tahiti..... 12 50 @ 35 00  
Pears, bx..... 1 00 @ 2 50  
Pineapples, doz..... 6 00 @ 8 00  
Strawberries, lb..... 10 @ 12 1/2

**PRUNES.**  
Prunes..... 12 1/2 @ 17  
Raisins, Cal, bx 1 50 @ 2 50  
Malaga..... 3 00 @ 4  
Zante Currants..... 9 @ 10

**VEGETABLES.**  
Artichokes, doz..... — @ —  
Asparagus, bx..... 50 @ 1 00  
Beets, cts..... 60 @ —  
Carrots, 100 lbs..... 35 @ 37 1/2  
Cauliflower, doz..... 50 @ —  
Celery..... 50 @ —  
Garlic, lb..... 1 @ 2  
Peas, Green..... 2 @ —  
Sweet..... 3 @ 4  
Lettuce, doz..... 10 @ 12 1/2  
Parsnips, lb..... 1 @ —  
Rhubarb..... 1 @ 3  
Horseradish..... 4 @ 5  
Squash, Marrow-fat, tn..... 20 @ 25 00  
Tomatoes, lb..... 15 @ 20  
Turnips, doz..... 50 @ —  
White..... 75 @ —

**WHEAT.**  
Wheat, 1st quality, lb..... 12 1/2 @ 17  
Choice..... 14 @ 16  
Northern..... 17 @ 21  
Burry..... 10 @ 16  
Oregon, Eastern..... 20 @ —  
Valley..... 25 @ —

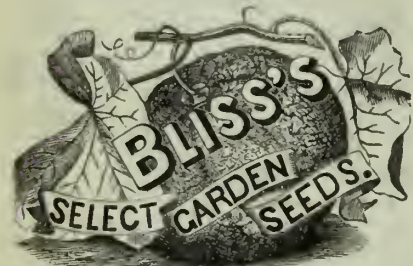
**WOOL, ETC.**  
Short Fre..... 14 @ 18  
Long Fre..... 18 @



## Nurserymen.

# Four Grand Prize Medals

AWARDED OUR EXHIBIT  
AT THE CENTENNIAL.



Bliss's Illustrated Seed Catalogue and Amateur's Guide to the Flower and Kitchen Garden—200 pages, including several hundred finely-executed engravings, and a beautifully-colored lithograph, 35 cents.

Bliss's Illustrated Gardener's Almanac and Abridged Catalogue—128 pages. Embraces a monthly calendar of operations, and a price list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. 10 cents.

Bliss's Illustrated Potato Catalogue contains a descriptive list of all the varieties recently introduced, with all other desirable sorts; also much useful information upon the cultivation of this valuable esculent. 10 cents.

Address, **B. K. BLISS & SONS,**  
34 Barclay street (P. O. box 5,712), New York.

## TREES, TREES AND PLANTS,

OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

**W. R. STRONG & CO.,**  
Nos. 6, 8 and 10 J Street, Sacramento.

## FRUIT AND ORNAMENTAL TREES,

Evergreens and Green-house Plants, Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

**THOS. MEHERIN,**  
516 Battery Street,

P. O. Box 722 Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

## THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING ROSES

**Strong Pot Plants**, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

### LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, - - - San Jose, Cal.

A large and general assortment of Fruit and Ornamental Trees, Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. 1 offer for sale a well assorted stock. Low-topped, stalky fruit trees a specialty. Address, S. NEWHALL, - - - San Jose, Cal.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.

**JOSEPH SEXTON,** - - - Proprietor.  
CULTIVATOR OF Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Petaluma, Cal.

## 500 CHOICE VARIETIES OF PLANTS

Trees, Plants, Bulbs. Fall Price List and Bulb Catalogue GRATIS. Address, F. K. PHOENIX, Bloomington Nursery, Ill.

**Dewey & Co.** { 224 } Patent Agt's.  
{ Sansome St }

# GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).  
THOS. UPTON.  
I. C. STEELE.

THOS. FLINT  
G. P. KELLOGG  
W. L. OVERHISER

O. HUBBELL.

D. CAMPBELL.

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

**DANIEL INMAN, Manager.**

# Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## TO COLOR BUTTER.

EVERY DAIRYMAN SHOULD USE

**Wells, Richardson & Co.'s PERFECTED BUTTER COLOR.**

It adds five cents per pound to the value.

It gives a pure rich Dandelion color.

It imparts no taste or smell.

It is as harmless as salt.

It is better than Carrots.

It is better than Annatto.

It is better than any other coloring.

Foreign or domestic, liquid or solid.

A sample sufficient to color fifty pounds of butter will be sent to any address, postpaid, on receipt of ten cents. Every Dairyman who wishes to realize the highest price should give it a trial now.

An energetic man wanted to act as agent in every town. Liberal terms to the right man. For terms and territory, address at once,

**WELLS, RICHARDSON & CO.,**  
Burlington, Vermont.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

**GOLDEN GATE PLASTER MILLS,**

LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

**\$500**

Yearly Profit from 12 Hens, by Hatching Eggs and Raising Poultry by means of horse manure alone. The Centennial and several Gold Medals, and 12 Diplomas, have been awarded to Professor A. Corbett, No. 7 Warren Street, N. Y. Testimonials and Catalogue sent on receipt of a three cent stamp.

FARMERS write for your paper.

# Seedsman.

## BULBS SEEDS TREES

## SEVIN VINCENT & CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. Trade price list on application.

\* \* \* We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**

P. O. Box 10231,

607 Sansome street, S. F.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

## SPANISH CHUFA

SEED FOR SALE.

Address  
**L. L. BEQUETTE,**  
Downey City, Los Angeles County, Cal.

Trees, Plants, Spring Lists free. F. K. PHOENIX, Bloomington Nursery, Illinois.

## INTERNATIONAL

Photographs of many of the finest Horses, Neat Cattle, Sheep and Swine, exhibited at the Centennial. Arabian, Trotting, Thoroughbred, Percheron, Matched Teams, Carriage, Heavy Draft, Agricultural Horses,

## LIVE STOCK

etc. Among the Neat Cattle are Short Horns, Herefords, Jerseys, etc. Among the Sheep are Cotswolds, South Downs, Shropshires, Merinos, etc. Among the Swine, are Chester White, and Small Yorkshire, in

## EXHIBITION

all, nearly 100 specimens, in Cards, Stereoscopic and 5x8 sizes. Will be sent by mail, post-paid, for 15 cents each for Cards, 25 cents each for Stereoscopes, and cents each for 5x8, sizes, on receipt of price. Send

## PHILADELPHIA

green stamp for printed list. Official Catalogue will be sent for publishers' price, 25 cents each. Address,

**E. F. HOVEY, 1408 Chestnut Street,**

Sole Publisher to the Live Stock Exhibition.

1876.

## SANBORN & BYRNES,



Mechanics' Mills, Mission Street,

bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Jewels and Balusters.

## NAPA VALLEY PROPERTY.

The undersigned, a resident and practical farmer and horticulturist in Napa Valley for the past twenty-five years, is now making REAL ESTATE in this valley a specialty. Parties contemplating investing in Napa Valley can derive much valuable information relative to true values, seasons, rain-fall, crops, etc., by calling on or addressing the undersigned. Fine Wheat Farms at \$40 to \$60 per acre, ON LINE OF RAILROAD AND NAVIGATION. Superior Alfalfa Lands on Napa River; Productive Vineyard Properties; Garden Lands and Villa Residence Properties.

**THOS. H. THOMPSON,**

Wells, Fargo & Co.'s Building,

Napa, Cal.



# UNION BOX FACTORY, GEO. W. SWAN & CO.,

114 to 124 Spear Street, between Mission and Howard, - - - - - San Francisco.

## STRAWBERRY BASKETS:

SWAN & CO.'S PATENT, ONE POUND, TIN TOP, PER 1,000,	\$ 9.00
SWAN & CO.'S PATENT, ONE POUND, NO TIN, PER 1,000,	5.55

## AVERILL MIXED PAINT,

MANUFACTURED BY THE

## California Paint Company.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED  
SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best  
white lead, prepared in the ordinary way. Is cheaper, handsomer,  
more durable and elastic than the best of any other paint.

For Sample Cards and Circulars, Address

## California Paint Company,

27 STEVENSON STREET, S. F.

Orders from the Country promptly attended to and sent C. O. D.

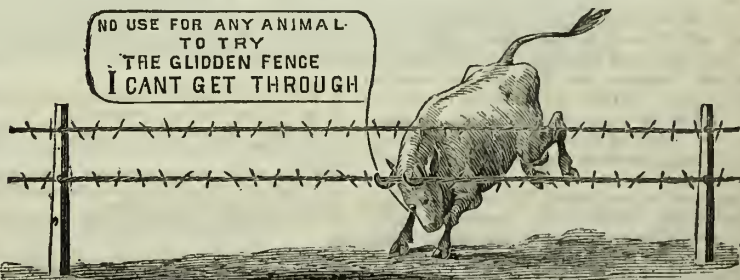
**PALMER BROS.,**  
726-734 MARKET STREET, S. F.

**Our Motto: "LOW PRICES."**

Ladies' Hats and Bonnets—Latest Styles,  
French Millinery, Flowers, Feathers,  
Human Hair Switches, from \$1.00,  
Laces and Veil Stuffs, Vests,  
Neckties and Riches,  
Purses, Belts, Fans, Jewelry,  
Collars and Cuffs, Aprons,  
Ruchings, Embroideries,  
Worsted, Canvas, Ties,  
2 to 6 Button Gloves, Gauntlets,  
Handkerchiefs, Stockings,  
Toilet Articles, Face Powders,  
Dress Trimmings, Buttons,  
Sewing Articles—Best in Market,  
Corsets—French Woven, Thomson's,  
Stair and Table Oil Cloth,  
Parasols, Umbrellas,  
Baby Goods of Every Description,  
Ladies' and Children's Suits,  
Ladies' Cotton Underwear of "Stems,"  
"Merino" " " Norfolk and N.  
Brunswick,  
Morocco Satchels and Valises,  
Gents' Furnishing in all the Best Brands,  
Boys' and Men's Custom Made Suits.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by  
J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and  
is More in Demand than all Other Barb Fences Put Together.

NO USE FOR ANY ANIMAL  
TO TRY  
THE GLIDDEN FENCE  
I CAN'T GET THROUGH



About one-half the cost of any  
other good fence; and can  
be put up for one-quarter  
the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLID-  
DEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO  
UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - - - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

**INTERNATIONAL HOTEL,**  
ALL NEWLY FURNISHED.  
824 & 826 Kearny Street, - San Francisco  
\$1.50 and \$2.00 per day. Free Coach to the House.  
H. C. PATRIDGE, Proprietor.

**CALVERT'S CARBOLIC SHEEP WASH,**  
\$2 Per Gallon.



After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

YOUR NAME PRINTED on Forty Mixed Cards for \$55 or \$77 a Week to Agents. \$10 Outfit Free. Ten Cents. STEVENS BROS., Northford, Conn. P. O. VICKERY, Augusta, Maine.



## DEWEY & CO. American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

### H. me Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

### DEWEY & CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

"BETTER TIMES ARE COMING!"

## THE GOLDEN PIANO

COMING RIGHT ALONG,

WILL BE SOLD

WELCOME PRICES

FOR CASH,

To all who want a good instrument and desire to pay for only what they get. Just wait for the "GOLDEN" PIANO and you can get a good one at a reasonable figure. Further particulars will be advertised soon.



Some Reasons for Subscribing for It.

Because it is a permanent, first-class, conscientious able, and well conducted journal.  
Because it is the largest and best agricultural weekly west of the Rocky Mountains.

That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.

That all the honest industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.

That the Rural, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

Subscription, \$4 a year in advance.

DEWEY & CO., Publishers.  
San Francisco, 1877.

### Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissioners; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract From the U. S. Statutes. The Law Concerning Pre-emption Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys of Land for Pre-emption, List of California Post Offices.

Published and sold by DEWEY & CO., S. F.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte and Sutter counties.  
G. W. McNEWE—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERS—Tulare, Kern and Fresno counties.  
A. U. STROGO—Lake, Napa and Solano counties.  
G. KITSOW—Contra Costa county.  
W. D. WHITE—San Bernardino and Los Angeles counties.

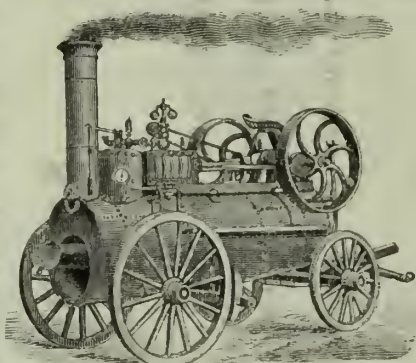
### Our Poultry Department.

E. H. Cheny writes from Bodega, Sonoma county, as follows: "Your paper is worth its subscription price yearly to any farmer who keeps two dozen chickens, to get Mr. Eyre's opinion upon the value of the different breeds of fowls, the proper treatment for them, the diseases to which they are liable and the remedies. I became acquainted with Mr. Eyre through your columns, and I have no cause to regret it, for in my dealings with him I find everything as represented, and without any disparagement for others, I can recommend him as one in whom confidence will not be displaced."

### RELIABLE TURNIP SEED.

Mr. Rupert W. Crompton, Esq., wrote, March 7th, 1877, that RENNIE'S PRIZE SWEET TURNIP yielded more than three times as much as the common seed. Mr. L. C. Fisher raised 1,800 bushels last year. Price, per pound, (in America currency, pre-paid,) thirty cent.  
WM. RENNIE, Seedsman, TORONTO, CANADA.

H. W. RICE,  
Manufacturer of  
The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less than any engines in use. Wood-Burning Engines changed to Straw-Burners, Saw-mill and Flour-mill Engines. Second hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

## HEALD'S BUSINESS COLLEGE

No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

### TULE LANDS.

Pasture and Crops this Season.

### TO LEASE.

Three thousand five hundred acres, well leveled and ready for immediate cultivation. Good crops can be raised this season if put in at once. Also.

20,000 Acres of Excellent Pasture.

Also, TULE LAND, Leveled and Unleveled, for sale in quantities to suit. Apply to

### M'AFEE BROTHERS,

426 Montgomery Street, San Francisco.

## ROWELL & CHESMAN

Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.  
Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulations, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Read address on postal card, and this book will be forwarded free of charge.

### HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.

Wholesale Grower of

ORANGE, LEMON and LIME TREES.

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

## SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

Early Canada } Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel } Yellow Globe } Beet Seed.  
White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

### OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls.

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown

Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 660, San Francisco, Cal.

### M. FALLON,

Cor. Seventh & Oak Sts.,

OAKLAND, CAL.

Light and Dark Brahmas, Buff, White and Partridge Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, White and Brown Leghorns, Silver Grey Dorkings, Houdans, Silkies, Black-Red Games, Bronze Turkeys, Rouen and Aylesbury Ducks, All from Premium Stock of Best Strains.

Fowls of the above varieties for sale; also, Chicks in their season. Eggs packed with care and sent in rotation as orders are received.

### THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

Any part of the

Coast to Hatch After

Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

25 FANCY CARDS, 16 styles, with name, 10c.; 20 Fancy Scroll, 15 styles, no name, 10c.; 30 Royal Bristol, 5 hints, with name, 20c., postpaid.  
J. B. HUSTED, Nassau, Rems. Co., N. Y.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for hatching from Pure Bred Fowls.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, APRIL 7, 1877.

[Number 14.]

## The Elephant in Agriculture.

When a city-bred man, in conscious pride of his ability, buys a farm and thinks that he can without any agricultural experience show all the old farmers of the neighborhood how a farm ought to be managed, he gets an elephant on his hands. This is not the animal of which we write.

When the rural lad, or his father, comes to the city and places confidence in every swindler who approaches him, he will be pretty sure to "see the elephant" before he reaches home. We do not write of this animal either.

The engraving on this page shows a fair East Indian landscape. It is a beautiful scene, in which mountain grandeur and valley sunshine and vegetation mingle to delight the beholder.

Were it not for the monument and for the rude mechanism of the farm wagon which appears on the wide road-way, it might be a scene in California—and yet not quite, for elephants are not used in this State as farm animals.

The elephant has something of a history in connection with the rude agriculture of the East. He is a great power and he is intelligent and teachable. The huge animals in the engraving appear to be walking along as quietly as an old pair of work-horses, and the most enthusiastic teamster would delight in the immensity of the load which could be heaped up in the high-wheeled cart which they draw behind them. How puny beside these working monsters seem the noble animals which do most of our farm labor.

Following the thought suggested by the engraving, we have gone to our books to ascertain what has been done with the elephant in Eastern agriculture. We read in Martin's Natural History that the elephant when once tamed becomes, partly from his docility, intelligence and affection for the human race, a most useful animal. In early times he was used for war, but the invention of artillery put an end to his usefulness in this particular. The elephant is possessed of uncommon strength, bearing burdens of from 2,000 to 4,000 pounds. It is a mistake to suppose that an elephant needs 150 pounds of food per day; 60 pounds of good, dry, nutritious fodder is sufficient. We note this point in case any of our readers should think of introducing the animals.

Dr. George Schweinfurth, in his late work, "The Heart of Africa," says that medals which have come down to us prove beyond a doubt that the African elephant was employed as a domestic animal. The state of torpor into which all the nations of the northern part of Africa have fallen since the fall of the Roman empire, is sufficient explanation why the worth of this animal has been suffered to fall into oblivion.

## Oppressive Assessments.

There is now not a little complaint among farmers concerning the way in which the county assessors are discharging their labors. We do not mean that the complaint is a personal one against these officers but rather against the instructions under which they are working or the customs and precedents which guide them.

We noted not long since the unjust discrimination which the Napa vine growers perceived in taxing vineyard property in such a way that the levy was equivalent to a tax on the growing crop, while the growing grain crops were not thus assessed. Now the farmers of Butte county are vigorously protesting against the infliction of the very thing which the Napa vine growers said was not done in their county, viz: the assessment of growing grain as so much

tax has to be paid at once by the renter, and the owner of the soil escapes the taxation altogether, as his rent is taken out of the aggregate yield of the season. Then, again, should the farmer hold on to his grain until the next season, the stock in the granary is again taxed. Can there be anything more absurd or unfair than this? We understand that most of our farmers on being assessed will enter a protest with the assessor, and it is expected that some redress will be had through the Courts."

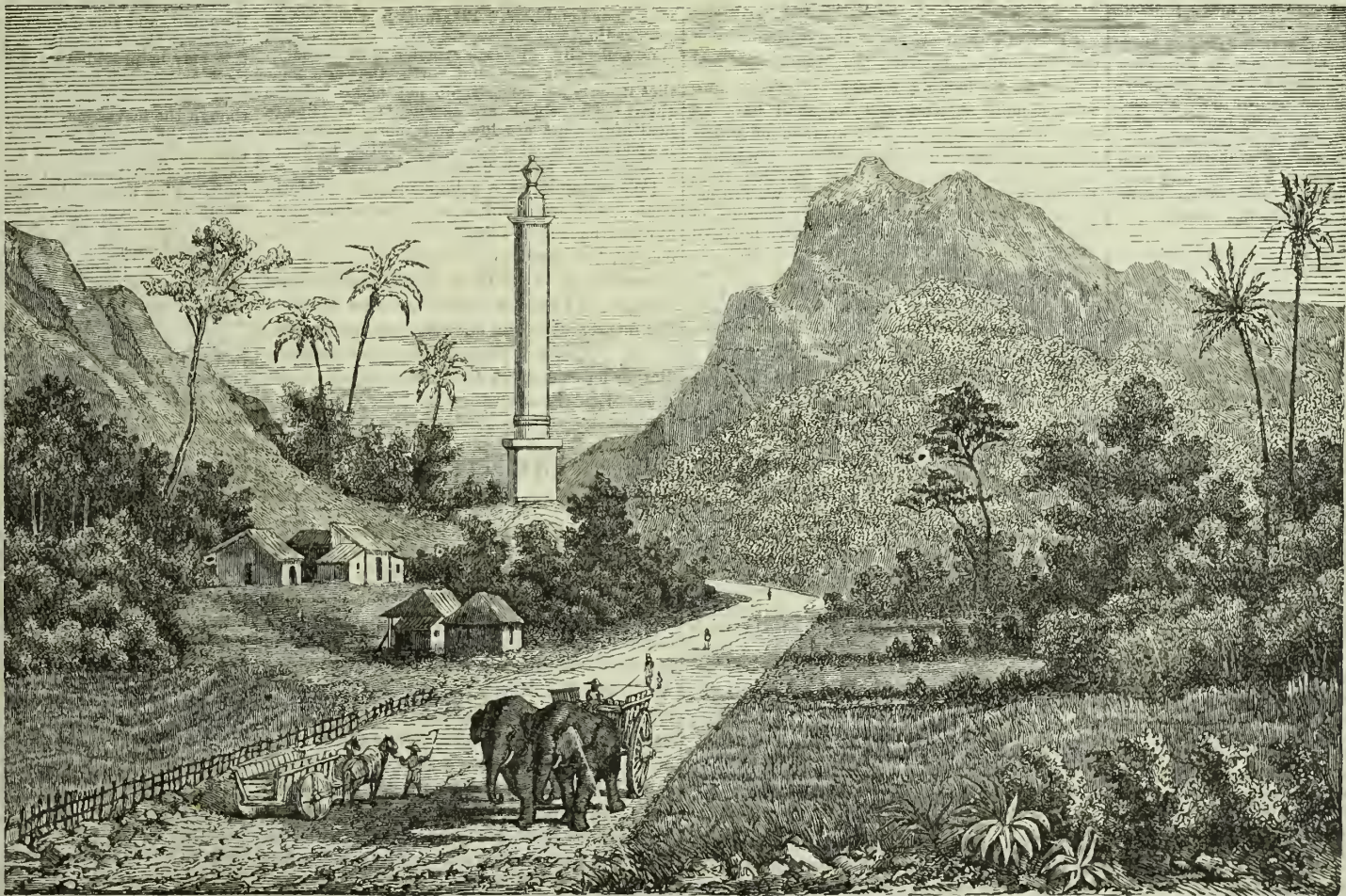
The double taxation of the grain which is mentioned as possible in the above quotation, when the crop is held until the assessor makes another visit, corresponds to the double tax on wine, which is one of the hardships which the vine growers protest against. On this point we read as follows in an article written by a vine grower in the last issue of the *St. Helena Star*. He writes: "First. The assessor last year valued bearing vineyards of foreign varieties at

## What California Has Not.

Sometimes it is easier to describe a thing by what it is not rather than by what it is. Thus when a man is possessed of many virtues it is easier to enumerate his few faults. This must be the philosophy of the gossips and fault-finders, although we never thought of their behavior in that light before. We have had such a long task in telling the many good things which have thus far been discovered in California, that we are not loth to take the other side and finish up the description by telling what California has not. The beauty of the whole matter is, too, that in our abundance we have not missed the trees and plants which Dr. Gray, in his writings about Darwinism, says do not grow naturally in California.

It is true that we knew some of them were not here indigenous, but so many have been introduced and so many glorious substitutes exist, that to stop and mourn for what we have not is senseless as to forget the salmon which lies in our basket and cry for the shiner which wiggled off the hook. This is the worst which Dr. Gray can say of us: "California has no magnolia, tulip or star-amise trees; no so-called papaw (*Asimina*); no barberry of the common single-leaved sort; no podophyllum or other of the peculiar associated genera; no ne-lumbo or white-water lily; no prickly ash or sumach; no lob-lolly bay or stuartia; no bass-wood or linden; neither locust, honey-locust, coffee-trees (*Gym-nocladius*) nor yellow-wood (*Cladrastis*); nothing answering to hydrangea or witch-hazel, to gum-trees *Nyssa* and *Liquidambar*, *Virburnum* or *Dierilla*; it has few asters and golden-rods; no lobelias; no huckleberries and hardly any blueberries; no epigea, charm of our earliest Eastern spring, tempering an icy April wind with a delicious wild fragrance; no calnia or clethra, or holly or persimmon; no catalpa-tree, or trumpet-creeper; nothing answering to sassafras, or to benzoin-tree, or to hickory; neither mulberry nor elm; no beech, true chestnut, hornbeam or ironwood, or a proper birch tree; and the enumeration might be continued very much further by naming herbaceous plants and others familiar only to botanists."

IMPORTED SHAD.—A shad weighing one and a half pounds was taken the other morning in the bay. This is the second one captured recently, and proves that the Pacific coast waters are perfectly adapted to the fish. The time will come, through the labors of the State Fish Commissioners, when shad will be found as abundantly in our markets as in those of the Eastern cities.



SCENE IN INDIA—THE ELEPHANT AS A FARM ANIMAL.

personal property. The *Chico Enterprise* states the grievance and its bearings upon the farmers as follows: "The assessors of the county, having commenced their labors of assessing, the farmers are experiencing a tremendous hardship under the new order of the State Board of Equalization to tax the growing crops. The tax seems to us the most oppressive of any tax yet levied. The farmer, in former years, has been first taxed upon his land, next his improvements, and then come his wagons, horses and other personal property. But here comes this year the re-enactment of that old outrageous tax upon his growing crop that may yet turn a failure—literally a tax upon his industry—his labor. As well might a merchant be taxed upon the prospective profits upon his store for the year as the farmer be taxed upon his growing crop. The one is as much entitled as the other in our estimation, and to make a distinction shows at once unequal taxation. But the greater hardship is experienced by the renters of land who have the crops assessed to them as so much personal property—four dollars per acre for a summer-fallowed crop and three dollars per acre for the winter sown. This personal

\$125 an acre, (if I mistake not) being from two to three times as much as land adjoining of same quality, used for wheat growing. Second. It being impossible to sell wine before the assessor comes around for the next year, your wine has to be assessed and taxed again.

"There is no other agricultural product that is burdened with such excessive taxation. This is why every vineyard almost in the State is under mortgage. This is the reason why no more vines are being planted, and why many are being dug up, and this is the reason why foreign varieties of grapes had to be sold last year in Napa for \$15 per ton, freight two dollars, netting only \$13 per ton. All these taxes and discriminations go right back to the producer, who is the sufferer in the end."

These things are certainly vital points in the growth of our agricultural industries. They should be fully discussed by all those engaged in these branches of production, and some measure pressed upon the next Legislature which will settle the matter upon the basis of justice and the encouragement of those lines of progress upon which the future of our State depends.



## CORRESPONDENCE.

### The Century Plant in Mexico.

EDITORS PRESS:—Although it is generally known that the so-called century plant does not wait 100 years before it blossoms, there are some who will be interested in the following extract from the journal of the late A. J. Grayson, who resided many years in the republic of Mexico and noted the growth and uses of the plant in that country:

I see much written of the wonders of the century plant, which is supposed to bloom once in 100 years. I am fully convinced that it is nothing more than the maguay (*Agave Mericana*) plant of Mexico. It reaches maturity here in from seven to eight years. The stem is wrenched from the body of the leaves, which discharge a thick, sweetish, milk-white juice. This juice is known as *pulque dulce*, which is an innocent drink; in a few days it ferments and becomes intoxicating; then it is *pulque fuerte*. When it is distilled it is called *mescal*, which is the national drink of Mexico. It is one of the most valuable plants in Mexico. The fibers of the leaves are used by the peasantry for thread and rope; the leaves are used for scouring kitchen utensils, etc. The root is roasted and has a sweetish taste; I think molasses might be made from it. I have been told that the resin obtained from this plant is a preventive against attacks of the teredo and other destructive insects.

The city of Tequila is the great manufactory of the universal drink distilled from the maguay plant, which in this locality seems to be the best in Mexico. Nearly the whole city is made up of distilleries, and long before you enter its precincts you can smell the fumes of this horrid liquor. Vast fortunes have been realized by those engaged in its manufacture. The plant grows to a large size here, and will thrive best upon what appears to be a barren soil. In this portion of Mexico the eternal cactus of every quality and the maguay plant are ever before you.

While visiting the market in the City of Mexico, we saw large worms or grubs which are found inside the thick leaves of the maguay; these are highly relished by the natives, and meet with ready sale. My wife inquired of a native what he intended to do with these grubs. He described the manner of preparing them with chile, then rolled up in a *tortilla*, and with an expression of the utmost satisfaction, or, as we would say, "make your mouth water," exclaimed, "Ah, que bueno!"

MRS. F. GRAYSON CRANE.

St. Helena, March 24th, 1877.

### San Bernardino County.

#### Riverside.

EDITORS PRESS:—The cry comes to us from many counties of a dry year, short crops, hard times in prospect, etc. Here we are independent of rain, and to-day our fields show the benefits of a thorough system of irrigation. While our neighbors are suffering for water, we are luxuriating in the bountiful supply afforded by the Santa Ana. Our trees are budding and blossoming, our small fruits and vegetables are preparing for a bountiful crop, our grapes are nerving themselves for a still greater yield, and last, but not least, our farmers, feeling entire confidence in our water supply, are planting thousands of orange and lemon trees.

Magnolia avenue, 132 feet wide, has been graded as far as Sayward, and this week a row of eucalyptus trees on either side, one of pepper trees in the center, with six magnolias at each intersecting street, every half mile, will be planted. This will be the finest drive in southern California, and I doubt not in America.

Since my last, many Eastern people have come and settled amongst us. Houses spring up like mushrooms, and one is reminded of the Arabian Nights as he makes his weekly trip into this valley.

#### Colton.

A few days ago I paid a visit to this new town, and find it too has in it the elements of progress. Several new houses have been built. The Transcontinental was not nearly large enough to meet the requirements of the increased travel, and so a large addition is being built. A neat little Presbyterian church is nearly finished and will soon be dedicated, free from debt. This enterprise is due to the earnestness and persistent labors of Rev. James Cameron and wife, pioneers of Colton.

A water company has been formed and pipes are already ordered to convey water to the citizens from a reservoir to be built upon the terrace near Mr. Cameron's residence. A great many semi-tropical trees will be planted this season in Slover colony, adjoining Colton. Your cotemporary, the *Semi-Tropic*, is a promising youth and is receiving deserved support in this region.

#### Bees.

From the best information I can find the honey crop will not be one-half in this county it was last year, and symptoms are not favorable for swarming. Last year, in my own apiary, swarming began by the middle of March. So far, but few drones have appeared and very little preparation to raise them. Few eggs are

yet in drone cells. My bees (Italian) are, however, in good feed on the Temescal mountains and rapidly filling up their hives with pure, white honey, probably from black sage, which is now in bloom upon the mountain sides. The white sage in some sections looks well in this valley, but in many places the growth is exceedingly light. The common earlier wild flowers, alfilerilla, etc., have been altogether lost to us on account of the short rain supply. Here in the mountains we have had about five inches. In the valleys not over three have fallen. The climate of

#### Temescal Valley

Is just perfect and the best resort I know of for persons suffering with lung troubles. Asthmatics revel at Riverside and Temescal in the clear, bracing atmosphere. The warm springs are said to be very beneficial for all chronic diseases except consumption, and to the consumptive the good living afforded, together with pure air and water, must be of great benefit. There are several fine farms in this valley, some of which are so moist as to require underdraining before they can be successfully tilled, and others use the surplus water for irrigating the less favored spots. Beekeeping is quite extensively carried on. Mr. Anderson has about 180 stands, Mr. Morse about 200 and I have reduced my own to something over 190. These are all within six miles. Besides these, there are several smaller apiaries. But I have already taken up too much of your valuable space. Allow me here to say that I value the *RURAL PRESS* more every day of my life, and would like to know that every family in California could have a copy. Cannot some of our rich farmers do something to aid their poorer and less favored brethren?

D. W. McLEOD.

P. S.—If there is any further information to be had upon the influence of bees upon the citrus family, we would be pleased to have it.

Riverside, March 22d, 1877.

[Can any of our readers supply the information? We should be pleased to have it.—EDS. PRESS.]

### San Joaquin County.

EDITORS PRESS:—Crops in this section of San Joaquin county, between the Mokelumne and Calaveras, are looking remarkably well. Two or three more showers and we shall have an assured crop, fully up to the average of years. Feed is also good and stock in fine condition. From reliable persons who have traveled from Washington Territory to San Diego, we are assured that one of the most desirable sections of California is that embraced in the area north of Stockton and south of the Cosumnes river.

The climate is healthful, free from chilling fogs or generally excessive heat; soil rich, producing large crops of cereals, vegetables and fruits, of the ordinary and semi-tropical kinds. There is a central and easy accessible market, by water or rail, and land obtainable at prices much below that demanded in more remote but less favored sections. Our society is good, property safe, villages, churches, and schools abound, and all has a healthy growth.

Active measures are being taken to introduce the waters of the Mokelumne, Calaveras and Stanislaus rivers for irrigating and manufacturing purposes over the surrounding country.

There is no doubt as to the success of the former in the near future, as surveys are being made with satisfactory results, and men of capital and enterprise are the active promoters. It is not intended as a monopoly, but all engaged in the farming interest are desired to take a hand. The effect will be to greatly enhance the price of land, encourage manufacturers, increase population, and secure a certainty, diversity and increase of crops. The immigrant should not fail to examine our advantages, and thereby possibly select this as his future home.

G. C. H.

### Tulare County.

EDITORS PRESS:—As your article on "Investments in California," in your issue of the 17th instant, would lead one to suppose that possibly capital might be induced to invest in a certainty even in an agricultural district, I would like to bring to the notice of your readers what we in these parts look upon as a grand chance for capital. I would premise by saying that to the south of Kings river there is a vast extent of splendid land useless without irrigation and utterly dry this year, when we have had not quite one inch of rain for the whole winter. Between Mussel slough and Cross creek it is thickly settled, depending on two ditches called the "Settlers" and "Lakeside," which of course are now dry as Cross creek (their source supply), which has not run this winter.

Now we, the farmers here, have secured the right of 300 feet of water to be taken from Kings river at the gorge where it leaves the hills and, by survey made, it can be brought to the present railway (between Kingsburg and Cross creek) giving there a fall of six feet, which in itself is a grand fortune at no distant date. After the water power has been utilized in building a city for a market for our products in the way of wool, cotton and pork, it will still serve us for irrigating and pay once again.

Another grand item, too, is that this ditch must be the outlet for the almost inexhaustible and magnificent timber which clothes the moun-

tains at the head of Kings river. The possibilities of this grand undertaking are too great for a short communication, but I hope these hints may perhaps create a little inquiry among some of the many moneyed men who could further enrich themselves by helping us, they finding the necessary capital and we the muscles.

G. H.

Hanford, Tulare county, March 20th.

### Marin County.

EDITORS PRESS:—Since I became a subscriber for the *RURAL PRESS* I have looked in vain for some good words said of Marin county, and I do assure you I am growing quite jealous of the many virtues and encomiums you are continually conferring upon other counties. I certainly believe that many good things can with truth be said of each and every county in California, but we think Marin head and shoulders above all the rest. You must know that in our county we never have a drouth, and we never have a flood, and we invariably raise good crops. Some years better than others, I admit. You must know, too, that we are raising the finest horses in the State. We have the best cows and make the most butter and the best butter. I think this is conceded to us on all sides. We can boast of inventors also—at least I know we have one we are very proud to claim, although at the present time he is a resident of Sonoma county. I refer to Captain Oliver Allen. Did you ever see his "fracture bed?" You must see it to appreciate it. It is the most wonderful and perfect piece of ingenuity and mechanism I ever saw. If you have a broken limb and are fortunate enough to get upon one of his beds, you will get up from it with your two limbs of the same length exactly.

I could enumerate the many attractions and the many advantages Marin has over other counties, but it would take too much space in your paper. I will close by saying a word or two of Petaluma, for we look upon Sonoma county as almost as good as Marin. We are next-door neighbors. Petaluma is where we do our trading and where we go to have a good time generally. I often wonder with the facilities for getting back and forth, that now families from San Francisco do not make a home there. The schools are excellent; the climate healthful; rents are low, and more, its society is good and genial.

MRS. C. W.

Marin Co., March 27th, 1877.

[We certainly have a high opinion of Marin county and are familiar with its advantages. We also have a very large list of readers in the county, but they do not seem to possess the promptings to write to us of their agricultural doings. We hope to hear more from Marin in the future. We do not like comparisons between counties; "comparisons are odious." Rather let each speak for itself of its own treasures.—EDS. PRESS.]

## THE STABLE.

### Shoeing of Horses.

For whatever purpose the horse is used, the shoe should not be too light; because it is then liable to be bent, and becomes an insufficient covering to the foot. The web of the shoe should be broad, and continued through the whole shoe to the heels, to give increased covering and protection to the sole of the foot. The outside of the shoe should exactly fit the crust of the hoof, thereby giving the entire foot an equal bearing on all its parts from the toe to the heel. The usual practice is to have a portion of the shoe projecting outwards, along both the outer and inner quarters of the hoof; and when this form of a shoe is connected with a narrowing of the web at the heel, the effect is to place the heel upon the inside line of the web, thereby producing an unequal bearing upon the ground surface of the foot. The setting off of the shoe at the heels is a great inconvenience to the horse when his foot sinks in the ground, and it is in this way the most of the shoes are pulled off and lost in the ground, or trodden off with the other feet. It is evident when the shoe fits the foot of the horse exactly, that when the foot is pulled up through the ground after sinking, the shoe must follow the foot without detriment or difficulty.

The shoe should be made sufficiently long to fully support the entire structure of the heels. The shoe should be of equal thickness throughout, and should be carefully adapted to the foot; this we cannot urge too strongly. If the shoe does not sit perfectly level all round, and if it extends so far outside the hoof that the nails are prevented from entering the crust at the exact spot, and in the very direction which they should, there will be a constant straining on the nails, which is injurious to the foot, and will be liable to chip pieces off the hoof. The shoe ought to be made wide across the foot, at the point where the two front nails are situated. The greatest mistake frequently lies here.—*National Live Stock Journal.*

## HORTICULTURE.

### The Banana in California.

Rev. H. H. Messenger, of Los Angeles, who is an enthusiast on the question of the cultivation of the banana in California, writes the following letter on the subject to the *Los Angeles Herald*. It is full of pertinent observations, the results of 10 years' experience in raising that fruit:

As to the kind to cultivate, let no one spend time and trouble with any other than the hardy kind, acclimated to the frost in winter through a series of years in Florida—the *Musa Cavendishii*. There are other kinds which may be finer in a purely tropical climate, such as the *Musa paradisiaca*, the Chinese dwarf, also obtained from the Sandwich islands; but these must be raised in a greenhouse or a very peculiarly sheltered place to do any good at all. The Florida banana, on the other hand, will thrive and bear fruit in the open air and will stand a good deal of frost with little injury. It will do well, indeed, where the others will either freeze to the ground every winter, so as never to fruit, or die altogether.

#### How to Cultivate Bananas.

Get bulbs or plants from six inches to six feet high (these latter will bear in 12 months, the other in two years), and plant 10 or 12 inches deep, in very rich, warm soil. As they will stand (or rather require) forcing, mix half well rotted manure (not new, which will heat them too much and kill them) with the soil. Then give them a soaking with water once a week in warm weather, or once a month at any rate. In warm, sunny exposures more fruit may be expected; but they will stand a good deal of frost for once or twice in winter, say 25° for a little while in the night, so the mercury soon rises before they freeze through. They draw up a great deal of moisture from the ground, which is of a higher temperature than the cold air of the night, and this circulating within the trunk preserves the fruit. For a few plants, protection may be provided by wrapping old rags and cloth around the body, which saves the internal heat, just as clothing for a person. And even though the leaves may be cut off, the new ones will be thrown out from the top, where finally the cluster or bunch of fruit appears, which, hanging a few months, ripens into the delicious fruit. The proper distance to plant them is about eight feet apart, as this gives room to irrigate and stir the ground between them. Also, such space is wanted for them to stool out, as they branch from the root, each stalk producing but one bunch of fruit. Then it dies down, or should be cut off near the ground to decay by the root and furnish food for the new plants which continually sprout from the old root. I think the new plants should be thinned out, so as to let about three from one root bear in a year. Six, eight and ten sprouts might be all, as it were, struggling for the mastery at once, in two or three years after planting, unless they were thinned, and some would perhaps bear nothing in that condition. Sell, give away or plant these somewhere else; for, remember, they are obliged to bear or die when the last leaf comes out, just as a stalk of corn. They are not trees, as so many ask, and each stalk bears but once. They are of the lily family and branch under the ground, just as the lily, pine-apple, etc. But unless killed in some way by frost, gophers or other injury, the roots send up new sprouts forever. Now take an acre, say, and plant eight feet apart, giving 681 plants. Force the growth by manure, irrigation and stirring the ground, and inside of two years you have some ripe fruit, some green, some just putting out a great brown bud, which lifts up a covering every day or two, disclosing about 10 nice little bananas, the size of one's finger, with a peculiar bloom on each, which the bees almost fight over. After two years then, say, but two stalks from each root bear. Well, then, say one bunch of fruit is produced from each root each year, and as these will average from 25 to 60 each, they will sell for \$1 each, which will be a nice little sum, almost equal to an orange grove.

#### The Increase of Bulbs

Is five or six each year, so that, in a few years, one is able to stock a number of acres from a small number to start with. Of course the continual pulling off of bulbs will prevent a large yield of fruit; but perhaps three bulbs can be taken from each every year, and as much fruit grow as if one were to leave all.

A rich, sandy soil seems best adapted to their growth, but with old straw or manure to mix in, almost any soil will do if it is only warm enough.

The *Santa Barbara Press* says: In Santa Barbara several of our large fruit-growers have grown the banana successfully, though only on a small scale. Mr. Dana B. Clark and Colonel Dinsmore, of the Montecito, have both succeeded in obtaining ripe fruit from the two or three trees planted by them, and they confirm the statement of Mr. Messenger, that *Musa Cavendishii* from Florida is the only species that could be successfully cultivated in the open air in a climate other than tropical. Last year some ripened fruit, grown in Santa Barbara, together with a bud in the various stages of development, were sent to the *Press* office by D. B. Clark.



## ARBORICULTURE.

## Large Almond Orchard—Spring Brook Ranch.

EDITORS PRESS:—A few days ago, I made a hasty visit to the large and splendid almond orchard near the pretty village of Los Gatos, in the southwestern part of this Santa Clara valley.

This fine orchard was noticed in the columns of the RURAL PRESS last season, but the enterprise from the beginning has been conducted on such a liberal scale, and in such a thorough, systematic and business-like manner in every respect, and the growth and progress made since then in developing a real, permanent, and, as is now believed, a paying institution, is such as to merit additional notice in a paper devoted to the improvement of the country.

Captain S. Gardner, of Dutch Flat, having purchased the interest of his former partner, Mr. Neff, is now the sole proprietor of Spring Brook ranch. The almond orchard, which consists of 20,000 trees, covering an area of 100 acres, is located on the north portion of the ranch, fronting the public road, from which it presents an attractive appearance. The soil is mostly of a sand and gravel loam, deposited, no doubt, in far-past ages by the wash from the mountains. The trees, which are remarkably uniform in size and shape, though only three years old from the nursery begin already to make quite an orchard-like appearance. They are all of the Languedoc variety, the very best, it is generally thought, as to its bearing qualities, the beauty and superiority of its fruit, and its fine, broad-leaved glossy foliage.

The driveway, from the road to the dwelling house, which is nestled away under some fine trees at the foot of the hills which bound the ranch on the south, lies through the center of the orchard; and as I drove leisurely down this long avenue I could see on each side the white, fuzzy young fruit already the size of large peach seeds, shining among the green foliage of almost every tree.

Captain Gardner visits the ranch frequently to see that everything is going on right, but in his absence it is under the care of Mr. Gust. Olson, who seems to take great pains to have everything done in the most thorough manner. On my way down through the orchard I found Mr. Olson and two other men at work with three teams, plowing and cultivating in the following manner: Mr. O. with a fine, valuable span of horses, which Captain Gardner had only purchased a few days before, was plowing only the central portion of the spaces between the rows, turning up the mellow, sandy soil to the depth of at least eight inches. The next plow following was drawn by a team hitched tandem style, that is, one horse before the other, so as to plow near to the trees without breaking their branches. The third plow was drawn by one quiet horse, carefully plowing the narrow strip of land between and around the trees that could not be reached by the others without damage to the trees, thus finishing the spaces as to plowing.

The spaces were then carefully harrowed over with a large fine-tooth harrow, leaving the soil deeply and finely pulverized, and the surface smooth and level almost as a floor. This, when completed, as it will be in a few days, will be the second thorough plowing of the whole orchard of 100 acres for this season already. During the months of summer the soil is kept loose and mellow, and free from weeds by frequent cultivating and harrowing; thus moisture is retained near the surface of the soil during the hottest and driest seasons. No marvel, then, that Spring Brook almond orchard, blessed with such thorough cultivation, in this warm, sandy soil, and located within the genial climatic influence of the foothill warm belt, should make rapid growth and development.

To give some definite idea of the wonderful rapidity of growth the almond tree will make under such favorable conditions, I make mention of a fact incidentally drawn from Captain Gardner's foreman, in our conversation about the place. He said in pruning and thinning out the trees this season they had removed limbs and brush enough to make 175 two-horse wagon-loads; and this from trees only three years old from the nursery, or four years old from the bud or graft!

Leaving the plowmen at their work, I passed along the avenue, which, through its whole length through the orchard, is lined on each side by a row of English walnut trees; I passed on towards the house, through a large meadow, which bore little sign of a dry season.

On approaching the white farm house, well shaded and sheltered by vines and trees, with the barn and outhouses beyond, the whole place presents a quiet, rural, home-like picture, pleasantly relieved by the terraced grassy hills in the background. Away from the dust and other unpleasant annoyances of the public road, with pretty yard and garden surroundings, and an abundance of clear mountain water for all purposes, who could wish a lovelier country seat?

While at the house I was presented by Mrs. Olson with some nuts as a sample of last year's crop of almonds, the merits of which we deliberately discussed at home; and it was our unanimous opinion that they were very superior as to size, richness of color and, above all, as to their fine flavor.

## The Fruit.

This, after all, is the great desideratum in

planting an orchard, that we may "gather the fruit thereof." We plant hedges, groves, borders and lawns for shelter, wood and beauty, but if we plant an orchard and get only these, we are disappointed.

Capt. Gardner had faith enough to plant 20,000 almond trees in this locality, expecting to gather fruit, and he has not been disappointed. I was not informed how much was gathered, of course the amount could not be large from trees so young; this year, however, judging from present appearances, it will be much larger—something that will begin to pay.

If in a year or two hence, as may reasonably be expected, this orchard should produce a crop of nuts averaging only 10 pounds to the tree, the aggregate would make 200,000 pounds, or 10 car-loads at 10 tons to the car; and would amount, at 15 cents per pound, to the nice sum of \$30,000. This certainly would begin to pay.

This, with but two exceptions, is the largest almond orchard in the State—that near Hollister, formerly owned by Smith & Bixby, consisting of 40,000 trees; and Col. Hollister's plantation near Santa Barbara, which numbers 25,000 trees.

From present indications, this Los Gatos neighborhood in the near future will become one of the greatest nut-producing regions of the State. In addition to this, there are quite a number of smaller orchards of almonds, and some of walnuts, which, in the aggregate, would number many thousand trees, many of which are beginning to bear; besides I know of parties who intend planting largely next season.

G. W. M.

Santa Clara, Cal., March 31st, 1877.

## THE APIARY.

## Honey Bees.—A Moth Protector.

EDITORS PRESS:—I have learned some "new wrinkles" through Captain Elisha Stevens about bee culture, and take this method of making them public.

He has several full hives of working bees, the largest and oldest swarm of three years' standing, with others, and his hives have not been injured by the bee moth. In the evening, he says that he finds plenty of millers making a drive to take the citadels; but his mode of construction is a complete protection from this formidable enemy. He has been using large and common sized hives, and is convinced that the small ones are the best, the most profitable to the apiarian.

One hive now full of honey is made of red-wood inch boards, six feet long, 13 inches wide and 16 inches in height, with two divisions, forming three apartments. The bees are allowed to pass through small apertures from one to the other. Last season he took out nine gallons of honey. His other hives, made on the old principle, were attacked by the moths and destroyed, while the experiment of the new arrangement is a success. It is constructed in this wise: In the front from the center all have projecting out 21 inches a square tube, wedge-shaped, commencing at the inner surface. The bottom board is seven inches in width and the box five inches high. The top and bottom at the extreme end come near together, having an aperture five inches wide and nearly one-fourth of an inch high. The bottom projects out three inches, forming a landing for the bees. This aperture is just high enough for the bees to pass in and out, traveling 21 inches before they reach the hive, but there is a head-gate across the passage way one and a half inches high, which every bee has to pass up and over, seven inches out from the hive. On the outer side of this head-gate or bar are two small holes, made through the bottom board, with two small tin tubes inserted, at an angle of 45° and four and one-half inches in length, so small that the honey bees cannot pass down through it. You can see it projecting below, near the outer side of the tube. If a miller is bold enough to pass up this box, when he reaches the bar instead of climbing he plunges down through the tube and comes out surprised and trembling, after encountering the hazardous charge. There is no other ingress or egress except up this 21-inch tunnel. The box and hive is made moth-tight with a smearing of tar boiled to a soft wax and applied warm over all the joints and crevices outside the hive. It appears to me that the swarms should be supplied with some other ventilation, but his bees improve each shining hour the year round, and do not seem to suffer. Each hive is shaded by a roofing from 8 A. M. all day, and the shade extends over the tubes.

## A Pioneer, Indeed.

Captain Elisha Stevens and a party of over 100 persons, men, women and children under his command, were the first immigrants over the Rocky mountains to the Pacific coast. He is now in his 74th year. He says that he left Omaha, Nebraska, on the 18th day of May, 1844, with 26 wagons and outfit to make the journey, as the first pioneer over the Rocky and Sierra Nevada mountains. Arriving at Fort Platte, eight more wagons and outfit joined his family party, in all numbering over 100 souls. This escort separated at Fort Hall, in Oregon. Eight wagons under the guidance of Captain Elisha Stevens landed in Fort Sutter, near Sacramento, the 22d day of December, 1844, while the second expedition was Col. J. C. Fremont's, landing at Sacramento, 1846. All of Stevens's party came through safely, two children being

born on the route, thus increasing their numbers. I may some time give a more succinct description. I am this moment writing this note over the very ground where Captain Stevens settled, or made his pitch, several years ago.

SOLOMON W. JEWETT.

Merino Farm, Kern county, March 28th.

## THE DAIRY.

## New Method of Raising Cream.

The best way to treat the milk for cream raising is still a vexed question. The latest claimed arrangement is that of W. Cooley, of Vermont. It was presented to the dairymen's conventions in the Eastern States during the winter. We have below Mr. Cooley's own statement on the subject:

There has been of late much discussion among butter makers regarding the best system of setting milk to produce most butter and the very best quality. This matter is of the greatest importance to both the farmers and the consumers. Discussion is generally followed by experiment, which settles facts and explodes mere theories. It is natural for people to follow old methods of doing things; to plod in the old well-worn ruts in which their fathers trod, and to expect theories for facts, without taking the trouble to investigate and experiment, the natural result of which is that many wrong notions and false theories prevail in relation to the best system of setting milk for butter.

Among the unsettled questions, this one has perhaps caused the most discussion of late: What is the animal odor, and how shall it be disposed of? It is generally conceded that heat applied to the milk will drive off the light gases called animal odors. Recent experiment proves cold condenses them into the watery part of the milk as effectively and with far less trouble than by any heating process. Professor Stewart, of Cornell University, remarked at the recent meeting of the Vermont Dairymen's Association: "The animal odors in milk are a sort of ferment and cold holds it in abeyance." Pure milk from healthy cows fed on healthy food with pure water, should be at once secured by a water seal so as to retain all its natural flavor, for it is the flavor of choice butter more than any other quality that determines the price it will bring. There can be no danger from taint where milk is set warm from the cow under a water seal if the temperature of the milk is reduced at once from 40° to 50°. At this temperature milk cannot taint in 24 hours, and if any one here believes otherwise let him not take my word for it, but test the question for himself. I am free to admit that milk set at a temperature of 65° in hot weather will taint, of course, but it does not follow that it will taint under directly opposite conditions. Milk reduced to 50° will raise all its cream in 24 hours; if set at 40° or 45°, and the temperature maintained, it will, if water-sealed, raise all its cream inside of 12 hours, and neither the milk nor cream will taint if set 20 inches deep. There are four methods of setting milk now in use:

1. The small, open, shallow pan system.
2. The large, open, shallow pan system, with water underneath.
3. The close and deep system of Mr. Hardin, and
4. The water-sealed or submerged system, which I will try to explain to you.

The small pan system needs no explanation.

The large open pans have advantages mostly in the way of saving labor, but the system has also very serious defects, for if run with cold water the butter must be of inferior quality, and the colder the water the poorer the quality of butter, because the milk being colder than the surrounding atmosphere, the moisture of the air is condensed into the cream, carrying with it the taints and impurities which exist, though unseen. I know of dairymen who affirm that they do not make as good butter with the large water-cooled pans, and the reason is obvious. Indeed, I do not hesitate to say that pure butter can be made in open cans with the temperature of the milk kept lower than the surrounding atmosphere. The Swedish system, improved by Mr. Hardin, is far superior to any open pan system, and should produce good butter. Its disadvantages are that so great a length of time is necessary in which to raise the cream, and the expense of providing a large quantity of ice to cool the milk and maintain a proper temperature. Experiments in setting milk have progressed in two directions, cooling and covering the milk, till now we come to the close, submerged or water-sealed system—milk set in cans wholly immersed in water at a temperature of 40° to 45° to obtain the quickest results. The points gained are these:

Flavor must be increased, because the milk is sealed; the milk is secure from outside odors, dust and insects; outside temperature cannot affect it, and as good a quality of butter can be produced in July and August as in June, providing the milk is as good, and the percentage of butter in dog days as good as in the more favorable part of the season. The animal odors are easily disposed of. Less room is required, because the milk is so quickly got rid of. Less capacity for holding milk is required, and consequently less cost to fit up. Less cost in running when ice is used, because the milk has to be held at the right temperature so short a time, and it is better to set milk in water than air, because water is a better conductor of heat.

With the milk water-sealed, all can make gilt-edge butter, even without the ice, provided

their water will hold the milk at 60°, and the system is a practical one for the great mass of farmers to adopt, because cheap and effectual. I have found this system a perfect guarantee against white specks in cream or butter, and the skim milk being perfectly sweet, in fact as sweet as when milked, invaluable for cheese. Milk set water-sealed, and kept at a temperature of about 45°, will make a good quality of cheese after parting with the butter at the rate of two pounds to 100 pounds of milk.

The conclusions I have arrived at are the results of careful experiments made by myself while working the milk from 500 cows at my factory, and are not guess-work or theory.

Mr. Cooley set about 30 pounds of milk in one of his cans, put on an iron cover and immersed it in water at nine o'clock, in full view of the audience. At one o'clock he took the can from the water tank, and exhibited the cream three inches deep upon the milk.

This surprising result was shown by means of a glass panel inserted in the can.

## THE VINEYARD.

## Bleeding Vines and Trees.

When grapevines, maples, birches, etc., are pruned just before the leaves open, and when the heat of the days and cold of the nights alternately expand and contract the gorged stems of the plants, the sap pours out in streams so copious and forcible as to be naturally a source of alarm. But nature is always profuse. Just as a plant yields seeds far beyond what are necessary for its mere reproduction, and pollen far beyond what is absolutely needful for fertilization, and flowers in similarly superabundant supply, so the material for the construction of all parts of a plant is given with a full hand. And the overflow of crude sap that we call bleeding does not often seem to detract from the ordinary amount of growth. M. Neubauer and Baron de Canstein have lately made special researches on this much questioned point of material loss by bleeding. Examining the escaping sap as to its chemical constituents, they found it to vary greatly according to the moisture or dryness of the atmosphere, the quantity of solid matter being much less after a term of rainy weather.

The principal contents are carbonic acid, nitrate of potash, sulphate and phosphate of lime, salts of magnesia and ammonia, gum, sugar and tartrate of lime, inositol, succinic acid, oxalic acid, and extractive matter. The young growth was found to yield on an average 85.32% of water with 13.12% of organic and 1.26% of mineral matter. Two equal quarts of the crude sap contained enough mineral matter to supply it for about one-quarter pound of young growth. M. de Canstein says that a vine is rendered more liable to disease, and to imperfect ripening of its fruit, and even of its wood, by the loss of much sap through this bleeding, and he advises early pruning, or if it has been unfavorably delayed, that it should be done on cool days rather than warm ones. Most tree-growers will have noticed that when pruning is done just as the buds swell, or open, the flow of sap is greatest, because the flow is so constant that the wound has no chance to become sealed or filled over so as to prevent the outflow. In this case the bark is often injured by long continued oozing keeping it continually wet.—N. Y. Tribune.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

## A Successful Experiment.

EDITORS PRESS:—We derive much benefit from your Poultry column, and as many of your lady readers are interested in that department, I think perhaps mention of a recent experiment made upon one of my favorite fowls may sometime be of service to them.

About two weeks ago a White Poland hen, in searching for a place to make a nest, got into the store room, where was left for the treatment of rats an uncovered can of squirrel poison. She had gorged herself with the wheat, and when found late in the evening was in spasms.

Thinking her to be past recovery, she was placed under a coop for final disposition in the morning.

The next morning, however, we found her alive, but with distended crop. I suggested that the crop should be cut open and the wheat extracted, which was done by removing a few feathers, an incision made about one inch in length, and carefully extracting the contents with the handle of a teaspoon. A spoonful of melted lard was inserted through the opening, the wound sewed up, and then she was placed in a coop, where for two days she received nothing but water, afterwards for a week she was fed with small quantities of soft food, when she was turned out completely cured, and is now laying again.

A year ago we had a brood of half grown ducks that filled their crops with the scrub and bristles of hogs just killed; being unable to digest the matter they all died. Had we extracted the contents as above, I think we should have saved them.

MRS. G. C. HOLMAN.

Lockeford, March 20th, 1877.



## PATRONS OF HUSBANDRY.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will hereafter be held on the second and fourth Tuesdays of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHARD,  
Master Golden Gate Grange, S. F.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Earnest Words from Bro. Garwood.

EDITORS PRESS:—The enclosed letter was lately received from Past Master Z. L. Garwood, of Santa Clara Grange. If you find anything in it that you deem of general interest to your readers, you are at liberty to make extracts of the same.—I. A. WILCOX.

[We take pleasure in printing the following stirring paragraphs.—EDS. PRESS.]

Through the RURAL PRESS I learn that you with others of our old officers are re-elected to office in our Grange.

If I could say one word to cheer on this glorious work of the Grange organization, I would feel a great satisfaction in doing so. If I can't work with you all in person, I may exchange a friendly sentiment and a word of encouragement, if need be, in the good cause, which you are impressed with a duty and responsibility to foster and mature to a higher degree of usefulness. I relax none of my ardor in the cause. I see encouragement everywhere, notwithstanding a shadow of lukewarmness may show itself in an insignificant degree.

Here, Grange work goes on in an encouraging manner for the future. The building of substantial Grange halls, even where but a few years ago there was nothing but a dense forest. Such signs do not indicate any great degree of weakness.

I surrender no ground, abandon no proposition which I held as to the perpetuity and future greatness of the Grange organization. I hold now, as I have held, that the Grange must become an educational institution to the tiller of the soil. Nothing in the history of man has ever offered so much to the cultivator of the ground as the Grange organization does to-day. Rome, when she limited her number of acres to the individual and fostered and cared for her agriculture, and the tiller of the soil worked in harmony and was at peace with his brother, was a mighty nation. Is not the suggestion worthy of our consideration. Our folks are too much in the habit of looking for some bonanza. Let them content themselves with well doing. Where is the man or woman who is not proud of our Insurance Company, Bank or Business Association? We know mistakes have been made, but results have abundantly compensated. I am especially proud of our Pacific coast membership. They have the ability and, I think, will get the will to learn that which interests them most. The time is near at hand when our farmers will be more than nine days old.

The ten-cent-dollar men—that is, those who come into the Grange with the idea of laying down a ten-cent piece and picking up a dollar—will grow ex hilarantly small. Stand by the ship as long as there is a plank above water; she is sufficient for the opposing storm, and I think a trusty crew on board.

### International Co-operation.

We have received, says the *Patron of Husbandry*, from Worthy Master Jones the following copy of a letter addressed to him by Mr. Neale, Secretary of the British Co-operative Association. It will be seen that the action of the National Grange in regard to international co-operation is regarded with great interest by the leaders of the Co-operative Association in England.

My Dear Sir:—I congratulate you sincerely and express my most sincere gratification at the successful issue of the steps taken by you and the Executive Committee of the National Grange, at its meeting, for promoting the great cause of international co-operation. We have begun without delay to do our part in furthering this work, by laying a statement of the resolutions adopted by the Grange before our members.

What is needed in order to enable your citizens to commence this trade on a sound basis, we can, I believe, supply with the means now at our command. That is:

1. If you send over an intelligent manager, in whom you have confidence, to look after your shipments, we can supply an executive who will be a guarantee to you that he does his duty and that the proceeds of the sales made on your account shall be remitted to you, less the agreed charges, or dealt with as you direct.

2. If these proceeds, or any part of them, are to be invested in the shape of goods ordered on your account, we can place your manager in communication with the best houses for obtaining what is so ordered on the most reasonable terms, of the best quality according to the price.

3. We shall, I believe, be able to assist materially in organizing an efficient system of drafts

against shipments, by which the Patrons will be able to obtain the advances requisite to enable them to get their produce into our markets on moderate terms.

These things I feel confident that we can do now, and if this can be done the way will be open for commencing a business which may, and will in a few years, grow into something vast and draw large amounts of English capital into what will then be known to be at once a safe and remunerative mode of investment.

Other people might supply capital at present much more abundantly than we can, but they would be people who wanted to trade on you, making profit at your cost. We co-operators are, I believe, the only body in Great Britain ready to trade with you, sharing all profits equitably. This is our one great qualification I consider, and hope you will think it all-important. Believe me, yours very truly, E. V. NEALE.

Manchester, England, Jan. 3d, 1877.

### Whither are We Drifting?

We clip the following sensible extract from a late issue of the *Morning Call*:

Too many young men just escaped from colleges and the universities, have been stricken with *cacothetes scribendi*, and desire to instruct "the masses." The result is, that they sit about the local editorial rooms of the newspapers, waiting for a "detail" much as those persons who, waiting for something to do, sit about the employment offices, waiting for some one to come in and hire them. Brains are altogether too plentiful this year; and if young men would take more to learning how to hammer out something which requires both mind and muscle; if they would get a mystery at their finger-ends by which they could go into the shops and make a living at making something that the world needs, they and the world would be better off. It is as true of the journalist as of the poet, that he must be born, not manufactured; and it is also true that enough of them are born to fill the demand. This very day, in this city, while all classes of dealers are complaining of inactivity in the general markets of money and merchandise, here we have another class sitting back behind a sort of allegorical and melancholy lot of counters with brains for sale and purchasers scarce. Students, Bohemians—even men of letters, men of travel and men of thought and literary experience—are here in numbers with nothing to do except to shudder over unpaid board bills, with no hope of ever being able to make more of those ghastly reminders of good things gone.

There is no question about the truthfulness of the foregoing. In fact it is a very mild statement of the case. The darker shades of it are not presented. The free lunch and swill-barrel brigade is potent with brains for sale at any price. A two-bit dinner will hire more brains than could be used in running six daily newspapers. In plain words San Francisco is overrun with "Bohemians" and loafers; and the same may be said of every considerable city in the Union. And still the metropolitan crowds of idlers and criminals increase from year to year. The country contributes her quota to this army of conceited simpletons, who are too nice for the "drudgery of the farm." Our modern fastidious, theoretical, impractical system of education lies at the foundation of the difficulty. The prevailing idea as to what constitutes a "polished" education, is to be able to live without manual labor; or, in other words, to be able to live on somebody else's labor. The indirect teachings and influence of our fashionable colleges and seminaries inculcate this idea. The truth of this assertion is fully demonstrated by the fact that not more than 20% of the sons of farmers and mechanics, who are fashionably educated, ever follow the avocations of their fathers, but are carried away with the idea that they have brains to sell. Especially is this the case with those "educated" about the large towns and cities. Very few of them are ever satisfied anywhere else—hence the filling up of the cities and towns with idle men and women.

If there was less of the popular delusion in regard to the necessity of sending boys and girls off from home to attend some fashionable college or seminary, the local schools would be better supported. It is a prominent part of our duty, in and out of the Grange, to encourage the education of the children, within the limits of "your" jurisdiction.

In order that this may be properly done, we must encourage the building up and supporting of schools of a higher grade nearer home. There should be at least one first-class grammar school established in every fairly settled township in the State. If we are disposed for the best interest and happiness of our children, we will learn to provide ample accommodation for their education in the district school. Let a practical, utilitarian course be pursued, which will fit them for the actual duties of life. Let them have more education morally and mentally and less sham and blow.—J. V. Webster, in *California Patron*.

INCORPORATED.—Articles of incorporation of the Linn's Valley Grange Hall Association, for the purpose of owning a Grangers' hall in Glennville, Kern county, has been filed with the Secretary of State. Capital, \$10,000, in shares of \$10 each. Directors, James Prewett, Sr., Henry Pascoe, S. W. Woody, T. R. Lavers and Calvin Lindsay.

### From the Granges.

#### Healdsburg Grange.

EDITORS PRESS:—At a meeting of Healdsburg Grange held on Saturday, the 24th ultimo, it was resolved that on the first day of May next, said Grange would hold a social picnic in the grove adjoining Healdsburg, and the Granges of Sonoma county are cordially invited to be with us.

We also desire the attendance of farmers who are not members of the Order and citizens generally, also their wives and children.

The Sunday schools of Healdsburg and vicinity are also cordially invited to be with us.

As this is designed to be a basket picnic, all are invited to bring baskets of provisions, and a good time generally is anticipated.

The programme of exercises for the day, including good music, is expected to please all who may attend. Geo. Allison, Aaron Hassett, Mrs. Aaron Hassett, A. B. Nally, W. C. Ellis, Committee on Arrangements and Invitation.

DISCUSSION ON FINANCE.—The question of finance is now receiving the attention of several of the Granges and earnest discussions are being held. J. D. Blanchard, W. M. of Golden Gate Grange, informs us that on motion of Bro. J. M. Horner, chairman of the State Grange Committee on Finance, it was resolved that the finance question be the topic for discussion at Golden Gate Grange meeting on Tuesday evening, April 24th, and that visiting Grangers who may be in the city or come for the purpose are invited to attend and take part in the discussion.

### In Memoriam.

WALNUT CREEK GRANGE, NO. 119, March 24th, 1877.

WHEREAS, By the inscrutable decree of Him who hath set bounds to the mighty deep, and said, "Thus far shalt thou go and no farther," death has, for the first time, entered the inner gate and taken from our midst our beloved and esteemed sister, MARY E. HUGHES, and in the hour of sad affliction we bow in humble submission to Him who doeth all things well.

Resolved, That in the death of Sister HUGHES our Grange has lost a worthy and efficient member, Bro. Hughes an affectionate wife and the community a worthy, exemplary member.

Resolved, That we deeply sympathize with the bereaved husband and friends of deceased in their affliction.

Resolved, That our charter be draped in mourning for 30 days and that the usual badge of mourning be worn by the members of this Grange.

Resolved, That these resolutions be entered on the minutes of this Grange, a copy sent to the afflicted family and one sent to the RURAL PRESS, Contra Costa News and Gazette for publication.—[Committee: Mrs. M. L. Huston, Mrs. L. A. Steele and Miss M. Hamilton.]

### The "Rural Press."

It is quite a time since we said a word for ourselves. The editor finds his time and thoughts so full of the pursuit of facts and ideas which he thinks may prove of value to readers that he might forget to say a word for the RURAL PRESS were it not for the bundle of complimentary letters, which increases with each day's mails. The truth is that we are greatly cheered by the constant marks of favor which readers freely give us. These words are louder than any which we would speak for ourselves and we know they will have full weight with the public, which should give us even wider support, and thus enable us to extend and improve our work. Old patrons of our paper will rejoice with us at the endorsement which we are gaining, and those who may see the paper for the first time will be assured that the RURAL PRESS will be of great value to them if they will give a trial. We wish to extend the circle of our readers, and to this end invite all to aid us with their subscriptions and their good words to those who should subscribe. From the many letters which we have before us we select a few good words:

John N. Ferguson, of Sonoma county, writes: "I will always speak a good word for the PRESS. The majority of my neighbors take it. It is a good paper, and no family, especially farmers, should be without it."

M. D. Miller, of Santa Barbara county, writes: "I feel as though it were impossible for me to do without the RURAL PRESS; I cannot afford to be without it."

Rev. S. S. Harmon, President of Washington College, an interested observer of agricultural progress, writes: "I have just been looking over the RURAL PRESS. I am most favorably impressed with its contents. Its range of agricultural matter is wide and deeply interesting. One such number as the last is worth the price of the whole volume. It is a great, good work in which you are engaged, your audience is very large and should become larger every day. I do not know that truisms of this kind are of any value to you, but I write them as a sort of thank-offering for what I deem to be a very valuable service you are rendering to the State."

Mason P. Kinne, of Onondago county, New York, writes to his son in this city: "The RURAL PRESS comes weekly and is read with care, the more so as I take no paper this year entirely devoted to agriculture. The PRESS is quite well adapted in very much of its matter to benefit us, and seems for us in many facts and suggestions. Sometimes while carefully looking over its pages I forget its being of Californian make-up. I have prepared a little medicine for

our Brahmas and Buff fowls from a recipe on one of its pages."

It gives us genuine satisfaction to receive such hearty words of encouragement from those for whom we labor, and it shall be no fault of ours if the RURAL PRESS does not improve under such generous approbation.

### General News Items.

TRAVEL to Yosemite valley has commenced. BISMARCK has resigned in order to get some rest from his labors.

THEY talk of fitting up the *Great Eastern* for transporting cattle from this country to England.

THE Internal Revenue receipts for March, 1877, were \$9,250,207, against \$8,293,252 for March, 1876.

BOSS TWEED has published his diary, which amounts to a confession, and makes an unqualified surrender of all his property.

THE Hollister folks are determined to explode \$1,000 worth of gunpowder in order to test its efficacy as a rain-producer.

THE Sun says: It is reported that J. R. Keene, who soon leaves for Europe, cleared over \$700,000 by his campaign in Wall street.

SPECIAL dispatches from Berlin to the *Post* and news from Paris to the *Standard*, represent public feeling in those places as not increased in hopefulness by the signing of the protocol.

NINE vessels of the Long Island fishing fleet, which left for the banks last November, are now so long overdue that it is believed they were lost in the gales which occurred some time since.

A GENERAL strike is imminent on the Philadelphia and Reading railroad in consequence of the order issued to their employees to sever their connection with the Brotherhood of Locomotive Engineers.

THE ship *Frank Jones* was wrecked on Fort Point last week. A tug was towing her to sea when the hawser broke and before sail could be made she drifted on shore. The vessel is now being stripped of her spars and rigging.

THE glazing mill, part of the powder mills of the California Powder Works, near Santa Cruz, blew up on Tuesday morning. One man killed and one wounded. There were nine tons of powder in the mill at the time of the explosion. The loss is about \$25,000.

RINDERPEST has appeared among sheep in another London suburb. The Treasury Department at Washington recommends vigilance on part of Customs officers in the matter of importation of horses, cattle, sheep and swine, so as to provide against the introduction of the rinderpest, which is pronounced infectious as well as contagious.

A BULL butted a train off the track of the Richmond & Danville railroad, last Monday, near a bridge. The engine, tender and six cars went through the bridge and the engine was killed. Shortly after the locomotive boiler exploded and the bridge and cars caught fire. The bridge was 600 feet long and was totally consumed.

MESSRS. D. M. OSBORNE & Co. request us to say to the farmers throughout the coast country that orders for extras for the old Kirby machines should be sent to their office in San Francisco at once, in order that there may be a certainty of orders being filled. This is important, as it requires 30 days' time to fill an order, if it must be filled from Anburn, N. Y. They call attention to their new Wheeler machines. Address, D. M. Osborne & Co., Box 1,818, San Francisco.

NEW PAPER IN SAN MATEO COUNTY.—We have received the first three copies of a new paper started at Redwood City, San Mateo county, by H. G. Rowley & Co. It is styled the *People's Journal*, and is well filled with fresh local matter and well selected miscellany. We trust the *Journal* will prosper and give us agricultural news from its county. We have not heard as much from the county of late as we should like to hear.

WINDMILLS.—The numerous efforts which are being made this year to gain the benefits of irrigation from artesian wells and from other sources of subterranean water, are giving the windmill business considerable activity. Among those who are profiting by this activity are our friends, Horton & Kennedy, of Livermore, Alameda county. Their Enterprise mill gives good satisfaction to those who have mentioned it to us, and we doubt not to all who have used the machine.

THE "WEST SHORE."—This is the title of an excellent illustrated newspaper, published by L. Samuels, of Portland, Oregon. The last issue contains 16 pages, handsomely printed and with a choice and varied selection of reading matter. The *West Shore* is true to local interests and will do much to advance the growth of its young and thriving State.

PERSONAL.—We have had a call from our friend John Mavity, of St. Helena. He reports things in Napa county in splendid condition agriculturally. Growth of tree and vegetable in his valley seems almost six weeks earlier than usual this spring. Mr. Mavity promises to let us hear from him when the press of the season's work is over.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**IRRIGATION IN SUNOL.**—*Cor. Independent*, March 31: Mr Hadsell has his irrigating ditches completed, under direction of S. W. Millard. The main ditch is one mile and a quarter long; the large ditch two miles, and the distributing ditches three miles, making in all six and a quarter. This was a great undertaking, but the whole work proved to be an entire success, and it is evident now that the enterprise of Mr Hadsell will be highly rewarded. Between 300 and 400 acres will be flooded, 120 of which will be sown with alfalfa, the remainder with wheat this season, and probably with alfalfa next spring. The ground was thoroughly subsoiled last spring and flooded again in the fall, and has been harrowed and re-harrowed, brushed and smoothed, until it is as level as a floor. The seed was sown immediately after the ground was flooded, and in two days some of it appeared above the ground, and in four days quite a carpet of green spread over the entire surface. This piece of ground will undoubtedly produce more this year than ever before, and the advantages of irrigation will be strikingly apparent when contrast is made with the surrounding land, much of which will not raise enough to pay for the seed. Mr. Rogan is having a survey made to bring the water from the Alameda creek to irrigate his bottom land; figures so far go to show that he can irrigate between 300 and 400 acres, and calculates to commence on the ditch within a few days.

## BUTTE.

**CROPS.**—*Record*, March 31: Diligent inquiry among our farmers develops the fact that the prospect for a crop was never better in Butte, both as to the acreage and the yield. The only "mildew" observable in this county is that of assessing growing crops.

## COLUSA.

**CROP PROSPECTS.**—*Sun*, March 31: The prospects have not changed a great deal since our last, except that the upper end of the county has had another rain and has thus been assured good crops. Many well informed farmers of that portion of the county say that the crops are far ahead of anything they ever had before. Of the other portion of the county, along the river, on both sides, there will be a great deal of grain raised, but without more rain the larger portion of the grain even there will be short of a full crop, while some will be a total failure. There has been quite a large quantity of tule land in the lower end of the county sown to wheat, which is looking very fine, and which will make a full crop without rain. On the plains, however, from Funk slough to the Yolo line, we have no very flattering prospect. There will be grain raised there, and perhaps a large quantity, but a majority of the summer fallow even needs rain very badly, and is drying up in spots. The winter sown grain is not looking at all well, and it will take rain in a very short time to save a great portion of it.

**WORK FOR NEXT YEAR.**—There is a great deal of plowing being done for next year, and we were much pleased to see that many of the farmers were cross-plowing their early summer fallow. A great deal that was left to volunteer is being plowed up. Judge Durham is cross-plowing a piece that we went over that is in as good condition as garden land, and we shall be much surprised if he does not get a good yield next year. J. C. Frazier, on the Hart & Harrington farm, has plowed about 2,000 acres of new land this spring, and has nine teams now at work. He is doing splendid work.

## CONTRA COSTA.

**RAIN AND MORE WANTED.**—*Gazette*, March 31: Up to this writing, Thursday night, except a very slight sprinkle Wednesday evening, the clouds that have this week let down quite copious showers in widely distant portions of the State have dropped nothing here, but we hear that a fine shower belt came down from the San Ramon Thursday afternoon and passed over the village of Concord, giving a strip of country about a mile wide quite a liberal moistening, the western edge of the shower marking a line about half way between Pacheco and Concord, and the eastern edge reaching nearly a mile beyond Concord into Diablo valley. It is quite certain that with as little as an inch more rain, just in the right way and manner, and other favorable conditions of weather, good grain crops could be made in all that portion of this county west of the Diablo meridian; but without this little additional fall of rain and the favorable conditions of weather, we cannot now consider the prospect assuring.

## EL DORADO.

**FEED.**—*Republican*, March 29: The feed on the thousands of hills in this section was never known to be as good as it is at present, and if the perishing stock upon the plains in the central and southern portions of the State could be permitted to roam upon them for a few weeks there would soon be a falling off in the price of good beef. In a drive through the country the other day, in the vicinity of Frenchtown, we saw thousands upon thousands of acres of splendid pasture, and scarcely a hoof of stock in sight.

## FRESNO.

**SMALL CROPS.**—*Expositor*, March 28: From all the information we can gain, there are but few farmers in the county that will succeed in

even making hay out of their crops this season. There are a few who have water with which to irrigate, that could secure a crop of grain, but even those parties are inclined to cut their grain for hay, as that article is sure to be demanded this fall. Mr. Days informs us that he has about 200 acres that would make grain, and Mr. Zoeller, of the Eggers farm, informs us that he has about 300 acres that has been irrigated, that will make good grain.

## MARIN.

**EXPERIMENT IN TRANSPLANTING A LAUREL TREE.**—*Journal*, March 21: Dr. A. W. Taliaferro has transplanted a fine laurel or bay tree, setting it at the lower corner of his front, on Fourth street. The tree is very symmetrical and handsome, about 25 feet high, and eight inches in diameter. It was taken from the side hill near the brewery. The hole for it was dug about six feet square and four feet deep; three feet of the tap root was taken up with it, and the excavation was filled with soil from the spot where the tree grew. If the experiment proves a success, it will lead to the transplanting of a great many of these peerless trees from their homes in the forest to the grounds of our private dwellings.

## MONTEREY.

**THE RAIN.**—*Index*, March 31: It is estimated that at least 35-100 of an inch has fallen during the last storm. The best of it is that it has been general all over the Salinas valley. This rain is of inestimable value to Monterey county, and causes everybody to smile. It will help the grain, make hay and improve the feed in the foothills and on the mountains. It also looks as though we would have more rain before it clears up.

**OUR DAIRIES.**—Notwithstanding the lack of rain, we hear of many dairies in Monterey county that will run all summer. Among others are the dairies of Messrs. Hatton & Co., Joe Gregg, Jas. Meadows and John James, all situated in Carmelo valley and vicinity, and which are reported never to have been in a more flourishing condition than at the present time. Hatton & Co. have 15 acres of beets and corn, which will furnish an immense amount of food for their cows. C. P. Kellogg, of Chualar, will also continue to run his dairy all the season, having a large amount of straw and hay which he wisely saved up last fall, instead of burning it.

## NAPA.

**THE CROPS.**—*Reporter*, March 31: During the past week we have been at some pains to ascertain the condition of crops in Napa county. In Napa valley the crops are better than an average, the grain being well advanced and growing in an unprecedented manner. From Pope valley almost the same report may be made, with the exception that the grain is not quite as forward as in Napa. In Berryessa the crops are very fine, although hardly up to the mark of last season. They are good, however, and nothing like a failure may be anticipated. The spring fogs have already begun to prevail, which saturate everything with moisture for several hours in the day, checking evaporation and supplying almost as much moisture as a small shower.

## SAN BENITO.

**REFRESHING SHOWERS.**—*Enterprise*, March 31: This section was visited by refreshing showers this week, and though they may not accomplish much toward making crops, an increase of feed will certainly be a result. According to the depot rain gauge, about 30-100 of an inch has fallen up to the time we went to press, and the clouds still promised more. The rain was much heavier in the mountains and valleys south, and the prospect for stock feed in that direction has greatly improved. Stockmen have plucked up renewed courage and conclude things are not so bad as they might be.

## SAN BERNARDINO.

**EDS. PRESS.**—I wrote you on the 28th ult. and stated that there was then a fair prospect for rain. It commenced to rain the following day, and up to the morning of the 31st ult. it is safe to say that about one and one-half inches fell, enough to help feed along for the present, but the majority of barley fields on the dry lands are generally considered past redemption, except for pasturage. Have heard of some fields, the stocks standing only a very few inches high, that already commence to head.—W. D. WHITE, April 1st.

## SAN DIEGO.

**RAIN.**—*Dispatch*, March 31: Over one inch of rain has fallen here. Reports from all points of the interior show from two to three and a half inches from 10 to 40 miles inland. This unexpectedly good rain puts a new face on the situation, and hopes are reasonably felt of at least half a crop of grain. Beekeepers estimate that this rain has more than doubled, some say more than trebled, the coming honey yield. People everywhere are in the best of spirits over the changed outlook.

## SAN JOAQUIN.

**DRY PLOWING.**—*Stockton Independent*, March 24: There are more fine points to be learned in farming in California than are dreamed of in the philosophy of Eastern farmers. Every year seems to develop new conditions that have not previously been observed, to puzzle the farmer and make him almost despair of attaining that exactness of experience essential to constant moderate success. For instance, it has been observed that dry plowing on heavy soils is very advantageous to crops in a wet year. Either the land absorbs more moisture when the rain

comes or it evaporates it more readily, so that grain grows more thriftily than on land plowed after the commencement of rains. On the contrary, dry plowing in a dry year is almost fatal to crop prospects. We have noticed several fields this year that were dry plowed, where the grain is already becoming parched, dry and almost dead, while on adjoining fields that were plowed when the land was wet, the grain looks thrifty and strong. The exact time of year to sow grain is also a very delicate question, a few days before or after a rain being of the utmost importance.

## SAN LUIS OBISPO.

**THE RAIN.**—*Tribune*, March 31: Many of our farmers who were bordering upon the ragged edge of despair, have brightened up wonderfully since the rain began to fall last Wednesday afternoon. Since then we have been treated to alternate showers and sunshine. And, though it is certainly too late in the season to revive crops in many localities, yet it must prove highly beneficial to the grass and late sown grain in such valleys as the San Luis, Osos and Laguna, Arroyo Grande, Corral de Piedra, Old Creek, Santa Rosa and others. In fact, not a few of our farmers and stock raisers owe their salvation for the season to this timely irrigation of their fields and pastures. We have seen some crops of early grain upon the Laguna rancho so heavy that there was imminent danger of its "lodging" before the rain; such as these will be damaged rather than benefited, but as there are very few such fields in the county, the loss will be comparatively small when compared to the incalculable benefit derived. Up to date the amount of the rainfall here is about one inch.

## SAN MATEO.

**BLIGHT AT HALF MOON BAY.**—*People's Journal*, March 29: The potato blight on the coast, in the vicinity of Half Moon Bay, has extended its destructive course: until some fine fields are now utterly hopeless. But the energetic farmers are planting over again without delay, and still expect to get a crop. Some one should investigate the causes of this peculiar disease of potatoes.

## SANTA BARBARA.

**EDITORS PRESS.**—Only a trifle over three inches of rain. It still looks like rain; we still hope; but hope deferred has made all our hearts sick. Pastures are dry and brown; much of our barley is dead, and fearful suffering stares us sternly in the face; but we need not despair. True, we cannot make money as heretofore; true, many of us will have to put forth unaccustomed strength, energy and industry, but with these well directed, none need starve; few need suffer very much. Where land has been well cultivated, even naturally pretty dry land, we shall raise some little crops, especially near the ocean. With the indications of a dry year before me, I planted very early; I now have corn and potatoes a foot high, and, as yet, looking well. This year should be a valuable lesson to us in the future; but alas, when prosperity again returns, the lesson, by far too many, will be forgotten, and we will again plod on in the same old ruts. Much more attention should be given to irrigating small patches, so that each farmer could raise at least his own vegetables, and thus save a large annual expenditure. This can be done to some little extent, even with our wells.—S. P. SNOW, March 28th, 1877.

## SANTA CLARA.

**GILROY.**—*Cor. San Jose Mercury*, March 27: Dry and warm, and our prospects for raising crops in this section this season are growing smaller and most beautifully less. "Hope deferred maketh the heart sick." We are sick. 'Tis no use to try and palliate the present circumstances in which we are situated.

## SOLANO.

**LOOKS OF THE CROPS.**—*Vallejo Chronicle*, March 31: The crops throughout the entire southern end of this county are now looking well, but farmers tell us that unless rain comes within a couple of weeks the grain yield will be very light. Crops can stand it well enough until then, but beyond, rain will be a necessity. Already, in some of the fields there is a quite perceptible change in the looks of the crops, arising from the continued drouth. In the Montezuma hills the wheat is looking very badly already, and the rains must positively come soon to save any part of the crops. None of the wheat has yet begun to head out that we have heard, although some of the barley is now heading. Briefly summed up, the prospect for this section is: more rain, and very fair crops; no more rain, and no crops to speak of.

## SONOMA.

**RECLAIMED LAND.**—*Petaluma Argus*, March 22: Three years ago the Pacific Reclamation Company commenced the work of reclaiming about 17,000 acres of salt marsh land, lying east of Sear's point and about 12 miles from this city. A levee, several miles in length and costing many thousand dollars, was under the supervision of P. L. McGill. The levee, we are informed, is well constructed and capable of resisting any pressure from floods or high tides that are liable to occur. In lands such as this company are reclaiming, two or three years' plowing and stirring of the soil are generally necessary before a good crop can be produced. The first plowing was done last year. This season about 500 acres have been plowed thus far, and several men and teams are now at work. About 100 acres have been sown with grain. The barley looks well and promises a fair yield; the wheat is not so good. Two artesian wells

have been sunk, which afford an abundance of good water; one is 300 and the other is 600 feet deep. It will be two years before the producing qualities of the soil will be fully tested, but it is nearly certain that the whole tract will prove to be one of the most valuable bodies of land of equal extent in the State. We understand that it is the intention of the company, when the land is fully reclaimed, to divide it up into small farms and offer them for sale.

## STANISLAUS.

**RAIN.**—*News*, March 30: The best rain we have had this season fell at this place last Wednesday afternoon and night. The rainfall measured about half an inch. It is still cloudy and threatening more rain. The young grain that is still living, as well as the grass, received a great stimulus. Many fields that before would only have made hay it is thought will now mature a crop, and much of that which would have been completely lost will make hay. Live stock, and especially the sheep interest, has been much improved. Bands that were preparing to move can now delay much longer. The benefits of the little rainfall to our people are hard to estimate.

## SUTTER.

**RAIN.**—*Banner*, March 31: Rain fell in this section on Wednesday night last for an hour or so, laying the dust. Thursday the sky was overhung with heavy clouds and the weather was cool enough to render fires a comfort.

## TULARE.

**DISTRUST OF THE DESERT LAND BILL.**—*Visalia Delta*, March 31: It is believed that parties in the interest of the West Side irrigation scheme were the originators of the desert land bill, the object being to gobble all the rich lands in the San Joaquin basin which have not been paid out by settlers. They have only to turn on the water from the main canal and the reclamation required by the law is accomplished, and all the lands in the vicinity can be taken and held for speculation. It takes head-work to buy government lands.

**CROPS.**—There are many fields of grain in this county that seem to hold out with wonderful vitality, and should we get one more good rain, followed by a few showers, they would make hay. The season is remarkably forward, and the fruit and early vegetables are by no means out of danger in the valleys. The thermometer was up to 88° several days during last week. A nice shower of rain visited us on Wednesday afternoon, and continued at intervals until Thursday at 10 p. m. Although it is too late to do much good on the plains, it will have a beneficial effect in the mountains, now the sole reliance of our stock men.

## VENTURA.

**THE RAIN.**—*Free Press*, March 31: At last and just when owners had about given up hope of saving their stock and farmers were anxiously speculating whether or not their grain fields would yield a crop of hay, the welcome rain descended. It commenced about dusk on Wednesday evening and continued at frequent intervals for 24 hours, sometimes in gentle showers and occasionally in a heavy downpour. Advices from all parts of the county indicate that at least an inch of rain has fallen and even more in some localities. As we write, the indications are favorable for a continuance of the storm. It is impossible to estimate the value of this timely rain. It insures a corn crop and it saves a very large area of wheat and barley.

## YOLO.

**CROPS.**—*Democrat*, March 29: There is yet a chance for first rate crops in Yolo county, if we get occasional showers and a continued absence of strong north winds. In the latter respect this spring has been a very favorable one. In any event we think that we are justified in expecting a fair crop from the summer fallowed grain, but unless we have more rain the late sown and volunteer cannot be expected to do more than make hay. An old resident and practical farmer remarked to us the other day that he had seen a much more gloomy prospect as to the crops of Yolo at this time of the year than is now present, and yet the season was among the best ever realized. So we are yet hopeful.

## YUBA.

**NEW HEADER.**—*Sutter Banner*, March 24: White, Cooley & Cutts, the hardware men of Marysville, have set up in their ware room a new header, manufactured by Walter A. Wood and represented on this coast by Frank Bros. & Co., of San Francisco and Sacramento. It is made in New York State, the wood work of Eastern timber, and is very strongly built, the beams and staying being nearly double in size of that of any other pattern. The drive wheels are iron bands, connected with hubs, also iron, by iron spokes or rods, the outer ends of which are riveted to the circumference of the wheel, and the inner ends bolted to the hubs, an arrangement that admits very readily of the replacing of a loose one. There are no leather belts in use about the machine, motion being given by a system of chain bands, the links of which are readily taken out and replaced, a great improvement over the leather belt, both as to the matter of time in repairing a broken one, and in tightening or loosing the tension. A number of other valuable improvements are to be found, among which may be mentioned the lowering or raising of the cutter bar, governed by a heavy locomotive spring, which, with several other governing apparatus, are all under the immediate control of the driver, and so arranged as to be made useful at the expense of very little power.





### Vittoria Colonna.

Vittoria Colonna, on the death of her husband, the Marchese di Pescara, retired to her castle at Ischia (Inarime), and there wrote the ode upon his death which gained her the title of Divine.

Once more, once more, Inarime,  
I see thy purple hills—once more  
I hear the billows of the bay  
Wash the white pebbles on thy shore.

High o'er the sea surge and the sands,  
Like a great galleon wrecked and cast  
Ashore by storms, thy castle stands,  
A moldering landmark of the past.

Upon its terrace walk I see  
A phantom gliding to and fro;  
It is Colonna—it is she  
Who lived and loved so long ago.

Pescara's beautiful young wife,  
The type of perfect womanhood,  
Whose life was love, the life of life,  
That time and change and death withstood.

For death, that breaks the marriage band  
In others, only closer pressed  
The wedding ring upon her hand,  
And closer locked and barred her breast.

She knew the life-long martyrdom,  
The weariness, the endless pain  
Of waiting for some one to come  
Who nevermore would come again.

The shadows of the chestnut trees,  
The odor of the orange blooms,  
The song of birds, and, more than these,  
The silence of deserted rooms;

The respiration of the sea,  
The soft caresses of the air—  
All things in nature seemed to be  
But ministers of her despair.

Till the o'erburdened heart, so long  
Imprisoned in itself, found vent  
And voice in one unpassioned song  
Of inconsolable lament.

Then as the sun, though hid from sight,  
Transmutes to gold the leaden mist,  
Her life was interlarded with light,  
From realms that, though unseen, exist.

Inarime! Inarime!  
Thy castle on the crags above  
In dust shall crumble and decay,  
But not the memory of her love.  
—Longfellow, in *Harper's Magazine*.

### Soft Sawder and Human Natur.

In the course of a journey which Mr. Slick performs in company with the reporter of his humors, the latter asks him how, in a country so poor as Nova Scotia, he contrives to sell so many clocks. Mr. Slick paused, continues the author, as if considering the propriety of answering the question, and, looking me in the face, said in a confidential tone: "Why, I don't care if I do tell you, for the market is glutted, and I shall quit this circuit. It is done by a knowledge of soft sawder and human natur. But here is Deacon Flint's," said he; "I have but one clock left, and I guess I will sell it to him."

At the gate of a most comfortable-looking farmhouse stood Deacon Flint, a respectable old man, who had understood the value of time better than most of his neighbors, if one might judge from the appearance of everything about him. After the usual salutation, an invitation to alight was accepted by Mr. Slick, who said "he wished to take leave of Mrs. Flint before he left Colchester." We had hardly entered the house before the clockmaker pointed to the view from the window, and, addressing himself to me, said: "If I was to tell them in Connecticut there was such a farm as this away down east here in Nova Scotia, they wouldn't believe me—why, there ain't such a location in all New England. The deacon has 100 acres of dyke—"seventy," said the deacon, "only seventy." "Well, 70; but then there's your fine deep bottom; why, I could run a ramrod into it. Then there is that water privilege, worth three or four thousand dollars, twice as good as what Governor Cass paid fifteen thousand for. I wonder, deacon, you don't put up a carding-mill on it; the same works would carry a turning-lathe, a shingle machine, a circular saw, grind bark, and—"Too old," said the deacon; "too old for these speculations." "Old!" repeated the clockmaker, "not you; why, you are worth half a dozen of the young men we see now-a-days." The deacon was pleased.

"Your beasts, dear me, your beasts must be pnt in and have a feed;" saying which he went out to order them to be taken to the stable. As the old gentleman closed the door after him, Mr. Slick drew near to me, and said in an undertone: "That is what I call soft sawder. An Englishman would pass that man as a sheep passes a hog in a pasture—without looking at him. Now, I find—Here his lecture on soft sawder was cut short by the entrance of Mrs. Flint. "Just come to say good-bye, Mrs. Flint." "What! have you sold all your clocks?" "Yes, and very low, too, for money is scarce, and I wish to close the consarn; no, I am wrong in saying all, for I have just one left. Neighbor Steele's wife asked to have the refusal of it, but I guess I won't sell it. I had but two of them, this one and the feller of it, that I sold Gover-

nor Lincoln. General Green, Secretary of State of Maine, said he'd give me fifty dollars for this here one—it has composition wheels, and patent axles; it is a beautiful article—a real first chop—no mistake, genuine superfine; but I guess I'll take it back; and, besides, Squire Hawk might think it hard that I did not give him the offer." "Dear me," said Mrs. Flint, "I should like to see it; where is it?" "It is in a chest of mine over the way, at Tom Tape's store; I guess he can ship it on to Eastport." "That's a good man," said Mrs. Flint, "just let's look at it." Mr. Slick, willing to oblige, yielded to these entreaties, and soon produced the clock—a gandy, highly varnished, trumpery looking affair. He placed it on the chimney-piece, where its beauties were pointed out, and duly appreciated by Mrs. Flint, whose admiration was about ending in a proposal, when Mr. Flint returned from giving his directions about the care of the horses. The deacon praised the clock; he, too, thought it a handsome one; but the deacon was a prudent man; he had a watch, he was sorry, but he had no occasion for a clock. "I guess you're in the wrong furrow this time, deacon; it ain't for sale," said Mr. Slick; "and if it was, I reckon neighbor Steele's wife would have it, for she gives me no peace about it." Mrs. Flint said that Mr. Steele had enough to do, poor man, to pay his interest, without buying clocks for his wife. "It's no consarn of mine," said Mr. Slick, "as long as he pays me, what he has to do; but I guess I don't want to sell it, and besides it comes too high; that clock can't be made at Rhode Island under forty dollars. Why, it ain't possible!" said the clockmaker in apparent surprise, looking at his watch; "why, as I'm alive, it's four o'clock, and if I haven't been two hours here—how on airth shall I reach River Philip to-night? I'll tell you what, Mrs. Flint; I'll leave the clock in your care till I return on my way to the States. I'll set it a-going and put it to the right time." As soon as this operation was performed he delivered the key to the deacon, with a sort of serio-comic injunction to wind up the clock every Saturday night, which Mrs. Flint said she would take care should be done, and promised to remind her husband of it in case he should chance to forget it.

"That," said the clockmaker, as soon as we were mounted, "that I call human natur. Now, that clock is sold for forty dollars; it cost me just six dollars and fifty cents. Mrs. Flint will never let Mrs. Steele have the refusal—nor will the deacon learn until I call for the clock, that having once indulged in a superfluity it is difficult to give it up. We can do without any article of luxury we have never had, but when once obtained it is not in human natur to surrender it voluntarily. Of fifteen thousand sold by myself and partners in this province, twelve thousand were left in this manner and only ten were ever returned—when we called for them they invariably bought them. We trust to soft sawder to get them into a house and to human natur that they never come out of it."—*Thomas Chandler Haliburton*.

BE SOCIABLE.—George B. Waring, a Rhode Island farmer, writes in *Scribner's Monthly* as follows: If American agriculture has an unsatisfied need, it is surely the need for more intelligence and more enterprising interest on the part of its working men and women. From one end of the land to the other, its crying defect—recognized by all—is that its best blood—or, in other words, its best brains and its best energy—is leaving it to seek other fields of labor. The influences which leads these best of the farmer's sons to other occupations is not so much the desire to make more money, or to find a less laborious occupation, as it is the desire to lead a more satisfactory life—a life where that part of us that has been developed by the better education and better civilization for which in this century we have worked so hard and so well, may find responsive companionship and encouraging intercourse with others. The social benefits and facilities for frequent, neighborly and informal intercourse are obvious. To say nothing of the companionships and intimacies among the young people, their fathers and their mothers would be kept from growing old and glum by the constant friction of their kind; and in so far as a more satisfactory social relation with one's fellow-men gives cheerfulness and the richness of a wider human interest, in that proportion would the village life have a wholesome, mellowing effect that is not to be found in the remote farm-house, nor even in the sort of neighborhood we sometimes find in the country, where several farm-houses are within a quarter of a mile of each other. The habit of "running in" for a moment's chat with a neighbor is a good one, and it gets but scant development among American farmers.

WORRIES eat the life away. They bring wrinkles to the face and gray hairs to the head, and half the time they are not only absolutely needless, but absurd. Why, in the name of all that is sensible, can we not wait until the draft of sorrow is forced to our lips, and not sup needlessly at the cup of gall and wormwood?

WHEN people have good times, and keep a bright, pleasant fireside, and are always glad to see friends, there will always be friends to come.—*Mrs. H. B. Stowe*.

PERSUASIVE influences are better than any amount of moralizing.—*L. M. Alcott*.

THE sunshine of sweet looks.—*Whittier*.

### Women.

"What!" said Bartle, with an air of disgust. "Was there a woman concerned? Then I give you up, Adam."

"But it's a woman you spoke well on, Bartle," said Mr. Poyser. "Come, now, you canna draw back; you said once as women wouldna ha' been a bad invention if they'd been all like Dinah."

"I meant her voice, man—I meant her voice, that was all," said Bartle. "I can bear to hear her speak without wanting to put wool in my ears. As for other things, I dare say she's like the rest o' the women—thinks two and two 'll come to make five, if she cries and bothers enough about it."

"Ay, ay!" said Mrs. Poyser; "one 'ud think, an' hear some folk talk, as the men war' cute enough to count the corns in a bag o' wheat wi' only smelling at it. They can see through a barn door, they can. Perhaps that's the reason they can see so little o' this side on 't."

Martin Poyser shook with delighted laughter, and winked at Adam, as much as to say the schoolmaster was in for it now.

"Ah!" said Bartle sneeringly, "the women are quick enough—they're quick enough. They know the rights of a story before they hear it, and can tell a man what his thoughts are before he knows 'em himself."

"Like enough," said Mrs. Poyser; "for the men are mostly so slow, their thoughts overrun 'em, an' they can only catch 'em by the tail. I can count a stocking too while a man's getting 's tongue ready; an' when he ont wi' his speech at last, there's little broth to be made on 't. It's your dead chicks take the longest hatchin'. However, I'm not denyin' the women are foolish; God Almighty made 'em to match the men."

"Match!" said Bartle; "ay, as vinegar matches one's teeth. If a man says a word, his wife 'll match it with a contradiction; if he's a mind for hot meat, his wife 'll match it with cold bacon; if he laughs she 'll match him with whimpering. She's such a match as the horsefly is to 't horse; she's got the right venom to sting him with—the right venom to sting him with."

"Yes," said Mrs. Poyser, "I know what the men like—a poor soft, as 'ud simper at 'em like the pictur o' the sun, whether they did right or wrong, an' say thank you for a kick, an' pretend she didna know which end she stood uppermost, till her husband told her. That's what a man wants in a wife, mostly; he wants to make sure o' one fool as 'll tell him he's wise. But there's some men can do wi'out that—they think so much o' themselves a'ready—an' that's how it is there's old bachelors."

"Come, Craig," said Mr. Poyser, jocosely, "you mun get married pretty quick, else you'll be set down for an old bachelor; an' you see what the women 'll think on you."

"Well," said Mr. Craig, willing to conciliate Mrs. Poyser, and setting a high value on his own compliments, "I like a cleverish woman—a woman o' sperrit—a managing woman."

"You're out there, Craig," said Bartle drily; "you're out there. You judge o' your garden-stuff on a better plan than that; you pick the things for what they can excel in—for what they can excel in. You don't value your peas for their roots, or your carrots for their flowers. Now that's the way you should choose women; their cleverness 'll never come to much—never come to much; but they make excellent simpletons, ripe and strong flavored."

"What dost say to that?" said Mr. Poyser, throwing himself back, and looking merrily at his wife.

"Say!" answered Mrs. Poyser, with dangerous fire kindling in her eye; "why, I say as some folks' tongues are like the clocks that run on strikin', not to tell you the time o' the day, but because there's sunmat wrong i' their inside."—*George Eliot*.

WOMEN AS BANKERS.—Sofar but two women in the United States have been elected as directors of national banks, Mrs. Bradley of Peoria, Illinois, being one, and Mrs. Louisa McCall of Canton, Ohio, who was but recently elected, the other. Mrs. McCall's husband was President of the bank at the time of his death and she has been elected as well fitted by her business ability to represent his large interests. There are many other women who are equally competent to fill such positions. By the way, there is a bank in this city located on Fifth avenue, especially designed for the use of wealthy ladies. Parlors are provided for their accommodation, and the effort is to have it known as a ladies' bank. Why not elect as directors a few of the rich women of the city? Such a course would undoubtedly increase its popularity with the gentler sex.—*N. Y. Graphic*.

SLEEP.—Night after night we die, and are born again. We lie down in our bed as in the grave, and the time comes when we lie down in the grave as in our bed; but as Dean Milman wrote:

"It little matters at what hour of the day  
The righteous fall asleep. Death cannot come  
To him mutually who has learned to die.  
The less of this brief life the more of heaven;  
The shorter time, the longer immortality."

BEAUTY LIKE SUMMER FRUIT.—Beauty is as summer fruits, which are easy to corrupt, and cannot last; and, for the most part, it makes a dissolute youth, and an age a little out of countenance; but yet, certainly, again, if it light well, it maketh virtues shine and vices blush.—*Lord Bacon*.

### Diamond Cutting by Girls.

This is another new trade for women, says the *Scientific American*, and we wonder that those who are seeking new outlets for feminine work have not thought of it long ago. Diamond cutting is the mechanical labor which, above all others, requires that extreme delicacy of touch and nice perception of form, color, etc., which is inborn in the majority of women, but which nearly all men are compelled to use much practice to acquire. Diamond cutting involves no severe physical labor, except possibly in the grinding of the stones together to form the facets. That branch requiring powerful wrist muscles, may be let to the men; but every other process, from the splitting of the rough gems up to the final polishing, is fully within feminine capabilities.

Twenty-three young women are now successfully working at this trade at Roxbury, Massachusetts, and the credit of teaching them is due to Mr. Henry D. Morse. That gentleman has hitherto employed trained diamond cutters from Amsterdam; and by carefully watching them he became quite an expert himself. The Amsterdam cutters are nearly all Israelites, and they are exceedingly chary of imparting their knowledge to strangers, preferring to teach only their sons or family relatives, or at best, Dutch boys of their own selection. It is their invariable rule to decline to take apprentices except under the above restrictions; and accordingly, when Mr. Morse requested his workmen to teach American boys, they peremptorily refused. Anticipating this result, he had secretly established a shop in Roxbury, and there had taught six or eight girls. Consequently, when his men mutinied, he discharged them forthwith, and replaced them by his female employees. The Yankee girls are now cutting and polishing diamonds in superior style.

WEBSTER AND THE BANK BILL.—Mrs. Webster's reminiscences of the home life of her husband are simply but freely given, and two anecdotes, not before published, illustrate his well-known and singular absence of mind. The first refers to a lunch party. The custom was that the pie—dear to the Eastern heart—should be divided according to the number of those present. Mr. Webster, on the occasion in question, having looked round the room, deliberately carried through the operation of "carving," and the pieces having been distributed he found himself with an empty platter for his own share. He had, while counting the guests, succeeded in escaping his own notice. When studying law cases, his habit was to leave his books open at the places where he had been consulting precedent or authority; and a young man who was studying with him had adopted the habit of following Mr. Webster through the passages consulted, in order to arrive at an idea of the probable course of his argument. On one occasion he found in one of the books the place marked by a fifty-dollar bill. Mr. Webster was notoriously careless in money matters, and this was taken as a sample of his forgetfulness. When he returned to the room his attention was directed to the bill. "I haven't missed any money," he said, "so it certainly cannot be mine." The young man declared in parallel terms that it could not be his. Mr. Webster persisted in refusing it, on the plea that he could not appropriate anything which he did not know to be his own. The student replied that he was in identically the same position. To solve the problem, Mr. Webster turned to the manuscript of a Fourth of July oration, which he had recently delivered, directed the student to use the fifty dollars in having it printed, and to keep the proceeds of the publication, which proved to be a considerable sum.

### Songs of the Violet.

Perhaps the violet has had more poems written about her than any flower except the rose. How can we help saying "her" of this lowly, sweet-breathed child of the meadow and road-side?

The air begins to be as sweet as if the breezes of another world were blown through ours, when the violets unfold. This, too, was noticed long ago. Shakespeare speaks of

"The sweet south,  
That breathes upon a bank of violets,  
Stealing and giving odor."

Barry Cornwall says this lovely thing about the violet:

"She comes, the first, the fairest thing  
That heaven upon the earth doth fling,  
Ere winter's star has set;  
She dwells behind her leafy screen,  
And gives as angels give, unseen,—  
The violet."

—*Lucy Larcom, St. Nicholas for April*.

THE BEAUTIFUL AND USEFUL.—The useful encourages itself; for the multitude produce it, and no one can dispense with it; the beautiful must be encouraged; for few can set it forth, and many need it.—*Goethe*.

THERE is nothing so cheap, no aids to education so important, no instrumentalities which assist so largely in making a home bright and pleasant, as books, newspapers, and magazines.

TRIUMPH OF APPLICATION.—Few things are impracticable in themselves; and it is for want of application, rather than of means, that men fail of success.—*Rochevoucault*.

HUMAN ability and human responsibility never part company.—*J. G. Holland*.



### California Women.

A contributor of the Fresno *Expositor* gives an account of the very independent way in which the ladies of the Central California colony contrive to show their entire independence of the men: "At the colony we saw not only intelligent, educated women working in the fields; but the women were highly cultivated, delicately matured, accomplished and accustomed to all the amenities of the higher grade of city life. At the corner of North and Elm avenues we saw a lady superintending the planting and doing part of the work herself. At the same place another lady, an efficient teacher, was running water through an irrigating ditch to submerge a two-acre field, probably for alfalfa. Half a mile further a lady was staking a cow on an alfalfa patch, while her neighbor opposite stood in the midst of a larger flock of chickens than we have seen together for some time. Here we saw five varieties of blooded poultry, and were told that over 1,000 chickens were in process of incubation and being raised this season, in addition to the cultivation of an extensive vegetable and flower garden and the raising of over 10,000 orange and lemon trees, and all this by a lady of education and refinement, with a family of four children about her. At the corner of Elm and Central avenues, a lady, formerly a teacher in the schools of San Francisco, was irrigating a beautiful young orchard and displaying considerable skill in managing a somewhat uneven piece of land. On Cherry avenue a lady and her two daughters, both of them black-eyed, red-cheeked beauties, were laying out a circular vegetable garden and planting Italian cypress and orange trees on the margin of their carriage drive. Half a dozen other ladies were out in their gardens with sun-bonnets on their heads, and shovels or rakes in their hands, far more healthfully employed than in cooking or running sewing machines. But not the least interesting sight we saw, was near the south canal on Elm avenue. Here were a lady and her daughter, apparently a slight built girl of some 18 or 20 summers, actually engineering a new canal across their farm to reach the top of a piece of high land across a slough. To ascertain if there were sufficient fall to run water from the water gate to the desired point, the ladies had set a line of stakes, surveyor fashion, one-eighth of a mile, from point to point; then with a large triangle and plumb, evidently improvised on the spot, a dead level across the slough was determined, and the fall obtainable noted. The younger lady seemed to be the engineer. May she engineer her way through life in her own self-reliant way, and when she marries, let her select a male biped that she can manage easily. A number of the colony farms are being improved by non-resident owners, who are engaged in business in San Francisco and elsewhere, and many of whom are women. These owners will come to live in the colony when their orchards and vineyards are in bearing. We doubt if another such community, in such large numbers and so small an area, can be found on this coast. May the valley be filled with similar inhabitants."

### How the Earth Might be Burned Up.

Professor Proctor, writing to *Belgravia*, notes the cases of star conflagration and the effect which would result to the earth if our sun should thus be acted upon: These star conflagrations, it is believed, are caused by contact with other heavenly bodies—meteoric flights traveling on eccentric paths, or those in attendance of the comets. The meteors attendant on a comet continue to follow in its path years after the comet has disappeared. The effect of a comet, bearing in its flight many millions of meteoric masses falling upon the sun—should that take place—can be understood. Our sun seen from some remote star whence ordinarily he is invisible would shine out as a new sun for a few days, while all things living on our earth and whatever other members of the solar system are the abode of life would inevitably be destroyed. If a comet came out of that part of the constellation Taurus, arriving in such a time as to fall upon the sun in May or June, the light of the sun would act as a veil, and we should be instantly destroyed without knowing it. If it fell in November or December we should see it for weeks, and astronomers would be able to tell us when it would fall upon the sun. The disturbance upon the sun would be temporary, but there would be no students of science left to record the facts. The chances are largely against such an accident. Our sun is one among millions, any one of which would become visible to the eye under such an accident, yet during the last 2,000 years less than 20 such catastrophes have been recorded. Mr. Proctor moreover reassures us in another way. He says in effect that all but one of these conflagrations have appeared in the zone of the Milky Way, and that one in a region connected with the Milky Way by a well-marked stream of stars; that the process of development is still going on in that region, but that if there be among the comets traveling in regular attendance upon the sun one whose orbit intersects the sun's globe, it must have struck before the era of man, and that in our solar system we may fairly believe that all comets of the destructive sort have been eliminated, and that for many ages still to come the sun will continue to discharge his duties as fire, light and life of the solar system.

### Young Folks' Column.

#### Kindness.

Since trifles make the sum of human things,  
And half our misery from foibles springs,  
Since life's best joys consist in peace and ease,  
And few can save or serve, but all may please;  
Oh! let the ungentle spirit learn from hence  
A small unkindness is a great offence.  
Large bounties to restore we wish in vain,  
But all may shun the guilt of giving pain.  
—Hannah More.

#### Good Will.

Here is a golden saying from the lips of A. T. Stewart, a man who in 50 years amassed more than \$50,000,000.

"I consider honesty and truth as great aids in the gaining of fortune."

If such a man, with such wealth, should go still farther, and make good will to his fellow-men the leading motive of his life, what a power he might become, and what a halo of glory would crown his name!

Ah, my boys, what a world it would be, if this spirit prevailed in it—if on every side we met those ready to help and cheer, instead of being compelled always to be on our guard against selfishness and fraud! Now, every one can do his share toward making his own little world such a world. I have known a single brave, manly, generous boy to influence a whole school, so that it became noted for its good manners and good morals. I have also seen a vicious boy taint a whole community of boys with his bad habits, and set them to robbing orchards and birds'-nests, torturing younger children and dumb animals, using bad language and tobacco, and doing a hundred other things which they foolishly mistake for fun.

Good will should begin at home. How quickly you can tell what sort of spirit reigns among the boys or in the families you visit! In some houses there is constant warfare; at any time of day, you hear loud voices and angry disputes.

"You snatched my apple and eat it!"  
"Touch that trap ag'in, Tom Orcutt, and I'll give ye somethin' ye can't buy to the 'pothecary's!"

"Ma! sha'n't Sam stop pullin' my hair? He's pulled out six great handfuls already!"

"He lies! I ha'n't touched his hair!"

"Who's been stealin' my but'nuts?"

"Pete shot my arrow into the well,—and now sha'n't he make me another?"

Then go into a house where you find peace instead of war, innocent and happy sports instead of rude, practical jokes—and, oh, what a difference!

You may always tell a boy's disposition by noticing his treatment of his sisters. A mean and cruel boy delights in tyrannizing over smaller children; but in the presence of stronger boys, he can be civil, and even cringing. A cowardly fellow like that is pretty sure to exercise his ill-nature upon the girls at home.

Now, I know that many of the boys I am talking to have far more good will than they ever show. Their disagreeable ways are the result of long habit and want of thought. The spoiled child is pretty sure to form such ways. He is accustomed to think only of himself, and to have others think chiefly of him. That is the trouble, I suspect, with Orson. Will he, when he reads this, resolve to break up the old, bad habit, and cultivate the better spirit that is in him?

By good will I do not mean simply good nature. Good nature may sit still and grin. But good will is active, earnest, cheering, helpful.

Ah, my boys, I have told you many stories,—and I have no doubt some of you wish I had made this a story instead of a talk. But the real motive of all my stories—the lesson I have always wished to teach in them, but which I am afraid some of you have overlooked—has been this which I am trying to impress upon you now. If I were to write as many more, the hidden moral lurking in every one of them would be the same. Or if I were now to take leave of you forever, and sum up all I have to say to you in one last word of love and counsel, that one word should be—good will.—J. T. Trowbridge in *St. Nicholas*.

ANIMALS AND STEAM-ENGINES.—A writer in *Dingler's Polytechnisches Journal*, in noting the behavior of different animals toward the steam-engine, remarks upon the dexterity with which dogs run about among the wheels of a departing railway-train without suffering the least injury, whereas a host of railway workmen annually lose their lives. On the other hand the ox, a proverbially stupid animal, continues standing composedly on the rails, having no idea of the danger which threatens him, and is run over. Many kinds of birds seem to have a peculiar delight in the steam-engine. It has often happened that larks have built their nests and reared their young under the switches of a much-traveled railway. In engine-houses the swallow is a frequent guest. In a certain mill, where a noisy 300-horse power engine works night and day, two pairs of swallows have built their nests for years and rear their young there regularly. A case of almost incredible trustfulness on the part of swallows occurred in the early part of last year, when a pair of these birds built in the paddle-box of a steamer, and regularly made the journeys from Pesth to Semlin.

### GOOD HEALTH.

#### Croup.

Croup is an inflammation of the inner surface of the windpipe. Inflammation implies heat, and that heat must be subdued or the patient will invariably die. If prompt efforts are made to cool the parts in case of an attack of croup, relief will be as prompt as it is surprising and delightful. All know that cold applied to a hot skin cools it, but all do not as well know and understand, that hot water applied to an inflamed skin will as certainly cool it off. Hence the application of ice-cold water with linen cloths, or of almost boiling water with woolen flannel, are very efficient in the cure of croup. Take two or three pieces of woolen flannel of two folds large enough to cover the whole throat and upper part of the chest, put these in a pan of water as hot as the hand can bear, and keep it thus hot by adding water from a boiling tea-kettle at hand; let two of the flannels be in the hot water all the time and one on the throat all the time with a dry flannel covering the wet one, so as to keep the steam in to some extent; the flannels should not be so wet when put on as to dribble the water; for it is important to keep the clothing as dry as possible, and the body and feet of the child comfortable and warm. As soon as one flannel gets a little cool put on another hot one, with a little interval of exposure as possible, and keep up this process until the doctor comes, or until the phlegm is loose, the child easier, and begins to fall asleep; then gently wrap a dry flannel over the wet one which is on, so as to cover it up thoroughly, and the child is saved. When it wakes up both flannels will be dry. The same result will follow if cold water is used, the colder the better; the cloths should be of muslin or linen and of several folds thickness, large enough to cover the whole throat and the upper part of the breast.—*Idem*.

OVER-EATING.—If the food is wisely chosen there is not much danger of over-eating. Dr. Beard says: It is a fallacy to suppose that people, as a rule, eat too much, and that most of the diseases of the world come from over-feeding. The truth is that among all decent or civilized people the tendency is directly the reverse. In our country, and especially in our large cities, far more are underfed than overfed. Throughout our land thousands and thousands die every year from actual starvation. Some of these unfortunates are little children whose parents are too ignorant or too poor to give them what is necessary to sustain life. But many of them are adults, whom hard poverty or sad ignorance has forced into a habit of systematic though undesigned starvation. Day after day the vital powers slowly fade, the strength grows less, the spirit becomes morbid and the face wan and dejected. Disease now steps in, attacks and carries by force some important citadel of the body, and death follows: The process is a slow one—sometimes very slow—extending, perhaps, over many years, but it is oftentimes as sure as it is slow.

SUGAR OF MILK FOR DIARRHEA.—Dr. Talmay prescribes for the diarrhea of hot countries, from 20 to 300 grammes of sugar of milk daily. He administers it in the simplest way: the sugar, dissolved in a little water or as a draft in the course of the day. An excellent mode of administration consists in putting the dose of sugar of milk to be taken, into a half a liter or two liters of milk, according to the habits and the digestive capacities of the patient. The treatment is spread over several months, diminishing the dose as nutrition becomes more considerable and easier. According to M. Talmay's little work (published by Cocoz, Paris), the endemic diarrhea of hot climates is the result of a functional lesion of the liver, which results in the diminution and even the suppression of the glycogenic function of the liver. The sugar of milk may thus replace the glucose which is wanting in the blood.

NERVOUS COUGHING.—Dr. Brown-Sequard once gave the following directions, which may prove serviceable to persons troubled with a nervous cough: "Coughing can be stopped by pressing on the nerves of the lips in the neighborhood of the nose. A pressure there may prevent a cough when it is beginning. Sneezing may be stopped by the same means. Pressing, also, in the neighborhood of the ear may stop coughing. Pressing very hard on the top of the mouth inside is also a means of stopping coughing. And I may say the will has an immense power, too. There was a French surgeon who used to say, whenever he entered the walls of his hospital, 'The first patient who coughs will be deprived of food to-day.' It was exceedingly rare that a patient coughed then."

CHOOSING A PHYSICIAN.—"To choose a physician," as Lady Mountcashel has well remarked, "one should be half a physician one's self; but as this is not the case with many, the best plan which a mother of a family can adopt, is to select a man whose education has been suitable to his profession, whose habits of life are such as prove that he continues to acquire both practical and theoretical knowledge, who is neither a bigot in old opinions nor an enthusiast in new; and, for many reasons, not the fashionable doctor of the day. A little attention in making the necessary inquiries will suffice to ascertain the requisites here specified."

### DOMESTIC ECONOMY.

GARNISHING TABLE FRUIT.—The *Agricultural Economist* calls attention to the table beauty produced by serving green fruits with a garniture of leaves. Amongst the finer foliage for the decoration of the dessert, vine leaves, branchlets and tendrils must ever hold the first place, but they should be used of different sizes and ages. Some of them die off almost a golden color, others, such as West St. Peters and Barbarossa, die off of the most fiery hues. The Claret should also be grown for its red leaves. The Virginian creepers, again, are beautiful garniture for the dessert, as is the variegated *Coclea scandens*. Many of the passion flowers are also beautiful in form, color and outline. The worst of these and many other beautiful leaves is that they smell somewhat strongly, and are apt to flavor as well as scent the fruits. Some of the amarantuses again, pelargoniums and irisenes give a beautiful richness and variety of coloring, while there are few more cooling and pleasing garnishings than the common ice plant and the variegated *Mesembryanthemum variegatum*. Limes, planes, oaks, elms, dogwood, hornbeams, maples and especially the *Acer negunda variegatum* and the scarlet maple are admirable for the garniture of different fruits for the dessert.

ORIGIN OF DESSERT.—The service of sweets and fruits at banquets originated in Milan in the 15th century. It was unknown in France under Louis XIV. No dessert at all appears in Moliere's picturesque descriptions of the banquets given by the Grand Monarque in 1664 and 1666, and so far as we know the first dessert ever put upon a great table in France was at the marriage festival of Louis XV., when his poor little Polish bride, Marie Leeczinka, was brought from her simple home at Weissombourg to share the first throne in Europe. Under the first Napoleonic empire the dessert, as we know it, was developed and established by three great artists, whose names should not be suffered to die: Desforges, Delorme and Dufoy. It was by the last named of these that the pyramids of iced-cream, then known as "fromages glaces," were first served; but he was careful always to serve with these and the other confectionaries, puddings and sweets of all sorts, genuine cheeses, "for the benefit," as he tells us candidly, "of those who need a second thirst."

CONSERVE OF ROSES.—A lady who has resided many years in Syria gives the following recipe: "Cut the roses when in full bloom, and pull out the petals. This can be done for several days until fragrant roses are done blooming. Spread the leaves or stir them up, that they may not mildew. When done gathering them put the rose leaves into a preserving kettle with a little water, cover them and boil until they are soft and tender, then add sugar and boil till you have a nice syrup, and put away in your fruit cans or in jelly glasses. A tablespoonful of this taken on rising in the morning before eating anything is regarded by the Syrians as one of the best remedies for indigestion. This delicious preserve or conserve of roses is also passed around on a little silver tray to guests to taste of, and talk about, and praise. Ladies will find it a delightful flavoring for pudding, cakes, and pies, as it retains the rose flavor and fragrance for any length of time. A little of the syrup in pudding sauce is very nice. A little of the leaves as well in mince pies is a great addition."

PRESERVING EGGS.—A writer in the *English Mechanic* says: "In the year 1871-72, I preserved eggs so perfectly that, after a lapse of six months, they were mistaken when brought to the table for fresh-laid eggs, and I believe they would have kept equally good for twelve months. My mode of preservation was to varnish the eggs as soon after they were laid as possible with a thin copal varnish, taking care that the whole of the shell was covered with the varnish. I subsequently found that by painting the eggs with fresh albumen, beaten up with a little salt, they were preserved equally well, and for as long a period. After varnishing or painting with albumen, I lay the eggs upon rough blotting-paper, as I found that, when allowed to rest till dry upon a plate or on the table, the albumen stuck so fast to the table or plate as to take away a chip out of the shell. This is entirely obviated by the use of blotting-paper. I pack the eggs in boxes of dry bran."

HOW TO POUR TEA.—There is more to be learned about pouring out tea and coffee than most ladies are willing to believe. If those decoctions are made at the table, which is by far the best way, they require experience, judgment and exactness; if they are brought on the table ready made, it still requires judgment so to apportion them that they shall prove sufficient in quantity for the family party, and that the elder members shall have the stronger cups. Often persons pour out tea who, not being at all aware that the first cup is the weakest, and the tea grows stronger as you proceed, bestow the poorest cup upon the greatest stranger and give the strongest to a very young member of the family who would have been better without any. Where several cups of equal strength are wanted you should pour a little into each, and then go back, inverting the order as you fill them up, and then the strength will be apportioned properly.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week, 1 month, 3 mos, 12 mos.  
Per line (10 words) .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square) \$1.00 \$3.00 7.50 24.00  
One inch . . . . . 2.00 5.00 14.00 40.00  
Four weeks are rated a month.  
Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

DEWEY & CO.

A. T. DEWEY, W. B. EWER, O. H. STROBE, J. L. BOONE

ADDRESS all letters to the firm, and not to individual members, or others, who may at any time be absent from our office.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, April 7, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Elephant in Agriculture; Oppressive Assessments; What California has Not; 203. The Week; Beet Sugar in California; Reclaiming Desert Lands, 216. The Premium Berkshire; Cattle Breeders' Meeting; Colonizing in California; Failure of Friedlander, 217.  
ILLUSTRATIONS.—Scene in India.—The Elephant as a Farm Animal, 209. Centennial Premium Berkshire Swine, 217.  
QUERIES AND REPLIES.—Destroying Squirrels; Arizona "Potato Bugs"; Farm Wanted, 216.  
CORRESPONDENCE.—The Century Plant in Mexico; San Bernardino County; San Joaquin County; Tulare County; Marin County, 210.  
THE STABLE.—Shoeing of Horses, 210.  
HORTICULTURE.—The Banana in California, 210.  
ARBORICULTURE.—Large Almond Orchard—Spring Brook Ranch, 211.  
THE APIARY.—Honey Bees—A Moth Protector, 211.  
THE DAIRY.—New Method of Raising Cream, 211.  
THE VINEYARD.—Bleeding Vines and Trees, 211.  
POULTRY YARD.—A Successful Experiment, 211.  
AGRICULTURAL NOTES from the various counties in California, 213.  
HOME CIRCLE.—Victoria Colonna (Poetry); Soft Sander and Human Nature; Be Sociable; Women; Women as Bankers; Sleep; Beauty Like Summer Fruit; Diamond Cutting by Girls; Webster and the Bank Bill; Songs of the Violet; The Beautiful and Useful; Triumph of Application; California Women; How the Earth Might be Burned Up, 214-215.  
YOUNG FOLKS' COLUMN.—Kindness (Poetry); Good Will; Animals and Steam-Engines, 215.  
GOOD HEALTH.—Croup; Over Eating; Sugar of Milk for Diarrhea; Nervous Coughing; Choosing a Physician, 215.  
DOMESTIC ECONOMY.—Garnishing Table Fruit; Origin of Dessert; Conserve of Roses; Preserving Eggs; How to Pour Tea, 215.  
GENERAL NEWS ITEMS on page 212 and other pages.

## NEW ADVERTISEMENTS.

Flower, Fruit and Tree Seeds, etc., Geo. F. Silver, 211 F. Moustache Protector, C. H. Barrows, 211. Conn.; East India Tree Tea, J. N. Berry, Carlsbad, Mo.; Select Garden Seeds, B. K. Bliss & Sons, N. Y.; New England Colony of California, C. H. Denison, General Agent.

## The Week.

The week has brought news that the rain, which was falling as our last issue went to press, gave much cheer and gladness to our friends in those parts whose blessings have been fewest the present season. From Santa Clara, Monterey, San Benito, San Luis Obispo, Santa Barbara, Los Angeles, San Diego, San Bernardino and around the feet of the State up through Kern, Tulare, Merced, Fresno, Mariposa and Stanislaus counties come words which lips in those parts had well nigh forgotten how to form. Those words were "glorious," "storm," "shower," "rains," "abundant," indeed, in several counties they pronounced the blessing the best of the season where adjectives hardly reached to "good" before. This is a theme for genuine rejoicing. It is not to be expected but that hardship will yet result and yet the rain breaks the back of the drouthy monster and bids feed start from fields which seemed stamped with famine. Where there was nothing before growth will now mount to hay and where nought but hay was expected there will be some well-filled heads of grain. And there is yet a month of possibilities in which rain may fall to stretch the season of feed farther towards the coming rains of the coming autumn.

In those parts of the State where prospects were good before the week brings note of a favorable continuance. There are still notes of mildew and rust, but not to the extent which many feared. The fruit has been spared the blight of frosts, unless the frosts have come since the date of our advice. In orchards and vineyards there is promise of early and abundant fruiting. The springtime of 1877 seems to lead her tardy ancestors of recent years by a month at least, and her grateful works in fresh green vegetables do no small work in promoting the health and happiness of a State full of earnest workers. There are many good notes for the week, at which we rejoice with all.

## Beet Sugar in California.

Change is stamped on the beet sugar interest of our State. It must be acknowledged that the enterprise from which most was expected and in which much capital was invested has proved an unprofitable undertaking. We refer to the Sacramento beet sugary. As nearly as we can learn the cause of the failure in this instance was not the lack of enterprise and capital, but rather in lack of close business management. We are told that the owners were unable to give the enterprise their personal attention, and, as is often the case in farming by corporations, the business was not economically managed, and the beets cost the company about twice as much as individual farmers could produce them for. Concerning the causes of the Sacramento failure the Stockton Independent says: "The manufacture of beet sugar has been abandoned in Sacramento for many reasons: the terrible ravages of the army worm in the beet fields, destroying the source of supply and injuring the quality of the beet; the inadaptability of the soil for production of a superior quality of beets, and general mismanagement and business complication." If these be the true reasons for the abandonment of the Sacramento concern, and as nearly as we can learn the trouble was of this nature, it would argue nothing against the success or possibility of making sugar from beets with profit in this State. Indeed, there is reason to believe that the industry contains elements of success, from the fact that the manufacture is not to be abandoned, but is to be prosecuted with vigor in another locality.

Last summer we had notes of the erection of a sugary on Andrus island for the manufacture of sugar from melons. This island is situated at the confluence of the Sacramento and San Joaquin rivers, and contains 4,000 acres of rich bottom land. It is one of the several islands which have been reclaimed from the waters which formerly submerged them when running high. Mr. F. A. Roe, of Oakland, being acquainted with the manufacture of melon sugar in Hungary, conceived the idea of starting the manufacture in this State and built the sugary on Andrus island. He imported a mill from Hungary for the manufacture of melon sugar. Since then, being impressed that greater chances lay in the manufacture of beet sugar, because he found that beet sugar was a demonstrated success, if freed from speculative embarrassments in its production, while melon sugar was altogether an untried experiment, he resolved to turn his machinery into beet sugar making. On his doing this the farmers on Andrus island took half the stock and contracted to keep the sugary supplied with any quantity of sugar beets at half the cost by corporation farming. So far the sugary starts on a substantial basis. Mr. Ortmann, a practical sugar maker from the Sacramento works, was engaged to make sugar. Mr. Roe, himself a fine practical business man, will devote his time to the conduction of the general business. The Sacramento Boiler Works, in this city, are now busy making tanks for this establishment. There are 250 of these tanks to be made altogether. The largest are eight feet by four by four; the next size, six feet by four by four; and the others are smaller. With the exception of the tanks now being made the mill is all ready for business. Thus the manufacture of beet sugar takes a new start in the interior of the State and, so far as we can see, bids fair to establish itself on a permanent and profitable basis.

We learn from the Stockton Independent that there are measures on foot for the purchase of the Sacramento machinery and the establishment of it in San Joaquin county. It says: "The machinery is of the latest and most improved pattern, having been imported from Germany at a cost of \$160,000. It can be purchased for \$45,000, and we learn that the negotiations for its purchase have nearly been consummated. Whether it will be set up in Stockton or on the upper end of Roberts island has not yet been determined. An experienced German, who spent all of his early life in the beet sugar manufacture in Germany and thoroughly knows the business, is of the opinion that the higher tide islands of this county are peculiarly well adapted to the production of the sugar beet. He has lived a number of years on Roberts island and is thoroughly familiar with the soil and its capabilities. On Roberts island, or any of the islands in fact, there will never be any trouble from the army worm, as the belt of water surrounding them is an effectual barrier to the progress of that destructive insect. The profits of a beet sugar factory well managed are large and remunerative."

We do not enjoy the comfortable assurance of our contemporary, that the river is going to prove an effectual barrier to the progress of the army worm, although we hope experience may so prove. Even if the worm should fail to work his passage on a ferry or on floating rubbish, there would be nothing to prevent the moth, (*Leucania unipuncta*), from floating across on the night winds, and laying her eggs on the water-bound fields. However, we hope the event may prove different.

While we write at length of beet sugar in the interior, we would not forget the interest in the production which is manifested in the southern counties. We hear that the factory in Soquel, Santa Cruz county, has made contracts for beets in the Pajaro valley at the rate of \$4 a ton.

The farmers on the Soquel, we read, decided not to furnish them for this price. There is now considerable agitation of the subject in Santa Barbara county. What results will ensue the future will disclose.

## Reclaiming Desert Lands.

EDITORS PRESS:—I want to know all about how to take up the section "desert land," whether I am to be on it the first year, etc. I have sent three sons to a locality near Tubac, Arizona. I want them to locate some land and take out the ditch and fence before I go down. I want to stay here and earn money to settle up and to pay their way while getting the water on the land and getting in the first crop. We are making preparations for 10 to 20 families to locate on some of those valleys, so that we can have a co-operation among ourselves.—G. W. PROCTOR, Cambria, San Luis Obispo county, Cal.

The matter which our querist presents is fresh and the answers to his questions will doubtless prove interesting to many who are looking for further information concerning availing themselves of the law for the reclaiming of desert lands, which was passed on the 3d of March last. We have looked up the instructions issued by the Department of the Interior at Washington, which have just been received at the Land Office in this city. In the description which we shall give of them, we must ask readers to refer to the text of the law, which was printed in the RURAL PRESS of March 10th. Read in connection with the copy of the law, the following instructions will mark out the course to be pursued by any one wishing to locate lands under the law. Our querist will see that there is no regulation concerning residence, and all that is required is that the land shall be reclaimed within the specified time.

The declaration of intention to be filed with the Register and Receiver at the land office of the district in which the land lies, must be under oath, and may be executed before either the Register or Receiver, or the clerk of any court of record having a seal. It must be set forth that the applicant is a citizen of the United States, or that he has declared his intention to become such, in which case a duly certified copy of his declaration of intentions to become a citizen must be presented and filed. It must also be set up that the applicant has made no other declaration for desert lands, and that he intends to reclaim the tract of land applied for, not exceeding one section, by conducting water thereon within three years from the date of his declaration. The declaration must also contain a description of the land applied for, by legal subdivisions if surveyed, or, if unsurveyed, as nearly as possible without a survey by giving, with as much clearness and precision as possible, the locality of the tract with reference to known and conspicuous landmarks or the established lines of survey, so as to admit of its being thereafter readily identified when the lines of survey come to be extended.

As preliminary to the filing of such declaration, it must be satisfactorily shown that the land therein described is *desert land* as defined in the second section of the act. To this end there will be required the testimony of at least two disinterested and credible witnesses, whose testimony will be reduced to writing in the usual manner; or the evidence may be furnished in the form of affidavits executed before the clerk of any court of record having a seal, the credibility of the witnesses to be certified by said clerk. The witnesses must clearly state their acquaintance with the premises and the facts as to the condition and situation of the land upon which they base their judgment. Registers are particularly enjoined to exercise great care as to the sufficiency of the proof upon this point in each case. After this proof has been satisfactorily made, the Receiver will receive from the applicant the sum of 25 cents per acre for the land applied for; the Register will receive and file his declaration, and will jointly issue, in duplicate, a certificate showing the declaration to reclaim the described and specified section.

One copy of this certificate will be delivered to the applicant, the other copy with the declaration and proof will be retained in the land office.

At any time within three years after the date of filing the declaration and the issue of certificate the proper party may make satisfactory proof of having conducted water upon the land applied for. This proof must consist of the testimony of at least two disinterested and credible witnesses, who must appear in person before the Register and Receiver. They must declare that they have personal knowledge of the condition of the land applied for, and of the facts to which they testify; and their testimony must be reduced to writing in the usual manner. The Register will require the party to present and surrender the duplicate certificate issued when the declaration was filed. When this is done, and the final proof made to satisfaction, the Receiver will receive the additional payment of \$1 per acre, and will also issue a final certificate of purchase and the reclaimed will become the property of the reclaimer with full title from the United States.

PRICKLY COMFREY.—We have in preparation engravings to illustrate an essay on prickly comfrey by Col. J. W. A. Wright. This plant we took occasion to comment upon in a recent issue of the RURAL as of probable value as a forage plant in this State. It is thought it can be grown with great success on our irrigated land, and such full description as we shall be able to give of it with Mr. Wright's assistance will doubtless be of much interest to all readers of our paper.

## QUERIES AND REPLIES.

### Destroying Squirrels.

EDITORS PRESS:—In a late number of the RURAL is an inquiry about the best method of destroying squirrels. There are doubtless several best methods, each depending upon circumstances. When one poison will not go down another should be tried. But where the pests obstinately refuse to partake of the food so elaborately prepared for them, let the sighted farmer try my method. Buy, or rather make, as any ingenious person can do, a hand-bellows; make it large, so as to use for any little black-smith jobs that are constantly occurring on the farm; make a fire with chips or bark in an iron vessel; put some of this in the squirrel hole and blow with the bellows. Smoke will issue from several adjoining holes; stop these, and put a little sulphur on the fire and blow again. When the hole is well filled with smoke, stop it up. The squirrels are effectually bulldozed, and will pull no more corn nor gnaw any more eucalyptus. In a few cases, however, in my experience, the holes are opened next day, but I presume this is done by absentees on their return or by squirrels from neighboring ranches. No person adjoining me spends any time or money in destroying squirrels. This is wrong. There should be an effectual law compelling every one to do his proportionate share toward the extermination of these great destroyers. The amount of damage they do is almost incalculable. Millions annually would be no exaggeration.—S. P. SNOW, Santa Barbara, Cal.

We have had mention of this sulphurous method before, and we have heard good reports of its success. Not long ago we described an apparatus which a man in Alameda county had contrived and mounted on a wheelbarrow, and thus could move his portable condemnation all over the fields and fumigate each squirrel gallery as he came to it. There may, of course, be points of convenience gained by a good fumigating apparatus, but Mr. Snow's arrangement is simple and cheap and well worth trial from all those who have squirrels with poor appetite for poison.

### Arizona "Potato Bugs."

EDITORS PRESS:—From your article in the PRESS of March 10th, I perceive that entomologists do not appear to be acquainted with the various destructive insects prevalent in Arizona. There are no less than four or five distinct species that prey on the potato in this valley; the first that I noticed last year was, I think, the blister beetle, mentioned by Prof. Riley in RURAL PRESS of March 10th. It is not seen exclusively on the potato, as I have seen it on the sage brush and grass on the hills. It feeds exclusively on the leaves, taking the rows in rotation and making clean work as it goes. This is a long, dove-colored, black-spotted, soft beetle, shaped somewhat like the cockroach, only slimmer and smaller. This insect is migratory in its habits. The next is a red and yellow striped beetle, with a hard shell. It comes out of the ground usually in pairs, and deposits its eggs (of an orange color) on the under portion of the leaf. The young grow with astonishing rapidity, and are of a dirty red color, and are apparently larger before they form their shields than subsequently. They do not arrive at maturity until they drop off the vine and burrow in the ground; when they make their appearance again to incubate they are full formed. They are of sluggish habits and drop off the vine when touched.

There is also a long greenish bug, with wings and habits similar to the first mentioned, very voracious; and then when the potato is about to bloom, there comes a black beetle similar to those seen in California.

We have also a pumpkin bug, of a greenish color, that cuts the vines at the roots. I have also noticed a beautiful red and purple striped beetle eating the beet tops. I will be happy to send some specimens of these insects to Prof. Riley. They do not come until the latter end of May and in the months of June and July.—D. W. MOONEY, Williamson's Valley, Yavapai Co., A. T.

These notes are of interest. We hope Mr. Mooney will send Prof. Riley specimens of each of the insects, and he doubtless will give us a full review of the subject unless he is too busy with the Government Grasshopper Commission. There may be new points of value to know.

### Farm Wanted.

EDITORS PRESS:—I wish to rent a farm this fall to sow a wheat crop for next year. If you know of any, please give the owners my address and tell them that the terms I want are these: The owner is to furnish land, teams and seed, and take half in the sack. I can give the best references that San Jose affords.—CHARLES B. DALTON, Hanford, Tulare county, Cal.

We give the above writer the benefit of a notice for the purpose of calling the attention of others to the fact that the RURAL PRESS is an excellent medium for advertising wants of this kind and of giving notice of land that is for sale or to rent. It is for the accommodation of our readers in matters of this kind that our advertising columns are especially adapted. Our rates are very reasonable, and the advertiser can place his want under the eyes of the whole State and hear of business opportunities which would be far beyond his knowledge were it not for the advertising pages of our paper. We hope readers wanting to obtain or dispose of property will recognize the assistance which the RURAL can give them toward the attainment of their desires.

A LARGE AGRICULTURAL ENTERPRISE.—The daily papers note that a vigorous sample of growing barley was exhibited on 'change by H. C. Beals, of the Commercial Herald. The sheaf was from a growing crop in a field of 500 acres on the ranch of Haggin & Carr, in Kern county, near Bakersfield. The growth was exceedingly rank, and the heads long and heavy, affording a striking evidence of the value of irrigation in a season like this. The ranch is one of the largest cultivated in California, consisting of 30,000 acres, and all the operations upon it are conducted on a gigantic scale. The crops this season are 2,000 acres of barley, 1,000 acres wheat, 175 acres corn and 3,000 acres alfalfa. The stock consists of 10,000 head of cattle, 20,000 sheep, 500 horses and 1,000 hogs. The working force at the present time is 625 men. All the crops are irrigated by an extensive and costly system of canals, which, with the other improvements on the place, added to the cost of the land, brings the total investment up to \$1,400,000.



### The Premium Berkshires.

We give illustration this week to represent the Berkshire swine which took the first premium at the Centennial exposition, and thus became to some extent representative of the breed in this country. They are the sow "Belladonna" and the boar "Lord Smithereen," imported and owned by T. S. Cooper, of Coopersburg, Pennsylvania. They are very fine specimens, and show the characteristic marks of the breed very well.

The Berkshire swine are very popular in this State, both among breeders and pork packers. The breeding has largely increased during the last few years, and the increase of imported hogs are being distributed by breeders and dealers to almost every county of our State. The largest importation of Berkshires into this State was, we believe, made in 1872 by Saxe & Shawhan, of Kentucky, 200 being brought in that importation.

The breeders of Berkshire swine have, we believe, done more in the way of systematic effort to maintain purity of pedigree in their herds than any other body of swine breeders. The "Berkshire Record," published by the Secretary and Treasurer of the Association, Messrs. Garland and Springer, of Springfield, Ill., is a very creditable publication, and one which all breeders would do well to patronize.

In connection with the engraving of the Centennial premium Berkshire we also present our readers with some interesting points from the "Premium Essay," of A. B. Allen, Esq., on the origin, breeding and management of Berkshire swine. He says:

Several aged men in different parts of Berkshire, of whom I inquired on my first visit to England in 1841, informed me they had known there improved swine, of the same type as I then found them, from earliest childhood. But the most particular and apparently reliable account I was able to obtain, was from Mr. Westbrook, of Pinckney Green, Byham, who told me that his father possessed them as early as the year 1780, in as great perfection as the best then existing in the country. Thus it will be seen that the improvement is now at least a century old, and more probably a century and a quarter; for it would have taken some years back of 1780 to begin a new breed of swine and get it up to a fixed type at that period.

The size of the improved Berkshire is shown by several examples. Mr. Allen says: I have heard of those, both in England and America, whose dead weight, dressed, exceeded 800 pounds. But at the time I first visited the former country the general weight, full grown, was about the same as at the present time, namely, from 300 to 600 pounds—according as the smaller or larger pigs were selected for fattening. The smaller sizes maturing several months the quickest.

The meat of the improved Berkshires, like that of the unimproved, abounds in a much greater proportion of sweet, tender, juicy lean, well marbled, with very fine streaks of fat, than other breeds of swine, but the former was far more delicate as now than the latter ever was. This renders the whole carcass the most suitable of all for smoking. The hams and shoulders are almost entirely lean, a thin rim of fat covering only the outside.

The improved Berkshires can be fattened at any age. Barrows matured at 12 and 18 months, according as selected from the litters, whether the largest or the smallest, and as subsequently fed and treated. Boars and sows reserved for breeding about six months longer, to get their fullest size and weight, not being pushed by high feed so rapidly as those destined for more immediate slaughter.

My experience is that both male and female generally produce their best offspring at two to five years of age. There are plenty of instances of their doing this both older and younger. I consider anything over seven to ten years old as quite risky in a breed so precocious and of such early maturity as the improved Berkshire. I have heard, however, of a boar breeding well till he had attained the age of 20 years, but it is not probable a sow would prove a good breeder beyond half this age. Much depends on feed and management in keeping up vigor and promoting longevity.

The following are the standard characteristics and marks of Berkshire swine as adopted by the National Convention of Swine Breeders of the United States and Canada, assembled at Indianapolis, Ind., November 20th, 1872:

Color, black, with white on feet, face and tip of tail, and an occasional splash of white on the arm. While a small spot of white on some other part of the body does not argue any impurity of blood, yet it is to be discouraged, to the end that uniformity of color may be attained by breeders. White upon one ear, or a bronze or copper spot on some part of the body argues no impurity, but rather a reappearing of original colors. Face short, fine and well dished; broad between the eyes; ears generally almost erect (but inclined forward), small, thin and showing veins; jaw, full; neck, short and thick; shoulders, short from the middle, deep from the back down; back, broad and straight; ribs, long and well sprung, giving rotundity of body;

short ribs of good length, giving breadth and levelness of loin; hips, good length from point of hips to rump; hams, thick, round and deep, holding their thickness well back and down to the hocks; tail, fine and small, set on high up; legs, short and fine, but straight and very strong, with hoofs erect, legs set wide apart; bone, fine and compact; hair, fine and soft—no bristles, even on the boar; quick and spirited in movement, stylish in carriage, and in the boar, more especially, bold and imposing in presence.

### Cattle Breeders' Meeting.

A meeting of the Cattle Breeders' Association was held in the Young Men's Christian Association building, on Wednesday April 4th. Hon. Cyrus Jones, President, in the chair.

The Secretary, Robert Ashburner, was necessarily absent and Hon. Jesse D. Carr was elected Secretary, *pro tem*.

President Jones delivered his annual address, which we expect to present in full to our readers next week.

On motion of W. L. Overhiser, a vote of thanks for the able address was tendered to the President.

The report of last year's meeting, prepared by Secretary Ashburner, was read by Mr. Carr and approved by the meeting.

Mr. Overhiser, of San Joaquin, asked whether the State Board of Agriculture took any notice of the protest of the society against the management of the display of stock at the State Fair,

M. Wick, of Butte county, said that inasmuch as the State society had a new President, it would be well to make a request again to ascertain whether the society could give a more respectful treatment. His respect for the new President, Major Biggs, would suggest this.

Mr. Carr stated that the protest of the breeders was on file before the State society, and it could be called up at any time. He was opposed to asking anything more of the society until it showed us respect enough to answer the communications of the breeders.

Mr. Overhiser: "The society has treated us with the utmost contempt."

Mr. Carr: "I move that a vote of censure be passed upon all members of the society who exhibited at the fair last fall, though I was one of them."

The motion was seconded by Mr. Overhiser, and the following resolution was framed and adopted:

That this society adhere to the resolutions passed by them at the meeting in Sacramento, April 19th, 1876, to exhibit no stock at the State fair until the State Board comply with the requests made of them, and that the members who attended the fair with their stock last fall be censured.

President Jones remarked that the society could not but pass the resolutions, inasmuch as two of the members to be censured were in favor of the resolution. The resolution was adopted.

Mr. Overhiser moved a resolution of censure on the managers of the State fair, the San Joaquin fair and all other fairs, who offer to pay breeders' expenses for bringing their stock and then refuse to do the same. He said he wished the public to see how stock exhibitions were made up and how breeders were deceived

ment in our State, new comers should examine for such locations as will suit their particular wants, that they may become fixed from the first and take deep root in the new land of their choice.

### Failure of Friedlander.

The most talked-of event in trade circles, as we go to press on Wednesday afternoon, is the failure of a man who is widely known in this State. The reporter of the *Bulletin* had an interview with Mr. Friedlander, and the points made below are doubtless the result of information received from him. We quote from the *Bulletin* as follows:

"Reports of the suspension of Isaac Friedlander were quietly circulated at an early hour after the opening of the banks this morning. Rumors of the kind have been floated at least twice before within the past two years, but they were premature. We regret that we cannot say the same of those whispered about to-day. Mr. Friedlander has been long identified with the land and shipping interests of California, and is widely known as one of the heaviest operators in tounage and wheat in this country. It is known that Mr. Friedlander is a heavy land-owner in the San Joaquin valley, where crops are not always certain. Much of this land he has sold to others on credit, and when the yield was poor he has carried his clients along from year to year, by not only waiting on them for payments, but advancing seed and supplies to bridge them over the difficulties attending poor harvests. In this way he has been accumulating a burden, which even his broad shoulders were unable to much longer bear. The drouth this year, in connection with other losses on wheat and ships, has culminated in his suspension. Over a year ago, in view of the promise of an unparalleled wheat crop, he chartered large numbers of ships to arrive from four to eight months ahead at 60s to 75s. In this business he had a lively competitor, whose name is frequently before the public in connection with stock speculations.

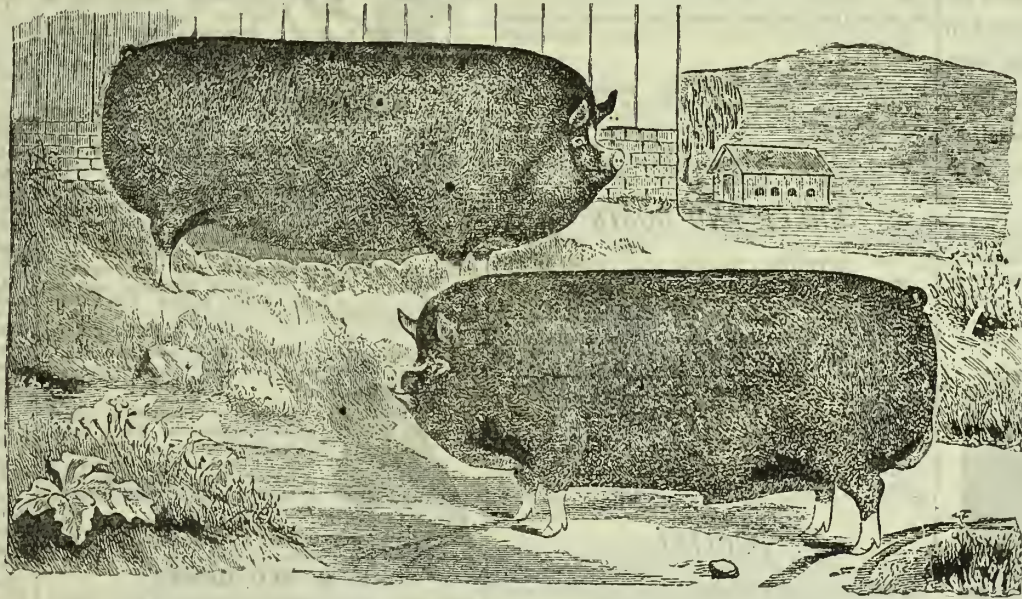
"It is true we have shipped more wheat this year than in any previous year, but we shall fall short at least 100,000 tons of what was considered the minimum surplus a year ago. The liberal rates offered brought ships here from all quarters of the world. They came singly and in schools, and filled our harbor as it had never been filled before. As the season wore on freights gave way and wheat went up. Mr. Friedlander undoubtedly tried to get enough wheat before the advance to make good what he knew he must lose on ships, but was not altogether successful. It is impossible at this writing to give his liabilities, as much depends on the solvent character of his assets. Admitting these to be as good as he believes them to be, his unsecured liabilities will aggregate about \$600,000, which, in a business of the magnitude carried on by him is a comparatively small sum. He freely confesses that he cannot pay dollar for dollar, and does not expect to be able to do so. The amount which he can pay will probably be determined at a meeting of creditors which will be held on Saturday. Fortunately, the heaviest creditors do not exceed a dozen in number, and it is believed that most of them will be able to stand their losses. The failure will affect no interests outside of this coast, and it is probable that the creditors will divide their losses by accepting so much to the dollar, and allow Mr. Friedlander to go on. Otherwise, he will go into bankruptcy."

LECTURE BY DR. DIO LEWIS.—The gentleman whose name is mentioned in the caption of this article delivered a lecture in the First Congregational church last evening on "Our Girls." It was given for the benefit of the new free library association. The church edifice was well filled. It would have been crowded to repletion had one-tenth of the citizens of Oakland known what kind of an address would have been delivered. No reporter could do justice to the speech of Dr. Lewis. It was inimitable. In its character it was serio-comic. In his personation wherein he eulogized his sainted mother, the lecturer threw himself up among the immortals. From the first paragraph to the closing sentence the remarks of Dr. Lewis were concise, incisive and thoroughly enjoyable to the large audience who had the satisfaction of listening to his address.—*Oakland Transcript*.

The whole lecture was good in every respect. By request of some of the prominent citizens, Dr. Lewis will repeat the lecture, with changes, at the same place on Monday evening next.

WE take pleasure in calling especial attention of our readers to the advertisement of the New England colony, in this issue. It is worthy of the consideration of all those who are in search of cheap and good lands.

ON FILE.—"Fruit Tree Suckers," W. P. G.; "Mexico," G. K.; "A Lunch with Aunt Mary," N. V.; "Insects on Fruit Trees," G. H. L.; "Prickly Comfrey," J. W. A. W.



CENTENNIAL PREMIUM BERKSHIRE SWINE.

and whether any members of the society exhibited without regard to the resolutions adopted at the last meeting.

Mr. Wick, of Butte, said he was pressed to exhibit and he wrote to Col. Younger to learn whether he was going to exhibit, and obtained the impression that he was. Finding others were going to exhibit, he did so and found Col. Younger's and Mr. Carr's stock there.

Mr. Carr stated that he urged Col. Younger not to exhibit, but he could get no promise from him. Mr. Carr then went to Modoc county and during his absence his herdsman took some cattle up there. Mr. Carr was opposed to the exhibition.

Mr. Overhiser stated that with all due deference to the members of the society he could not see what was the use of the Breeders' Society meeting and passing resolutions, and the members doing directly to contrary to the agreement. The managers of the fairs laugh at the society because they can go to the members individually and persuade them to act contrary to the expression of the society.

Mr. Overhiser stated that he could afford to stay away from the fairs because he could make more by showing his herd to good men on his ranch. He was breeding thoroughbreds for their paying qualities in beef and milk, and he wished visitors to the herd to see the herd at milking time. He is breeding to establish the fact that thoroughbred Durhams are a milking breed and is sure he can do it. He has 30 thoroughbred cows which he will match against the same number of cows of equal age of any dairy herd in the State.

Mr. Overhiser said he would not go to the fairs this fall until he was sure that cattle should receive as fair a show as horses. He thought it was no use of adopting resolutions on the subject, but for himself he was not going to support fairs in which true cattle and agricultural interests are overshadowed by other interests and purposes. "What I would like to see," said he, "is a stock fair to exhibit stock without any speed programme, to show stock, sheep, swine, etc. This we could do if we as stock-breeders would act together, but not if we resolve one thing and do another thing. I would be willing to pay \$500, just to try the experiment. We have stock on this coast which would make a display which could not be surpassed anywhere. I saw the Centennial cattle show and saw nothing there which was better than we can show."

even when such objectionable bargains were made.

The society passed next to the election of officers, which resulted in the re-election of the old board, as follows: President, Cyrus Jones of Santa Clara; Vice-President, Moses Wick of Butte; Secretary and Treasurer, Robt. Ashburner of San Mateo; Executive Committee, Jesse D. Carr, W. L. Overhiser, Coleman Younger.

On motion, Sylvester Scott, of Cloverdale, Sonoma county, was elected to membership.

Mr. Bates alluded to the formation of the Meat Shipping Company, which has been described in these columns.

The society adjourned to meet on Wednesday evening during the State fair in Sacramento.

### Colonizing in California.

Probably no better plan of colonizing, either for the colonists or land holders, has been devised than that of segregating a parcel of land, dividing it up into small farms, and making a special effort to fill up the colony with a select and compact company; and where irrigation is necessary or desirable, securing the water right with the land. We believe that wherever this plan has been adopted in California it has met with most satisfactory success.

During a recent visit to the Central California colony, near Fresno City, we were much gratified with the most remarkable success of that enterprise, nearly all the lots having been sold at \$1,000 each. The work done and progress made during the short time since this colony was inaugurated is really astonishing. We passed around and conversed with many of the settlers, and found every one that we met well pleased with the prospect. The water for irrigation is said to be ample for all contingencies, ensuring a crop every year, regardless of drouth, as the supply comes from the eternal snows of the Sierras. Settlers, whether from this State or abroad, who are desirous of founding homes in the country, will do well to give this plan of settlement a careful consideration. By it a large and compact community is quickly brought together, ensuring the early establishment of schools and church and society privileges, the lack of which, in the usual desultory plan of settling up a country, is always found to be a sad drawback to the settler.

With all the inducements offered for settle-



SINGLE SUBSCRIPTIONS for this paper will not be received for less than \$4 a year. Any reliable person is authorized to get up a club of five or more old or new names at \$3 a year, to be paid strictly in advance.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.

SUBSCRIPTIONS to the RURAL taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.

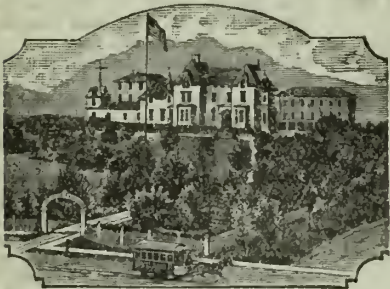
Dewey & Jordan have been at 433 Montgomery street, S. F., for 13 years. They are reliable—like the "New York watches" they sell.

SUBSCRIBERS not properly credited on their printed address labels within two weeks after paying, should notify this office.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

A BOOK to sheep-growers will be sent free by addressing James Moore & Co., San Francisco.

CALIFORNIA



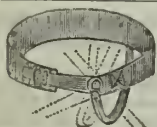
MILITARY ACADEMY.

For circulars, address  
Rev. DAVID McCURE, Principal,  
OAKLAND, CAL.

Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.



RUPTURE CURED

Use no more METALLIC TRUSSES! No more suffering from Iron Hoops or Steel Springs! The Patent Magnetic Elastic Truss is worn with ease and comfort, NIGHT AND DAY, and will perform radical cures when all others fail. Reader, if you are ruptured, try one of our Comfortable Elastic Appliances. You will never regret it.  
Send for Illustrated Circular and Price List.  
MAGNETIC ELASTIC TRUSS CO.,  
609 Sacramento Street, San Francisco.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). AMOS ADAMS, (SECRETARY). THOS. FLINT  
R. C. HAILE, (VICE PRESIDENT). THOS. UPTON. G. P. KELLOGG  
JOHN LEWELLING, (TREASURER). I. C. STEELE. W. L. OVERHISER  
O. HUBBELL. D. CAMPBELL.

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

Poultry.

OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,  
P. O. Box 650, San Francisco, Cal.

THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS Eggs Shipped to  
EGGS, \$0.50 per doz. Any part of the

BRAHMAS } \$5.00. Coast to Hatch After Arrival.  
LEGHORNS }

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.  
Also, Thoroughbred Southdown Sheep.

Stock Notices.

A JOINT AUCTION SALE

—OF—

Blooded and Graded Stock.

—ALSO—

A CHOICE LOT OF DAIRY COWS,

Will take place at the

Benner Ranch, 7 miles from Oroville,  
Butte County,

And One Mile from Wick's Ranch,

Friday & Saturday, April 13 & 14.

MOSES WICK will sell the following animals, consisting of nine head of Young Bulls, all Thoroughbreds:

ORLANDO,

The Sweepstakes Bull at State Fair in 1875, and in 1876 took first premium. (Herd book No. 15,050.)

LORD NELSON,

A two-year-old. (Herd book No. 23,782.)

PACIFIC,

By Red Cloud, out of Reta, two years old. (Herd book No. 24,249.)

PATTERSON DUKE,

Two years old. (Herd book No. 24,257.) Also, five Young Bulls, by Orlando and Golden Luan Duke, out of Imported Cows.

Also, four head of Thoroughbred Cows and Heifers. Also, ten head fine graded Cows and Heifers, from three-fourths to fifteen-sixteenths Durham, all of good milking strain.

Also, will sell six head of good work Horses and one fine double carriage.

HENRY PRESTON will sell nine head of graded Bulls, yearlings and two-year-olds, all from the stock advertised to be sold by MR. WICK, being from three-fourths to fifteen-sixteenths Durham.

D. S. BENNER will offer for sale the following animals, among which is as choice a lot of Dairy Cows as can be found in the State:

Sixty head of choice Dairy Cows.

Also, ninety head of mixed stock, ranging from yearlings to three-year-olds, consisting of Steers and Heifers. Also, six extra work Horses and fourteen saddle Horses and Colts.

The above stock is among the finest in the State, and will be sold upon the following terms:

All sums under \$50, cash down. All sums over \$50, notes with approved security at ten per cent. on one year's time.

Parties purchasing \$50 worth and over, paying the cash down, will receive a discount of ten per cent.

THE BENNER RANCH

Will also be sold at Public Auction, consisting of 560 acres Patented Lands, 400 acres of which is enclosed with a good fence; 250 acres will raise good grain; 50 acres will grow good alfalfa and 210 acres is excellent grazing land. The whole is well watered by a number of living springs. The buildings, consisting of dwelling-house, barn and other buildings, are in good order and convenient. There is also a fine orchard of Apple, Peach, Pear and Fig Trees. Also, it contains a fine vineyard, in good order. It is pleasantly situated, near a number of good markets, and is a very desirable location for a family.

SALE POSITIVE, IN GOLD COIN.

Terms of Payment:

One-third of the purchase money on the day of sale, and the remainder in two payments, one twelve months and the other twenty-four months, secured by mortgage on the place, interest at ten per cent.

MOSES WICK,  
HENRY PRESTON,  
DAVID S. BENNER

Feb. 24th, 1877.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,  
NAPA, CAL.

BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER SAXE, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



## MUSIC BOOKS

—FOR—

Schools, Academies & Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.  
Equally good are the older **HOUR OF SINGING**, (\$1,) by EMERSON & TILDEN, **CHOICE TRIOS**, (\$1,) for 3 female voices, by W. S. TILDEN, and **DEEM'S SOLFEGGI**, (75 cents) which has exercises in Italian style.  
**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.  
**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.  
**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.  
As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, **RIVER OF LIFE**, (35 cents,) **SHINING RIVER**, (35 cents,) **GOOD NEWS**, (35 cents.)  
Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## ARITHMETIC MADE EASY.

ROPP'S

## EASY CALCULATOR

Is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can instantaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months.

The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Cribbs, a Fine, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightning calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided.

The work is nicely printed on fine, tinted, paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY & CO., San Francisco.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,

Stockton, Cal.

## HEALD'S

BUSINESS COLLEGE

No. 24 Post Street,  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## London Assurance Corporation,

OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - \$14,993,466

## Western Assurance Company,

OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

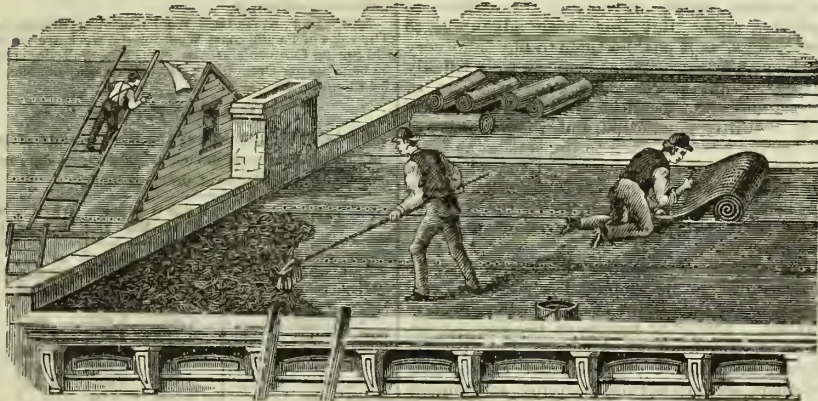
H. W. JOHNS' PATENT

## ASBESTOS ROOFING AND ASBESTOS PAINTS,

## ASBESTOS CEMENT FOR LEAKY ROOFS,

Asbestos Roof Paints for Leaky Roofs,

## ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

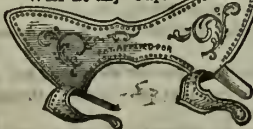
which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## MOUSTACHE PROTECTOR.

Will fit any Cup.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patentee, Willimantic, Conn.

FARMERS write for your paper.

## DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

\$55 & \$77 a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine.

## FOR SALE.

ENGLISH PATENT

## Straw-Burning Engines.

At the Vienna Exhibition, the Diploma of Honor, Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, Manufacturers of

HEAD & SCHEMOITH'S

## PATENT ENGINES

For

Burning Straw, Reeds, Corn-Stalks, etc.

These engines for burning straw and other vegetable products have been tested for some time in Russia, on the banks of the Danube, in Egypt and India, and have been found to effect a

GREAT SAVING OF FUEL,

Enabling steam power to be introduced into countries where it was formerly impossible to use it.

## The Expansion Engines

Of this firm ARE CELEBRATED FOR THEIR SMALL CONSUMPTION OF FUEL and do not burn more than about three to three and a half pounds of coal per indicated horse-power per hour. This Engine was on exhibition at the Mechanics' Fair last fall in San Francisco. It is the

Only Fire-Box Straw-Burning Engine on the Coast,

And is without doubt the BEST PORTABLE ENGINE ON THE COAST; Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT AND MANAGER... C. J. CRESSEY.

TREASURER..... J. V. WEBSTER.

CASHIER..... ALBERT MONTEPELLIER.

SECRETARY..... FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## TULE LANDS.

## Pasture and Crops this Season.

TO LEASE.

Three thousand five hundred acres, well leaved and ready for immediate cultivation. Good crops can be raised this season if put in at once. Also

20,000 Acres of Excellent Pasture.

Also, TULE LAND, Leveled and Unleveled, for sale in quantities to suit. Apply to

M'AFEE BROTHERS,

426 Montgomery Street, San Francisco.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12 50.

GOLDEN GATE PLASTER MILLS,

LUCAS & CO.,

Nos. 215 and 217 Main-Street, San Francisco.



## Southern California.

Within the past year or two the southern part of California has made more rapid strides than most other parts of the State. The reason of this is, that large tracts of land have been put upon the market and that people have found out that the ground is good for something better than to let herds of cattle or sheep run upon it. Another thing also has been proven; that is that the great San Joaquin valley, a valley as large as the States of Massachusetts and Connecticut, will always produce good crops in all kinds of seasons where irrigation is resorted to. The climate is more mild than further north, and those persons who emigrate from the East to escape the rigors of winters are attracted almost as much by the temperature of southern California as by the fertility and richness of its soil. That part of the State has also a large area as compared with the population, for if we count only the fertile parts there are not more than six inhabitants to the square mile; whereas several European countries, with a soil not richer by nature, have 100 to the square mile. Sparseness of population implies a rapid increase and it is the proportion of increase that gives activity to business and profit to ownership of land. This increase in southern California has been very great of late and is a great attraction for settlement and an excellent assurance of the prosperity of the settlers. This section of country has only recently become accessible by rail, the cars having made their first through trip from San Francisco to Los Angeles on the 5th of September, 1876.

It is to the section of the country referred to that many of the immigrants to California are turning their attention. No Eastern climate is to be compared to that which is generally experienced here, either with respect to health and comfort or to the needs of the horticulturist. It is the severity of the occasional frosts that prevents the cultivation of the fig, orange, pomegranate, date palm, olive and other delicate plants in South Carolina, Georgia and Tennessee, though they thrive in the same latitude on this side of the continent. The temperature of the summer nights is also an important feature. In California they are so cool as to secure refreshing slumber, while in the Atlantic States they are oppressively hot. The air is also dry here and sunstrokes are unknown.

Many persons suppose that the southern country is too dry to do anything with; but experience has proved that in localities where it is applicable, irrigation brings better crops than in other places where nature alone is relied upon for the desired quantity of water. American farmers generally have little idea of the value of irrigation in a country where there is not an inch of rain in average seasons from June to October, inclusive, and where even in the other seven months the annual rainfall does not exceed 20 inches in some parts of California. In the moist atmosphere, the wet summer and cold winters of the Atlantic slope, they have never felt the want of supplying water to their fields by artificial channels. Did space permit, we could show, to those unacquainted with the subject, that in other parts of the world whole regions have been enriched most wonderfully, simply by irrigation, and deserts made to blossom like the rose. Large districts in southern California are much better adapted to irrigation than many which have been irrigated in older countries by much less enterprising people than Americans.

Land which with wild grass and without irrigation will not support more than one sheep upon an acre, when irrigated and cultivated with alfalfa will support 20. And if the alfalfa be not used for pasture it can be mown eight times in a year, yielding two or three tons to the acre each time. If cultivated in grain or common kitchen vegetables, two crops can be gathered in a year. Such facts suggest a few of the reasons why irrigated fields command prices so much greater than dry lands, and show to the settler the advantage of getting upon ground that is susceptible of irrigation.

The capacities of grain raising of the soil of California have been proven by such enormous practical figures, extending over a period of years, that it is hardly worth while to refer to them here, but the fruits of California are still among the chief wonders to visitors. The excellence and multitude of varieties, the size, abundance and continuous supply of fruit, combine to make fruit raising profitable and easy. Moreover, with the generality of people, more money can be made on small farms in fruit culture than by raising wheat on large tracts. The climate is such that the trees grow rapidly and mature early, and it allows the temperate and semi-tropical kinds to grow side by side. The date palm has a range of six degrees here. The orange lives in the open air as far north as 40°. The pomegranate, apricot, nectarine, fig, olive, and the European grapes, which are too delicate for Tennessee or North Carolina, extend through eight degrees, and the guava, lime, lemon and pine-apple have ripened in the open air on the southern coast. The small proportion of moisture in the atmosphere and of cloudy days in the year, and the restriction of heavy rains to a few months in the winter and early spring, give peculiar facilities to the drying of fruit, which is destined to be a leading industry of the State.

Southern California possesses peculiar advantages with regard to fruit culture. Varieties

can be raised there that cannot be produced in the northern counties, and these varieties are such as will easily bear transportation and are not immediately perishable, so that they always have a market. Another peculiar advantage of the varieties of fruit which can be raised there is that they are very profitable, and the crops are quite large and abundant. This is particularly the case with the orange, which is now cultivated quite extensively in southern California. The orange at eight years from planting out the nursery trees, or ten years from the seed, will bring 1,000 to the tree. Sixty trees are planted to the acre. These trees are found in practice to yield at the least \$10 clear profit per tree, or \$600 to the acre. This is below the present actual yield of orange orchards in Los Angeles. The first orange trees planted in San Bernardino valley in 1862 are now bearing abundantly, producing as many as 1,400 oranges each per annum. Orange trees are generally set out at four years old, (they cost 50 cents each) and commence to bear two years after planting. The yield for several years gradually increases, and when 12 years old each tree bears at least 1,000 oranges a year. In some places the trees are planted 100 to the acre.

The raisin business, too, is one which is assuming large proportions in California, as it has been found very profitable. In the Atlantic States our raisins are proving formidable rivals to the imported ones. We have the natural resources in our State for supplying the \$15,000,000 worth of prunes, figs and currants that annually come to this State from the Mediterranean, and they are products in which we can have no competition from other States. The almond, walnut, olive, lemon and lime may also be cultivated to advantage and profit. All of these things will grow abundantly in southern California, and with much less labor or risk than some of the cereal crops in other places.

A very great advantage of raising this class of crops is that a handsome and permanent income may be obtained from a comparatively small piece of land. The "ten acres enough" principle comes nearer being put in practice here than anywhere else in the United States. Almost any prudent and diligent man who has twenty or twenty-five acres of land can grow rich upon it by irrigating and raising the class of crops we have mentioned. Fruit culture is the one agricultural industry not affected by a dry season. The variety of crops is such as cannot be grown elsewhere in the United States, and they are such as provide a good and constantly increasing income.

It must not by any means be supposed by persons immigrating to southern California that they will find a country covered with cultivated farms, orange, lemon, fig and almond groves in every direction, with luxuriant tropical growth, for the reverse is the case. The country is now only being reclaimed from a cattle herding ground, and it is only a year since the railroad has enabled people in most of the sections to market a crop. But this is an advantage to new-comers, as it enables them to buy land very much cheaper than if the country were thickly settled. Many places have been laid out, of course, and some localities are filling up rapidly with a thrifty population, but the majority of the territory is still open to the settler, as large tracts are divided up for sale. Even when the thermometer ranges high, as it sometimes does, the heat is not enervating, as in the Eastern States, and as stated above, cases of sunstroke are unknown.

The system of colonies has been largely instrumental in developing the resources and adding to the population of some of the southern counties. The great success of the first experiment of the kind at Anaheim, Los Angeles county, encouraged other similar enterprises, and there are now several thriving settlements of this kind in the southern counties, with a bright future ahead. Considerable attention is now being paid to settlements of this character in Fresno county, where the soil and climate are excellent and the facilities for irrigation exceptional. The soil is a sandy loam, very rich and adapted to the growth of all kinds of grains and grasses as well as fruits, and vegetables of every variety, and will bear free irrigation without baking and becoming unfit for cultivation. The railroad passes through Fresno to Los Angeles, rendering communication with all parts of the State quick and easy, and creating a demand for real estate which will naturally greatly increase the value of the land in a few years. There are several colonies in this section which are prosperous and growing. A new one has just been formed, called the "New England," in which some new features have been added, which might be copied by those formed hereafter. The 6,000-acre tract is divided into 20-acre farms, and each farm has a perpetual water right deeded with the land, the only expense to the farmer being the small assessment necessary to keep the ditch in repair. In the center of the tract a small town has been laid out with a 20-acre park in the center, and about this are lots reserved for public buildings, schools, Grange hall, etc., belonging to the settlement in common. The purchasers of the farms are also entitled to a lot in this town, 50 by 150 feet, on making their final payment—or before, if they put up a building and improvements worth \$600. This tract is about six miles from the railroad and near the Central California Colony. The Fresno irrigating canal runs along one side its entire length.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, April 4th, 1877.

Trade is quiet and marked by little worthy of comment, except such changes in current prices as will be noted below.

In Wheat there has been a slight advance both in foreign and local rates.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	10s 7d@11s —	10s 10d@11s 3d
Friday.....	10s 5d@11s —	10s 10d@11s 3d
Saturday.....	10s 5d@11s —	10s 10d@11s 3d
Monday.....	10s 7d@11s —	10s 10d@11s —
Tuesday.....	10s 7d@11s —	11s —@11s 3d
Wednesday.....	10s 9d@11s —	11s —@11s 4d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	9s 3d@9s 7d	9s 5d@9s 11d
1876.....	9s 10d@10s 2d	10s 2d@10s 9d
1877.....	10s 9d@11s —	11s —@11s 4d

## The Foreign Review.

LONDON, April 2d.—The *Mark Lane Express* says: Considerable rain has fallen during the past week, and the weather has been unfavorable for agricultural labor. The majority of the country markets have been scantily supplied with English Wheat. This shortness of supply will probably be noticeable for some time, especially as the stronger tone and advancing prices at Mark Lane will cause holders to become careless of selling. A marked alteration has taken place in local trade, and a heavy demand has been experienced for Wheat in all positions, at an advance of a shilling and two shillings per quarter. The time has now arrived when buyers cannot shut their eyes to the fact that our requirements between this and harvest will be greater than can be met with the available supplies, as long as imports continue on their present limited scale; while, at the same time, no doubt can be entertained that the steady consumption which has been going on has so reduced granary stocks that higher prices for Wheat, especially red, will probably prevail in our market for some time. California and India may be relied on for white Wheat, but the ease with which supplies that have already come forward have been absorbed leads to the conclusion that every quarter that may reach us will be required. A noteworthy feature of trade has been the absence of speculation.

## Freights and Charters.

Wheat freights have continued stagnant during the week, says the *Commercial News*, and there seems to be little demand at any figure. The only charter effected being at last week's quotations, we quote nominally at £1 17s 6d to Liverpool and £2 10s to Cork, U. K., for wooden ships. At the close we have 8,179 tons in port under engagement to load wheat, 21,147 tons disengaged and 9,123 tons miscellaneous.

## Eastern Wool Markets.

BOSTON, April 4th.—The demand for Wool is moderate. Medium and Ohio and Pennsylvania, 39¢@42¢; XX, 46¢@47¢; XX and picked, 48¢@50¢; Wisconsin, Michigan and New Hampshire, 39¢@38¢ for fair and good lots; Combing and Delaine, 42¢@45¢; California lall, 16¢@25¢. There is nothing doing in Spring; Pulled, Super and X, 30¢@40¢; the latter for good Super.

NEW YORK, April 1st.—Wool has been devoid of life. The sales of Pacific coast Wool for the week are 34,000 lbs old Spring California at 23¢; 110,000 lbs Fall do, 14¢@16¢; 50 bags Spring Oregon, 20¢; 47 bales Valley do, 30¢; 12,000 lbs Combing do, 33¢.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Mar. 14.	WEEK Mar. 21.	WEEK Mar. 28.	WEEK April 4.
Flour, quarter sacks..	13,171	90,541	44,121	34,933
Wheat, centals.....	60,201	112,748	104,563	93,437
Barley, centals.....	8,750	8,540	10,018	10,509
Beans, sacks.....	1,021	883	1,742	2,235
Corn, centals.....	7,653	3,671	967	5,208
Oats, centals.....	1,116	3,602	8,550	7,665
Potatoes, sacks.....	15,132	11,793	10,920	6,058
Onions, sacks.....	931	1,469	974	573
Wool, bales.....	885	1,572	3,796	5,297
Hops, bales.....	35	20	—	8
Hay, bales.....	1,168	1,149	1,322	744

Bags—There is no change in prices. The talk is still of combinations to advance prices, but we hear of nothing of this kind yet accomplished.

Barley—Barley is higher. We note sales: 500 sks good Coast Feed, \$1.52; 800 do Bay do, \$1.52; 500 do Chevalier for feed, \$1.62; silver; 500 sks choice Coast Feed, \$1.52; 250 do dark do, \$1.47; 250 do good Coast Feed, \$1.60, silver; 200 sks Chevalier, \$1.50; 500 cts Coast Feed, \$1.50; 1,425 sks do, \$1.52; 1,500 sks Coast Brewing, \$1.52; 4,000 cts do, \$1.55, all for gold, and 2,000 cts Coast Feed, \$1.60, silver. Ten thousand cts good Bay Barley changed hands on Thursday at \$1.50, gold.

Beans—A few changes in price are noted in our table of quotations.

Buckwheat—Buckwheat is unchanged.

Corn—Corn has continued its advance. We note sales: 1,000 sks small Yellow, \$1.75; 900 do large Yellow to arrive, \$1.70; 275 sks small Yellow, \$1.75; 100 do large do, \$1.75 per ctn.

Dairy Produce—Butter has continued to advance slowly, until 30c @ lb is now attainable for the best selections.

Eggs—Eggs have dropped 1@2c per dozen.

Feed—There has been another general advance in ground Feeds, as may be seen by our quotations below. Hay sales have been within former range, with perhaps a tendency toward the outside figure. We note transactions: 25 tons fair Clover and Oat, \$14; 27 tons fair Cow, \$14.25 per ton; 10 tons Cow, \$14; 24 tons fair Wheat, \$16; 15 tons Barley and Oat mixed, \$16.50; also a small lot of Wild Oat, \$17.25 per ton. The best Wheat is now quoted at \$18.50 per ton.

Fruit—Strawberries have become plenty and sell at \$7@11 per chest. Pears are poor and cheaper. Oranges show an upward tendency.

Hops—The market is reported altogether without transactions. The New York market is also without change.

Oats—Oats have sold within former range. Receipts from Oregon have been ample. We note sales: 430 sks Oregon Feed, \$2.17; 500 do good to choice Feed, \$2.15@ \$2.20; 700 sks good Oregon Feed, \$2.10; 300 do good Humboldt, \$2.12 per ctn, gold.

Onions—Onions have experienced an improvement, and stocks are now being held for still higher figures. We note sales: 30 sks choice Bay from wharf, \$1.25; 240 sks Union City, \$1.40.

Potatoes—The market is unchanged in condition of supplies and prices are same as last week.

Provisions—Meats are without change, except Pork, which falls considerably owing to the impression among packers that they have put down enough. This is the report in the trade. Cured Meats are unchanged.

Poultry—Most kinds are quotable lower, as may be seen in our tables.

Vegetables—Asparagus is a little higher. Cauliflower and New Potatoes are up a point, while Green Peas, Rhubarb and Marrowfat Squash are lower. The novelty of the week is String Beans. A small shipment of String Beans, the first of the season, was received on Saturday from J. Polser, of Vacaville, Solano county. This consignment is the earliest in years. The first lot last year came to hand May 3d. The lot obtained about 40c per lb.

Wheat—Our prices are advanced a point, both for Shipping and Milling. Transactions during the week are noted as follows: 1,000 cts choice Milling, \$2.20; 4,000 do choice Chile, for milling, \$2.15; 1,000 do Superfine do, \$2.10; 3,600 sks choice Milling at \$2.15; and 1,000 cts do do at \$2.20 per ctn, delivered at Oakland; also 1,000 sks good Milling at \$2.12; 5,000 sks fair to choice Shipping, \$2.07@2.15; 1,500 do good Milling, \$2.15; 1,000 do choice do, \$2.20; 4,000 cts choice Milling, \$2.15; 300 sks good Milling, \$2.15; 400 do choice do, \$2.17; 650 do do, \$2.20; a lot of 14,200 sks Oregon Club to a miller, \$2.15. Holders of Wheat are firm.

Wool—Receipts of Wool have been free and transactions have been in larger amounts. We note sales of 20,000 lbs choice Northern Spring, 21¢@22¢; 100,000 lbs Spring, 15¢@18¢; 14,000 Spring San Joaquin, 13¢; 4,000 lbs shrinky rams' Wool 12¢; 84,000 lbs Fall, 10¢@13¢; 80,000 Spring, 16¢@18¢.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., April 4, 1877.

BEANS. Almonds, hd sh lb 7 @ —  
Soft sh lb 15 @ 17  
Butter..... 1 25 @ 1 75  
Brazil..... 2 40 @ 2 45  
Peanuts..... 17 @ 18  
Red..... 3 00 @ —  
Pink..... 3 00 @ 3 12 1/2  
Sml White..... 2 00 @ 2 25  
Lima..... 2 25 @ 2 37 1/2

BROOM CORN. Union City, ctn..... 25 @ 50  
Stockton..... 1 00 @ 1 25

CHOICE. Petaluma, ctn..... 40 @ 50  
Salt Lake..... 15 @ 20  
Humboldt..... 30 @ 50  
Cuffey Cove..... — @ —  
Early Rose, new..... 85 @ 1 00  
Sweet..... 1 25 @ 1 50

COTTON. Cotton, lb..... 15 @ 18

DAIRY PRODUCE, ETC. Butter, doz..... 22 @ 23  
Point Reyes..... 30 @ 30  
Cal. Fresh Roll, lb 25 @ 30  
Point Reyes..... 30 @ 30  
Pickled Roll..... 22 1/2 @ 27 1/2  
Firm..... 25 @ 25  
Western Reserve..... 15 @ 20  
New York..... — @ —

CHEESE. Cheese, Cal. B..... 12 1/2 @ 15  
Old..... — @ —  
Eastern..... 12 1/2 @ 15  
N. Y. State..... 19 @ 20

Cal. Fresh, doz..... 22 @ 23  
Ducks..... 22 @ 23  
Oregon..... 19 @ 20  
Eastern..... 19 @ 20

FEED. Bran, ton..... 22 @ 25  
Corn Meal..... 38 @ 40  
Hay..... 10 @ 18 50  
Middlings..... 30 @ 40  
Oil Cake Meal..... 38 @ 40  
Straw, bale..... 75 @ —

FLOUR. Extra, bbl..... 6 50 @ 7 12 1/2  
Superfine..... 4 75 @ 5 50  
Graham..... 5 50 @ 6 00

FRESH MEAT. Beef, 1st qual, lb 7 @ 9  
Second..... 6 @ 7  
Third..... 4 @ 5  
Mutton..... 3 @ 4  
Spring Lamb..... 8 @ 10  
Pork, undressed..... 5 @ 6  
Dressed..... 7 @ 8  
Veal..... 7 @ 9  
Milk Calves..... 9 @ 10 1/2

GRAIN, ETC. Barley, feed, ctn..... 1 45 @ 1 55  
Brewing..... 1 55 @ 1 60  
Chevalier..... 1 50 @ 1 62 1/2  
Buckwheat..... 1 80 @ —  
Corn, White..... 1 70 @ —  
Yellow..... 1 75 @ —  
Small Round..... 1 75 @ —

Oats..... 1 70 @ 2 20  
Milling..... 2 25 @ 2 40  
Rye..... 2 00 @ —  
Wheat, shipping..... 2 10 @ 2 15  
Milling..... 2 15 @ 2 20

HIDES. Hides, dry..... 15 @ 17  
Wet salted..... 7 @ 9

HONEY, ETC. Beeswax, lb..... 25 @ 27 1/2  
Honey in comb..... 10 @ 15  
Strained..... 6 @ 6

HOPS. California..... 16 @ 18  
N.Y. Jobbing..... 8 @ 10  
Cal. Walnuts..... 8 @ 10

FRUITS AND VEGETABLES. [WHOLESALE.]

WEDNESDAY M., April 4, 1877.

FRUIT MARKET. Apples, bx..... 50 @ 2 50  
Crab, lb..... 2 @ 3  
Bananas, bunch..... 2 @ 3 50  
Cocoanuts, 100..... 5 00 @ 6 00  
Limes, Mex..... 8 00 @ 12 50  
Cal..... 10 00 @ 15 00  
Lemons, Cal M..... 10 00 @ 15 00  
Sicily, bx..... 10 00 @ 11 00  
Oranges, Mex..... — @ —  
Tahiti..... — @ —  
Cal..... 15 00 @ 35 00  
Pears, bx..... 1 00 @ 2 00  
Pineapples, doz..... 6 00 @ 6 00  
Strawberries, doz..... 7 00 @ 11 00

VEGETABLES. Artichokes, doz..... — @ —  
Asparagus, bx..... 1 00 @ 1 25  
Beets, ctn..... 60 @ —  
Cabbage, 100 lbs..... 50 @ 60  
Carrots..... 35 @ 37 1/2  
Cauliflower, doz..... 75 @ —  
Celery..... 50 @ —  
Garlic, lb..... 1 @ 2  
Kans. Sweet..... 2 1/2 @ 3  
Lettuces, doz..... 10 @ —  
New Potatoes..... 2 @ 3 1/2

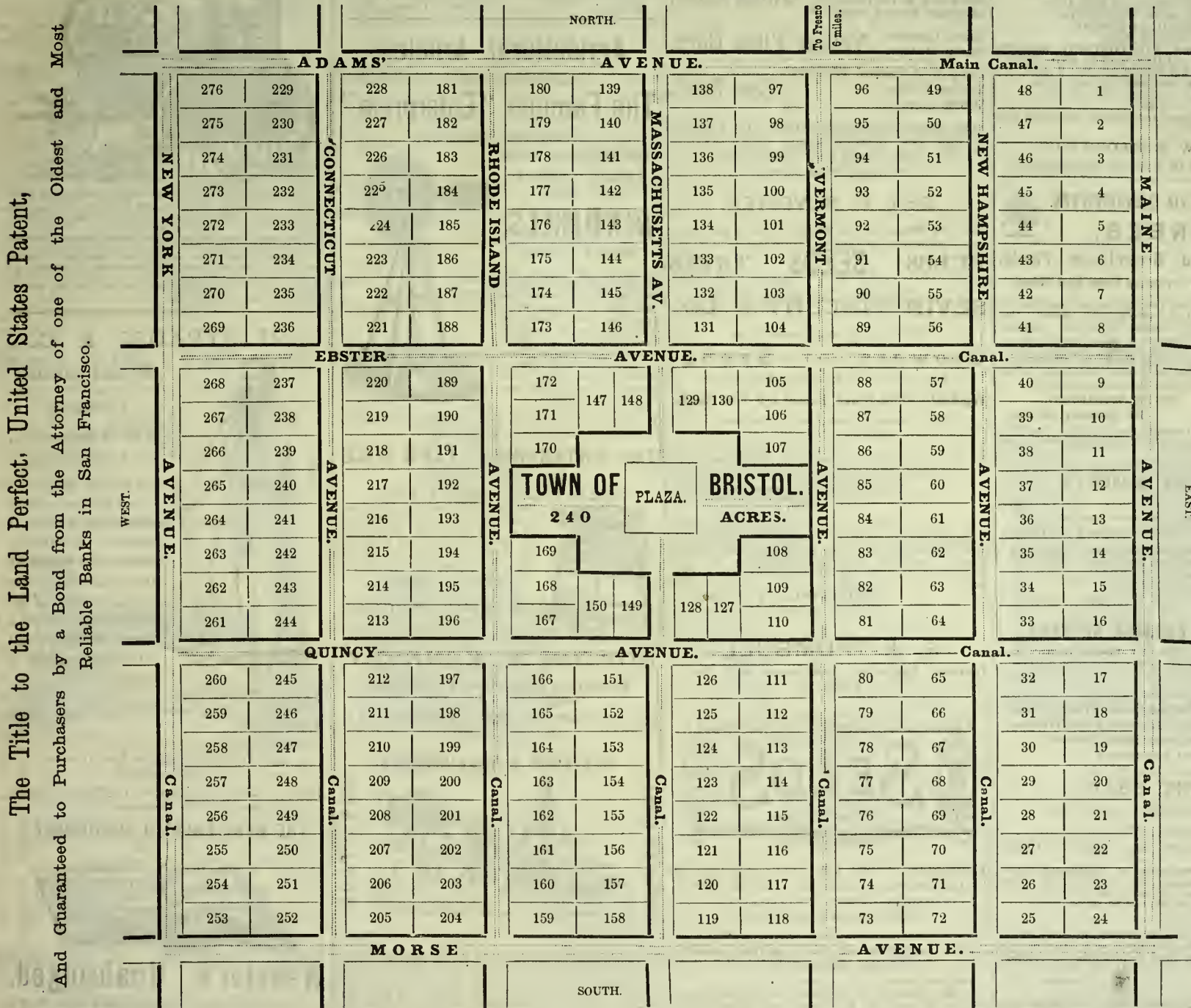
PARSNIPS. Parsnips, lb..... 1 @ —  
Rhubarb..... 1 @ 2  
Horse-radish..... 4 @ 5  
Squash, Marrow..... — @ —  
Lak tn..... 12 50 @ —  
Tomatoes, lb..... 20 @ 25  
Turnips, ctn..... 60 @ —  
White..... 75 @ —



# NEW ENGLAND COLONY OF CALIFORNIA,

IN FRESNO COUNTY,

Near the flourishing town of Fresno; Nine hours from this city by rail, with one of the Most Healthy and Delightful Climates in the World.



A PERPETUAL WATER-RIGHT FOR IRRIGATION  
The Main Canal is Supplied from the Never-Failing Waters of Kings River.  
TWO CROPS of Grain and Potatoes in ONE YEAR.

Beautiful Homes amid Orange Groves and Semi-Tropical Fruit, and yielding a Large Income, secured with a Small Monthly Investment, WITHOUT INTEREST.

## HOMES FOR ALL.

The New England Colony was organized for the purpose of furnishing for people of limited means, cheap, attractive homes, with a constantly increasing income, thus securing them a competency in a few years with only a small outlay.

The terms are easy, and within the reach of almost any one with a small salary. With a small additional outlay, from time to time, in planting oranges, limes, figs, olives and other semi-tropical fruits, almonds or raisin grapes, etc., the value of the land will be enhanced manifold, and a net annual income may be secured of from \$5,000 to \$8,000, or even more.

These are no fancy figures or idle dreams, but well attested facts. Abundant testimony, from the best authority, can be given, to show that a 20-acre lot in the New England Colony can easily be made to net, in less than ten years, \$500 to the acre per annum.

## THE NEW ENGLAND COLONY

Consists of nearly 6,000 acres of land, of a deep, sandy loam of great fertility, laid out in 20-acre lots, as represented in the above map. In the center is a public square of twenty acres, surrounded by a town of nearly 1,000 lots, 50x150 feet. A part of the square will be devoted to the public use as a beautiful plaza, and the balance surrounding the plaza will be donated to the various societies for the erection of churches and halls, and for schools and other public uses.

EVERY PURCHASER OF A TWENTY-ACRE LOT WILL BE ENTITLED TO A TOWN LOT, 50x150 feet, on making his final payment, or at any time previous by erecting on it a building costing not less than \$600.00, and paying \$5.00 towards ornamenting the plaza and adjoining streets with trees.

## TERMS OF SALE.

A 20-acre lot, WITH PERPETUAL WATER-RIGHT FOR IRRIGATION, will cost \$600.00, or \$30.00 per acre.

### PAYABLE AS FOLLOWS:

One hundred dollars cash, at time of purchase; forty-seven monthly installments of \$10.00 each, and a final payment of \$30.00 on or before the first of May, 1881, WITHOUT INTEREST. All agreements are to date from May 1st, 1877.

Liberal discount will be allowed to all who prefer to pay cash and secure their deed at once.

The entire land of the Colony is nearly a perfect plain, inclining to the south and west, so that every part can be easily irrigated from the canal brought to every lot.

There is little choice in the lots, except as one may prefer to be near the town of Fresno, on the north, or to the town and plaza in the center of the colony.

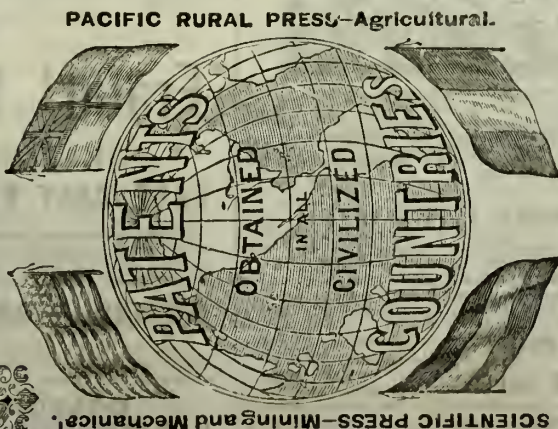
Office of the Colony, 38 California Street, San Francisco.

J. Stratton and C. H. Denison, General Agents.

We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others,

DEWEY & CO'S  
SCIENTIFIC PRESS  
Patent Agency.



Established in 1860. All branches of Patent Soliciting business conducted with care and ability. Send for Free Circular. Office, No. 224 Sansome St., S. F.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

- J. L. THARP—San Francisco.
- B. W. CROWELL—Colusa, Butte and Sutter counties.
- G. W. MCGREW—Santa Clara county.
- A. C. KNOX—Nevada, Montana and Utah Territories.
- C. N. WEST—Santa Cruz, Monterey and San Benito counties.
- A. C. CHAMPION—Sonoma and Marin counties.
- A. U. STRONG—Lake, Napa and Solano counties.
- G. KUTNOW—Contra Costa county.
- W. D. WHITE—San Bernardino and Los Angeles counties.

ORDERS for the GOLDEN PIANO will be received at this office, where further information can be had concerning their excellent qualities and favorable prices.



## Nurserymen.

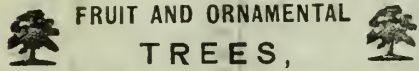


**TREES, TREES AND PLANTS,**  
OF EVERY DESCRIPTION, AT THE CAPITAL NURSERIES, SACRAMENTO. A FULL ASSORTMENT OF EVERYTHING IN THE NURSERY LINE, BOTH WHOLESALE AND RETAIL, AT LOWEST MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORTMENT OF FIELD, GARDEN, LAWN AND TREE SEEDS, WHICH WE OFFER AT VERY LOW RATES, BOTH TO THE TRADE AND PLANTER IN LARGE OR SMALL LOTS.

Catalogues, Price-Lists, and Printed Directions free on application. Address,

W. R. STRONG & CO.,  
Nos. 6, 8 and 10 J Street, Sacramento.



**FRUIT AND ORNAMENTAL TREES,**  
Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior to anything of the kind ever offered in this market. Two and three years old. Grafted of choice varieties. FRUIT TREES of all varieties in large quantity at reduced prices. Also, Monterey Cypress, Monterey Pines, Blue Gums, Magnolias, Acacias, Roses, etc. Those laying out new grounds will find it to their advantage to call and examine our stock before purchasing elsewhere.

THOS. MEHERIN,  
516 Battery Street,  
P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send for Price Catalogue.

**LOS GATOS NURSERIES,**  
S. NEWHALL, Prop'r. - - - San Jose, Cal.  
A large and general assortment of

**Fruit and Ornamental Trees,**  
Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stately fruit trees a specialty. Address,  
S. NEWHALL, - - - San Jose, Cal.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor.

CULTIVATOR OF  
**Fruit, Nut and Ornamental Trees. Also,**  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

**HENRY SHAW,**  
VENTURA, VENTURA COUNTY, CAL.,  
Wholesale Grower of  
**ORANGE, LEMON and LIME TREES.**

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

**Trees, Plants,** Bulbs. Fall Price List and Bulb Catalogue GRATIS, Address, F. K. PHENIX, Bloomington Nursery, Ill.

## INTERNATIONAL

Photographs of many of the finest Horses, Neat Cattle, Sheep and Swine, exhibited at the Centennial. Arabian, Trotting, Thoroughbred, Percheron, Matched Teams, Carriage, Heavy Draft, Agricultural Horses,

## LIVE STOCK

etc. Among the Neat Cattle are Short Horns, Herefords, Jerseys, etc. Among the Sheep are Cotswolds, South Downs, Shropshires, Merinos, etc. Among the Swine, are Chester White, and Small Yorkshire, in

## EXHIBITION

all, nearly 100 specimens, in Cards, Stereoscopic and 5x8 sizes. Will be sent by mail, post-paid, for 15 cents each for Cards, 25 cents each for Stereoscopes, and cents each for 5x8, sizes, on receipt of price. Send

## PHILADELPHIA

green stamp for printed list. Official Catalogue will be sent for publishers' price, 25 cents each. Address,

E. F. HOVEY, 1408 Chestnut Street,  
Sole Publisher to the Live Stock Exhibition.

1876.

## LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,  
SANTA BARBARA, CAL.

-respondecence solicited.

## Seedsman.

## SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New } Sweet Corn.

Early Canada }  
Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel }  
Yellow Globe } Beet Seed.  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,  
No. 317 Washington Street, San Francisco

**BULBS SEEDS TREES**  
**SEVIN VINCENT & CO.,**

Wholesale and retail dealers in and

**Growers of Seeds,**

Keep constantly on hand a complete stock of

**Vegetable, Field, Grass, Flower and Tree Seeds,**

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. <sup>22</sup>Trade price list on application.

We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,  
P. O. Box 10233,  
607 Sansome street, S. F.

**R. J. TRUMBULL,**  
Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

<sup>22</sup>Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABBRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

## RELIABLE TURNIP SEED.

<sup>22</sup>Rupert W. Crompton, Esq., wrote, March 7th, 1877, that RENNIE'S PRIZE SWEET TURNIP yielded more than three times as much as the common seed. <sup>22</sup>Mr. L. C. Fisher raised 1,800 bushels last year. Price, per pound, (in American currency, pre-paid), thirty cents. W.M. RENNIE, Seedsman, TORONTO, CANADA.

**SPANISH CHUFA** Address  
L. L. BEQUETTE,  
Downey City, Los Angeles County, Cal.

**SEED FOR SALE.**

**Trees, Plants,** Spring Lists free. F. K. PHENIX, Bloomington Nursery, Illinois.

## EAST INDIA TREE PEA.

A new and valuable Pea just introduced from East India; is attracting great attention wherever introduced, and is pronounced by all who have grown it to be superior to any other. It is a most valuable acquisition, as it can be used green or ripe. The pea-bug never infests this pea. It will yield 100 bushels per acre. The stalk grows very branched, like a bush or shrub, and is covered with a mass of pods from top to bottom, often producing over 200 pods per stem. (Grows three feet high; requires no sticks. Price per packet, by mail, 25 cents; five packages, \$1.00. Address, J. N. BERRY, Carthage, Mo.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity. We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

The "ENTERPRISE" FEED MILL  
(PACKER'S PATENT),  
FOR GRINDING BARLEY, ETC.,

Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.  
All Goods Warranted.  
Send for Illustrated Circulars and information to

**HORTON & KENNEDY,**  
Managers for California and Pacific Coast,  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or un hitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel is regulated by a set screw so that in grinding the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine for grinding knives, axes, chisels, shears, etc.

Address, WIESTER & CO., 17 New Montgomery St., San Francisco.

**Fraud! Fraud!!**  
COLLINS & CO'S

**CAST, CAST STEEL PLOWS.**

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

**COLLINS & CO., HARTFORD.**

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

H. W. RICE,  
Manufacture of  
The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood Burning Engines changed to Straw Burners, Saw mill and Flour mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Thrashers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

## LEVI STRAUSS &amp; CO.,

Patent Riveted  
Clothing,  
14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## An Indispensable Requisite

FOR EVERY  
Teacher, Advanced Student, Intelligent Family,  
Library, and Professional Person, is

## THE BEST ENGLISH DICTIONARY,



## Webster's Unabridged.

"THE BEST PRACTICAL ENGLISH DICTIONARY EXTANT." London Quarterly Review, October, 1873.

"Every farmer should give his sons two or three square rods of ground, well prepared, with the avails of which they may buy it. Every mechanic should put a receiving box in some conspicuous place in the house, to catch the stray pennies for the like purpose."

"Lay it upon your table by the side of the Bible—it is a better expounder than many which claim to be ex-pou-nders."

"It is a great labor-saver—it has saved us time enough in one year's use to pay for itself; and that must be deemed good property which will clear itself once a year. If you have any doubt about the precise meaning of the word clear, in the last sentence, look at Webster's nine definitions of the v. t." Mass. Life Boat.

<sup>22</sup> Recently added, four pages of

**COLORED ILLUSTRATIONS,**  
Engraved expressly for the work at large expense.  
Sold by all Booksellers.

## The Nurseryman's Directory.

A REFERENCE BOOK  
OF THE

**NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,**  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsman in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade; alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,  
Publishers, Galena, Illinois.

**CALVERT'S CARBOLIC  
SHEEP WASH,**  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, & F. Sole Agent for the Pacific Coast.





# UNION BOX FACTORY, GEO. W. SWAN & CO.,

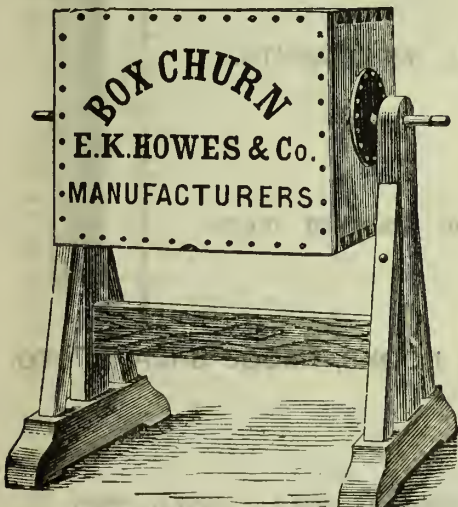
114 to 124 Spear Street, between Mission and Howard, - - - - - San Francisco.

## STRAWBERRY BASKETS:

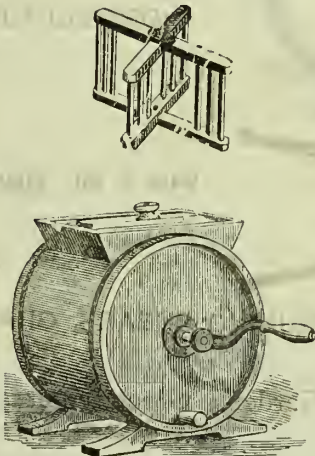
SWAN & CO.'S PATENT, ONE POUND, TIN TOP, PER 1,000,	\$ 9.00
SWAN & CO.'S PATENT, ONE POUND, NO TIN, PER 1,000,	5.55

# E. K. HOWES & CO.,

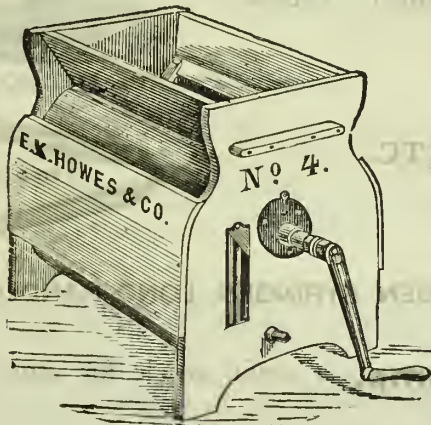
Nos. 118, 120 and 122 Front Street, - - - - - San Francisco.



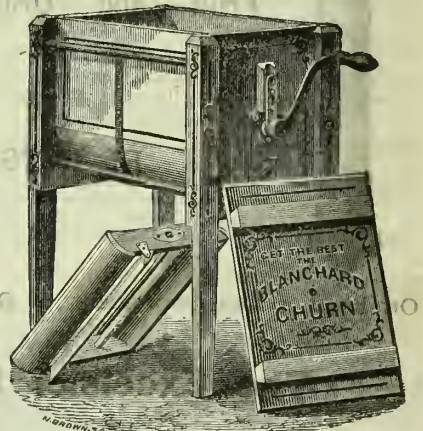
Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

# PACIFIC CORDAGE COMPANY,

MANUFACTURERS OF

## MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES & CO., Sole Agents for this Coast, - - - 118 and 120 Front Street, San Francisco.

Orders from the Country promptly attended to and sent C. O. D.

Ladies' Hats and Bonnets—Latest Styles,  
French Millinery, Flowers, Feathers,  
Human Hair Switches, from \$1.00,  
Laces and Veil Stuffs, Vels,  
Neckties and Fichus,  
Purses, Belts, Fans, Jewelry,  
Collars and Cuffs, Aprons,  
Ruchings, Embroideries,  
Worsted, Canvas, Ties,  
2 to 6 Button Gloves, Gauntlets,  
Handkerchiefs, Stockings,  
Toilet Articles, Face Powders,  
Dress Trimmings, Buttons,  
Sewing Articles—Best in Market,  
Corsets—French Woven, Thomson's,  
Stair and Table Oil Cloth,  
Parasols, Umbrellas,  
Baby Goods of Every Description,  
Ladies' and Children's Suits,  
Ladies' Cotton Underwear of "Stems,"  
"Merino" " " Norfolk and N.  
Brunswick,  
Morocco Satchels and Valises,  
Gents' Furnishing in all the Best Brands,  
Boys' and Men's Custom Made Suits.

Our Motto: "LOW PRICES."

726—734 MARKET STREET, S. F.  
**PALMER BROS.,**

Deutsch, Français, Espagnol, and Skandinavisk Språk spoken.

**ROWELL & CHESMAN**  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.  
Publish a book on ADVERTISING, AND HOW  
AND WHERE TO DO IT, that every Advertiser  
should have before making contracts either with the  
papers or through Agents. It contains lists of papers,  
prices, circulations, and much other matter of value  
which will save time and money to those seeking in-  
formation about, or making contracts for Newspaper  
Advertising. Send address on postal card, and this  
book will be forwarded free of charge.

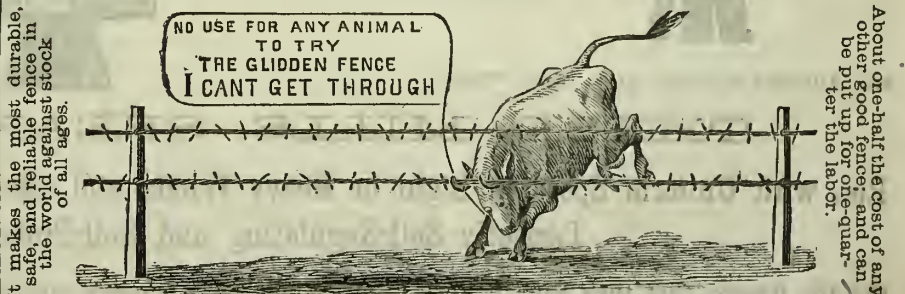
YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.

25

FANCY CARDS, all styles, with name, 10c.; 25  
Cardinal Red, in gold letters, with name, 20c.;  
20 Fancy Scroll, 16 styles, no name, 10c.; postpaid.  
J. B. HUSTED, Nassau, Renss. Co., N. Y.

**\$500** Yearly Profit from 12  
Hens, by Hatching Eggs and  
Raising Poultry by means of  
horse manure alone. The  
Centennial and several Gold Medals, and 12  
Diplomas, have been awarded to Professor A.  
Corbett, No. 7 Warren Street, N. Y. Testi-  
monials and Catalogue sent on receipt of a  
three cent stamp.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by  
J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and  
is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLID-  
DEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO  
UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
7. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
8. The only barb wire that gives universal satisfaction and has greater sale than all others put together.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES; GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

### Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the PRESS, Harper's Weekly and Scientific American, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, Dewey & Co., Publishers, San Francisco.

### INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.



# GEO. F. SILVESTER,

WHOLESALE AND RETAIL SEEDSMAN, 315 and 317 Washington Street, between Battery and Front,

IMPORTER AND DEALER IN

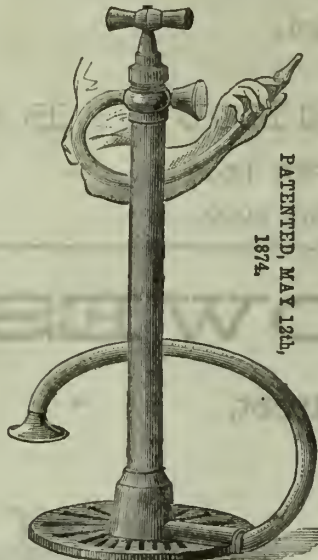


Vegetable, Flower, Fruit and  
Tree Seeds,

GRASS AND CLOVER SEEDS,

Fruit and Ornamental Trees,

PLANTS, ETC.



"THE EXCELSIOR PUMP."



Trade Mark.

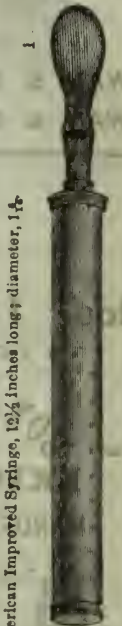
Coniferæ Forest Tree Seeds, Etc.,

INDIGENOUS TO THE PACIFIC COAST.

BUDDING AND PRUNING KNIVES.

HORTICULTURAL IMPLEMENTS.

WHALE OIL SOAP for Destroying Insects.



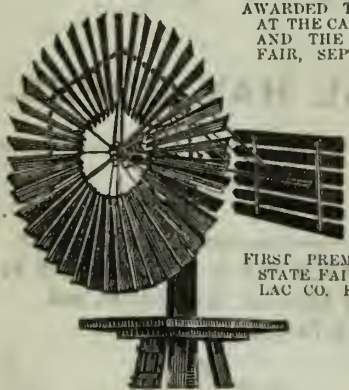
American Improved Syringe, 12 1/2 inches long, diameter, 1 1/2.

On hand a fine assortment of GARDEN SYRINGES, LONG HANDLED PRUNING SHEARS, GRASS HOOKS, HEDGE SHEARS, ETC.

**The Excelsior Pump**, a useful article for watering Gardens, Green Houses, Etc.

ORDERS RESPECTFULLY SOLICITED.

## ALTHOUSE AND RAYMOND WINDMILLS

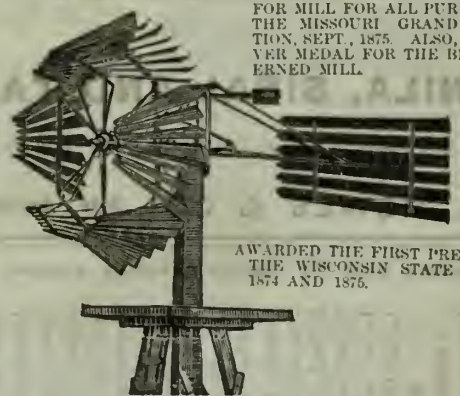


AWARDED THE FIRST PREMIUM  
AT THE CALIFORNIA STATE FAIR,  
AND THE STOCKTON DISTRICT  
FAIR, SEPT., 1875.

FIRST PREMIUM AT THE IOWA  
STATE FAIR, 1875, AND FOND DU  
LAC CO. FAIR, WIS., 1874.



RAYMOND PAT. WAUPUN



AWARDED THE FIRST PREMIUM  
FOR MILL FOR ALL PURPOSES AT  
THE MISSOURI GRAND EXPO-  
SITION, SEPT. 1875. ALSO, THE SIL-  
VER MEDAL FOR THE BEST GOV-  
ERNED MILL.

AWARDED THE FIRST PREMIUM AT  
THE WISCONSIN STATE FAIR IN  
1874 AND 1875.

The Althouse Windmill in a Light Wind.

The Althouse Windmill in a Heavy Wind.

THESE MILLS SPEAK FOR THEMSELVES.

Run with Uniform Speed in Light or Heavy Winds, and take care of themselves in any Gale.

Perfectly Self-Regulating and Self-Protecting, Reliable, Durable and Ornamental, Cheapest and Best,

For the Reason that they Run in Very Light Wind, work Quietly and Steadily in a Gale, and, unlike Solid Wheel Mills, when properly set

THEY NEVER BLOW DOWN.

L. H. WOODIN, Esq., San Francisco.

The Althouse Windmill is the best I have ever seen in use. It gives satisfaction in every respect.  
Eureka, Nevada, Jan. 16th, 1877. EVERETT, Gen. Supt. Eureka & Palisade R. R.

I believe the Althouse Windmill cannot be excelled in any particular.  
Colusa, Sept. 5th, 1876.

J. A. WINSHIP.

We are satisfied, after a fair trial, that the Althouse is the best Windmill in use.  
Galt, Sac. Co., Aug. 23d, 1876.

WHITAKER & RAY.

My Althouse Windmill has been in use since the 1st of May, and has not failed one day to furnish plenty of water for all my stock and ranch use.  
Plainsburg, Merced Co., Oct. 27th, 1876.

R. M. BURCHELL.

I know of no Windmill which I believe to be as perfect a self-regulator, or that will run in lighter wind. No gale can injure it whether running or standing still.  
Martinez, Contra Costa Co., Dec. 15th, 1876.

JOHN ROGERS.

Mine, though of smallest size, raises water 85 feet, enough for seven families and their stock, and as much more for irrigation.  
San Buenaventura, Aug. 20th, 1876.

S. BRISTOL.

N. B. We sell the Best Self-Regulating Mill in the World. Ten-foot Wheel for \$90.

ORDERS PROMPTLY ATTENDED TO.

SEND FOR PRICE LIST TO

L. H. WOODIN, San Francisco, Cal., Proprietor.

BAKER & HAMILTON, Sacramento or San Francisco, Gen'l Agents.





Volume XIII.]

SAN FRANCISCO, SATURDAY, APRIL 14, 1877.

[Number 15.]

### Walter A. Wood & Co.'s Header.

The approach of harvest makes novelties and improvements in harvesting machinery seasonable subjects for editorial comment. Although the work of the header and the separator will not be as great as usual in this State this year, there will still be some counties which will tax them to their fullest capacity. In these counties the preparation for the hard work of the year will soon be in hand.

Our illustration shows a new header just issued from the well-known workshops of Walter A. Wood & Co., whose reputation for good work in reapers and mowers will win confidence and interest in anything which comes upon the market in their name. The new header is now being sent out for the summer trade by Frank Bros. & Co., of San Francisco and Sacramento, who have the agency for this coast. The header is built upon the Case or Treadwell model, which has been found excellent for California practice. Several important improvements have been made in regard to construction and arrangement, which have been suggested by some of our largest grain growers. Leather belts have been thrown out and chains substituted, which, it is believed, will prove most certain in action and admit of quicker adjustment. Another improvement is in the reel, which is readily adjustable. The wheels are of iron, firmly constructed. It is claimed that the header will prove of exceeding light draft, because of the perfect balance which is gained. The spring balance which governs the raising and lowering of the cutter-bar is a new feature from which much is expected.

The whole plan of the construction seems to be on the line of strength. The wood-work is about twice as heavy as usual, and the best Eastern timber is used in the building. The Case header has been greatly praised for its simplicity, and this excellent quality has been maintained in the new machine. We have no doubt the header will receive the careful examination and trial of practical men.

The scene in which this apparatus is represented at work is in many points true to California life, and will give to our readers in many States an idea of farming practice with which they are not familiar on their farms.

**A WONDERFUL SPECIES OF THE COTTON PLANT.**—A cable dispatch from London to one of our daily papers says: A remarkable discovery has been made in Egypt by Signor Giacomo Rossi, Austrian Consular Agent at Alexandria. He has found a new cotton plant, which is so wonderfully prolific that it may prove a dangerous enemy, the report says, to the American cotton raising interests. Signor Rossi, in his report of the discovery, says that about two years ago he accidentally came across the new plant on the property of a captain in the Menulia district, who collected the seed and sold it to his neighbors at twelvefold the price obtained for the ordinary kind. The plant has a long stem, and being without branches much space is saved. It bears on an average 50 pods on each bush, while the usual yield of the plant is about 30. A smaller quantity of seed is needed, but the great drawback in Egypt is that it requires much more water, which necessitates the alternating of the crops with grain and vegetables. In the sea islands of the Atlantic coast or along the lower Mississippi it would prove wonderfully prolific.

### New Enterprise for Handling Wool and Stock.

We have alluded before to the new enterprises in hand by Falkner, Bell & Co., of this city, for handling wool and live stock. They have undertaken to introduce selling wool by auction according to the method now prevailing in London. For this purpose they have erected a wool warehouse at the corner of Sixth and Townsend streets, adjacent to the Central Pacific railroad freight houses. It is perhaps the best planned institution of the kind in the city, for, being latest planned, it embraces all the good features of the older ones. We recently paid a visit to the establishment, and found it a large building, 140 feet wide by 230 feet long, strongly constructed and well finished. It has two wide entrances for loaded drays, one on each of the streets named above. The interior on each side of the drive-way is divided

the center of the block is the feed barn, and half a dozen strong corrals have a corner touching the feed barn. These corrals are well furnished with racks for feeding sheep, cattle, and troughs for swine. In one corner of the yards is a large windmill and a tank which secures an abundance of good water. This water is conducted by pipes to the different corrals and buildings. At one side are a row of covered stalls for cattle. The arrangement seems to us very complete and commendable, and will doubtless prove a great convenience to our stock men who desire city accommodations and trade facilities.

### What California Has.

When we wrote an article last week to show our readers what Dr. Gray said we *had not* in the way of plant treasures, we had half a thought that some of our wide awake readers would show us that the able botanist was not

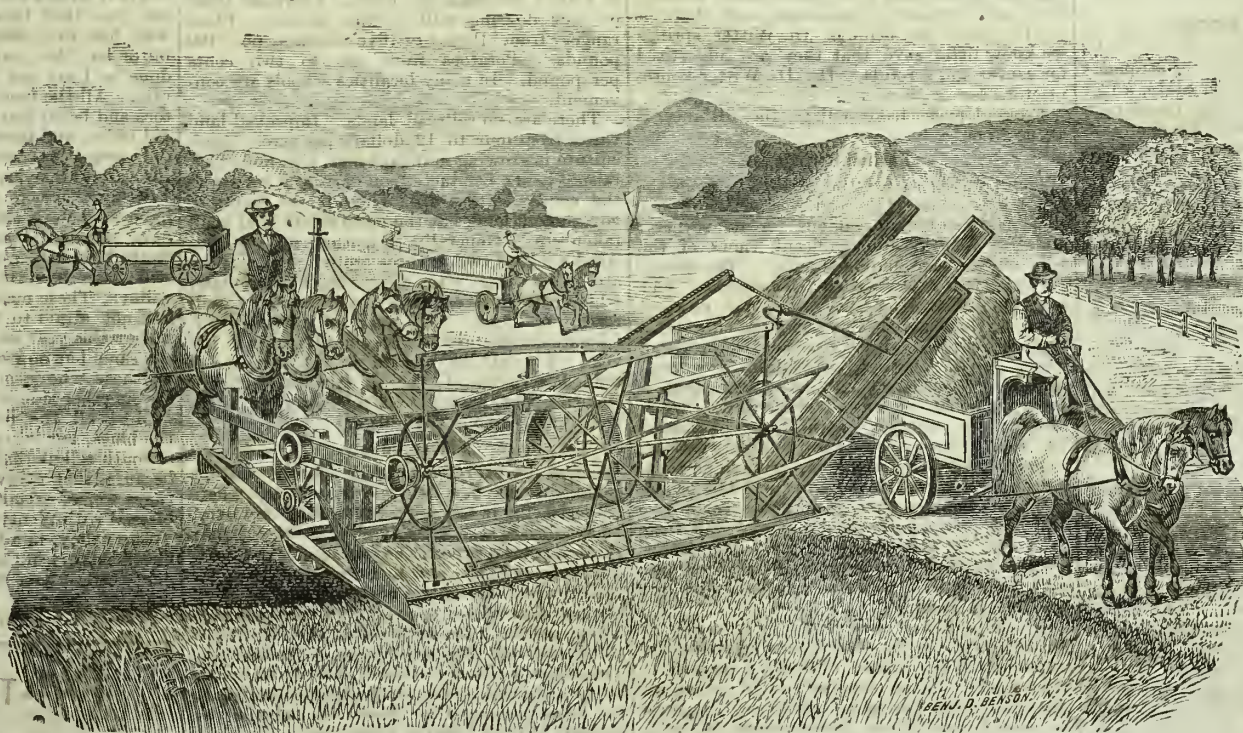
### The Squirrel in Court.

It seems that the pestiferous squirrel is to be put into court on his own merits, and that he will have neither prosecution nor defense, but will have to take the cold judgment of the judge without the consolation of witnesses nor jury. We mean by this, that the constitutionality of the law providing for the public killing of squirrels is now before the Supreme Court for decision. The man who protested against paying the rates prescribed by law for killing the squirrels on his property, in Contra Costa county, puts his case directly upon the constitutionality of the law irrespective of the constitutionality of the squirrel. Arguments are submitted and upon them the judge will tell us whether it is constitutional to charge a man for killing the squirrels on his property or not. The Contra Costa Gazette has the official information on this subject as follows: Ex-District Attorney Mills has handed us a printed copy of the transcript and brief in the suit of "The People of the State of California vs. John B. Felton," submitted here on stipulation of the parties, without trial or argument, and a *pro forma* decision sustaining the demurrer of the defendant rendered by Judge Dwinelle, for the purpose of getting the question of the constitutionality of the Squirrel Nuisance Abatement law directly before the Supreme Court for determination.

We learn from Mr. Mills that Mr. Wise, the attorney on the other side, has agreed with him to have the case put on the calendar for hearing at the present term of the Supreme Court, and its decision will be awaited with much interest by the people of this county and of the State, who realize that there is no hope of relief from the squirrel nuisance without a law of stringent provisions that will hold owners to the obligation of destroying the pests on their lands, or for the costs of their destruction by public agents. Should the constitutionality of the act be sustained by the Supreme Court, as there is good reason to believe it will be, no insurmountable obstacle will remain to the practical extermination of this destructive pest, from which not only the agricultural and stock raising, but the commercial interests of the State have so greatly suffered.

**A DAIRY GRIEVANCE.**—There is good ground for complaint on the part of the dairymen at the rates which are charged them by some transportation companies, and of the way the product is handled during transit. We hope these questions will be fully discussed and some action taken at the dairymen's meeting this fall. The dairymen should act together in forcing common carriers to respect their wishes. We read in the San Luis Obispo *Tribune* the following protest from O. B. Logan: "Goodall, Perkins & Co. have given orders not to receive butter in boxes without weighing. Boxes that contain one hundred pounds of butter weigh on an average one hundred and fifty pounds. The cost of freight from here to San Francisco is twenty dollars per ton. This makes to the shipper of butter thirty dollars per ton, which is outrageous, and an imposition upon the community, and it should not be quietly submitted to. Some step should be taken to checkmate the move, either by a meeting of shippers, or by seeking some other means of transportation."

FRANK LESLIE, with his wife and several friends and a corps of artists, left New York last Tuesday for the Pacific coast.



WALTER A. WOOD & CO.'S NEW HEADER

into sections, there being 28 in all, above and below. The warehouse has a capacity of 8,000 bales. It is exceedingly well lighted, with windows in the roof, arranged to get light without direct sunshine. On one side are the arrangements for grading wool. These will enable men to work at the same time in the sorting and sacking the graded material. The firm will grade all the wool which is sent for auction sale, and will then warrant the article to be according to the grade specified upon the bales. In this way Eastern buyers can rely upon getting just the grade they bid upon, and farmers producing good clips will get the full benefit of it at the sales, the grading at the expense of the producer. Near the grading-pens are the powerful presses, by which the bales are compacted for shipment. This is done after the sales, and is, of course, at the expense of the purchaser.

After inspecting the wool department, we were driven by Mr. Townsend to the new stock yards in South San Francisco. These were constructed both for the care and sale of animals which might be consigned to the firm. The firm find that their customers, their wool patrons, often wish to send to the city flocks of sheep and shipments of cattle to be sold, and by establishing a stock yard of their own they are enabled to transact this business with satisfaction. Building upon this need of their business, they have laid their plans wide enough to accommodate a large trade of this kind. The yards are well located and are commodious. In

fully acquainted with our plant resources. So it proves, for our esteemed contributor, John Mavity, of St. Helena, sends us a crisp note, which is fresh with the dews of the fields where its facts were gained. He writes: "In your quotation from Dr. Gray, concerning what California has not, appears my favorite fruit, the 'huckleberry.' You have but to go to Del Norte county, and perhaps no farther than Humboldt, to find them with all the delicious fragrance of the Eastern variety. And in addition three other varieties abound. A high bush, black and red; also low bush, red variety. None, however, have the fragrance of the blue variety. There are other wild berries and fruits in that county, such as thimbleberry, sal-lal, strawberry, blueberry, crab-apple and what the East has not, the salmonberry. They resemble very much the red raspberry the first year of their growth, but instead of dying down each year as the raspberry, they continue to grow from year to year, until they are about 10 feet in height. The young wood is covered with sharp spines like the blackberry, but after the second or third year shed them off, and the bark becomes smooth. The fruit is larger and in shape somewhat like the raspberry; color yellow or salmon. About one bush in 10 bears a purple berry. It is not likely that they would flourish in our dry inland valleys, as they are only found in damp, shady ground in the immediate vicinity of the ocean. They make a very good dish with the addition of cream and sugar, but devoid of much flavor."



## CORRESPONDENCE.

### Lake County Mineral Springs.

EDITORS PRESS:—Of the many mineral springs of central and northern California, none have of late years attracted so much attention as those within the hill-encircled county of Lake. Each year witnesses the advent of thousands of health-seekers from the bay and valley counties, and among the readers of the RURAL there are sure to be many who are planning trips in that direction this season. To such it is hoped the following notes upon the principal springs, their location, the routes, prices, etc., may be of use.

#### How to Get There.

To get into Lake county the most-traveled and best route from San Francisco is by steamer to Vallejo and thence by rail to Calistoga, the distance now being accomplished in four hours; fare, \$3.50. From Calistoga there are two lines of stages, one overland via Kelseyville to Lakeport, leaving Tuesdays, Thursdays and Saturdays, the other via Lower Lake and the Clear lake steamboat to the same destination on Mondays, Wednesdays and Fridays. The road winds up a four-mile grade over a shoulder of Mt. St. Helena and then descends a shady canyon into Loconoma valley. Eighteen miles from Calistoga, Middletown is reached. Fare, \$2. Here the two stage routes to Lakeport part company, and it is also a point of divergence to the principal springs of this part of the county.

#### Anderson Springs

Are three miles west, on one of the headwaters of Putah creek. They are little visited, except by campers. The waters are cold and contain iron, sulphur, soda and magnesia chiefly. There are no baths.

Four miles northwest of Middletown are situated the

#### Harbin Hot Sulphur Springs.

The oldest and best-known of all the Lake county health-resorts. These are the strongest sulphur springs in this part of the State, a fact to which they undoubtedly owe their popularity. The principal spring gushes out of the mountain side in a remarkably strong, steady stream; its temperature is 120°, and it contains chiefly sulphur, iron and magnesia, the sulphur being much the strongest in solution, and giving to the water a taste popularly supposed to resemble that of rotten eggs. The water is conducted directly into the bath-houses, of which there are 14—nine "tub" and five "plunge"—the temperature of the baths being graduated from 117°—which is about as hot as one can bathe in without boiling oneself—down. A daily bath and sweat, and the drinking of the water both hot and cold, is the prescribed course here, and is very successful in the cure of rheumatism, scrofula and complaints of the liver and kidneys. They have been visited by as many as 200 people at one time.

The situation of the springs is an unfortunate one—in a narrow canyon, between high, steep hills that preclude exercise except the most severe. Fifteen years ago it was a wilderness of chamisal. The story of its proprietor, Richard Williams, is an excellent example of what hard work, backed by perseverance and native shrewdness, can do even in so unpromising a location. Eleven years ago he purchased this place for \$2,500, almost his entire capital. To-day he has upon it three large hotel buildings and a dozen cottages, excellent bath-houses, a large vegetable garden, and cattle upon a thousand hills; he runs a private stage-line from Calistoga direct to the springs; in short, he has the best regulated and most complete watering-place, in all its appointments, in Northern California. One hundred thousand dollars would not buy it now; and his only explanation is, "I do my work myself."

The accommodations are good, but exceedingly plain. Terms, \$12 to \$15 per week. Stage fare from Calistoga, \$4.

#### Adams, Siegler and Howard Springs

Are close together, on a road leading from Cobb mountain to Lower Lake. They are best reached by way of Bassetts, a stage station 12 miles from Middletown, at the base of Cobb mountain.

Adams springs are romantically situated in a green little nook, among tall, pine-covered hills, three miles from Bassetts. The springs are four in number, clear and cold, holding in strong solution iron, soda and potash. The waters are sharp and biting, and leave a taste resembling that of petroleum. There are rooms here for about 50 people, but the place is at present without a permanent landlord, a want which will doubtless be supplied before the season fairly opens. Terms, \$10 a week.

Siegler springs are three miles north of Adams, in so charming a situation that the visitor is under constant temptation to out-door exercise. The springs are some 30 in number, containing chiefly iron, soda and magnesia, the iron being generally in strongest solution; indeed, they are claimed to be the most valuable chalybeate springs in the county. The springs

are both hot and cold, and there are half-a-dozen bath-houses. This place is the property of Alvinza Hayward, Esq., and has for several years been in a semi-closed state, but it has this year passed into new hands, and the visitor will find no more cheerful and home-like stopping place than with Mr. and Mrs. Hooper, at Siegler.

Howard springs are one mile east of Siegler and seven miles south of the village of Lower Lake. The waters contain iron, magnesia, soda and lime, and range in temperature from 60° to 107°. There are several bath-houses. Accommodations here are somewhat primitive and Missourian in character, and rates are but \$3 to \$12 a week.

Passing northward from these springs of the southern part of the county, the next met with are the

#### Highland or Caldwell Springs.

These springs are beautifully located on the edge of Big valley, close under the mountains, five miles from Kelseyville and 18 miles from Cloverdale, on the road from that place to Lakeport, on which there is this summer to be a daily stage line, so that from the city the springs may be reached either via Sonoma valley and Cloverdale or Napa valley and Calistoga. There are some 30 or 40 springs here, warm and cold, containing chiefly magnesia, soda and sulphur, in various combinations. The water is used for both bathing and drinking purposes.

Eight miles from Highland springs we reach Lakeport.

The county seat and largest town of the county. It is the terminus of almost all the stage routes in the county—to Calistoga, to Cloverdale, to Ukiah, and to Bartlett springs. The distance to San Francisco via Calistoga is 120 miles, fare \$8.50; to Lower Lake, by steamer on Clear lake, about 25 miles, \$1.50; to Calistoga, 52 miles, \$5.00; to Upper Lake, 10 miles; to Ukiah, 30 miles.

#### Pearson and Witter Springs

Are in the northwestern corner of the county, on the road from Lakeport to Ukiah. The former is 13 and the latter 16 miles from Lakeport. Pearson springs are upon Scott creek, two miles east of the Blue lakes, two lovely little sheets of water, hemmed in by lofty mountains and for which no bottom has yet been found. The springs are said to be beneficial in kidney, liver and rheumatic complaints, and there is good hunting and fishing. Of Witter springs we know little save that they are advertised for cancer and scrofula. Dr. D. Witter is proprietor.

From Upper Lake village the distance is about 15 miles to

#### Bartlett Springs,

Which have attracted the greatest throngs the last few seasons. The road is a well-built one over the mountains, famous for its scenery, affording as it does magnificent views of the lake and the surrounding country. The springs are in a small valley "among the chamises," and are much visited on account of the pleasant flavor of the water and its beneficial effects in a great variety of diseases, especially of the blood, "only proving entirely worthless, or worse," says the proprietor with a caudor that is quite unusual in an advertisement, "when brought in contact with lung diseases." The springs are numerous and in great variety, containing sulphur, magnesia, potassium, soda, borax and many other ingredients. The principal spring bubbles up into a stone basin two feet deep. It is quite palatable and the taste for it does not need to be acquired. The springs are all cold; baths are provided for those who wish them, but the principal reliance is on the drinking of the water.

The springs have been visited by as many as 700 people in one day, and accommodations are ample for all who come. Terms, from \$10 to \$15 a week. In the summer stages arrive almost daily from Lakeport via Upper Lake, and tri-weekly from Colusa, distant about 50 miles to the eastward. There is also a road, but a rather rough one, through Long valley and the Sulphur Banks to Lower Lake. Distance 25 miles. From San Francisco the fare is about \$12.

#### General Remarks.

We have thus made the round of the Lake county springs. Our readers may choose between them; but whichever they may visit, we feel sure they will be benefited, if not by the waters at least by the change of scene, the fresh, invigorating mountain air, and the perfect rest and forgetfulness of every day pursuits that seem to come of themselves in those quiet, retired nooks in the hills.

As will be seen, rates vary at most of the hotels from \$10 to \$15, the higher prices securing the most desirable, best furnished rooms, with extra accommodations in the way of lights and fire. Stage fares are generally about 10 cents a mile; higher in special cases. Society at the springs will of course be found pleasant, being composed almost entirely of Californians, the number of Eastern visitors being noticeably small as compared with our southern health resorts.

The highest number of visitors usually occurs during the months of May, June and July. No better time can be found, however, than just now, while the fields and hills are green, and the roads not yet dusty. The climate is very similar to Napa valley, the mercury rising to 110° upon occasion in the summer. No fear need ever be entertained of cold.

WM. HENRICI.

San Francisco, March, 1877.

### Modoc, Siskiyou and Placer Counties.

EDITORS PRESS:—During the past two years I have written occasional letters from Modoc county to the Colusa Sun and other papers showing up the advantages of Northern California. The result was letters came to me from various parts for further particulars. Then I concluded to answer all concerned in the PRESS and quit, as I had become tired of this kind of notoriety. This final letter you published only a few weeks ago, and now come three more letters of inquiry. It appears I am elected to continue writing, and here let me state that no letters shall receive personal attention without enclosed stamp.

Modoc and Siskiyou counties are unsurpassed for grazing purposes. Some excellent butter, beef and wool now come from that section and the amount is rapidly increasing. Red Bluff is the market and is distant from 80 to 160 miles. The road is considered the best mountain road of its length on the coast and the highest altitude is about one-half that at which the railroad crosses the Sierra Nevada. Potatoes and all the hardy vegetables do splendidly, as well as wheat, barley and oats. It is a poor place for corn, squashes, tomatoes, melons, and most large fruit, although some of the small fruits do very well. Wild plums, choke-cherries and currants are very plenty some seasons when frosts are not severe. The plums are usually bitter. About one year out of four the snow covers the feed, and stock must be fed. Good hay grounds are indispensable, and to be safe a man should keep over no more stock than he has hay to provide for three months. Some winters only a few weeks' feeding is required, and some none at all. Ice forms from two to eight inches thick, owing to locality and season. The ground does not freeze enough to prevent potatoes from volunteering.

The weather sometimes gets down to 20 degrees below zero, but this cold spell is only a few nights' duration. Hogs are generally raised, some places being very favorable to the business. Some put up bacon, for which they find a home market at 16 cents per pound. Stores and saw-mills are most everywhere within a day's ride back and forth. There are three or four flouring mills in that section. Flour ranges from three to five dollars per 100 pounds. Potatoes from one to two cents per pound. In many localities schools are convenient.

There are no railroad lands. Improved land varies from four to 12 dollars per acre. Agriculture is growing in importance, that and stock raising being conducted on narrower ranges as the county settles up. There is yet plenty of government land, but the natural hay land is all taken up. Generally irrigation is required. Alfalfa makes two to three crops a year. There are many other ways of making a few dollars, which the man of energy and economy will readily find out. The water is soft and cold. Climate delightful at least eight months in the year. I would be pleased to give a more extended account of these extreme northern counties, but having sold my interests there and located among the hills of

#### Placer County.

It must be expected that my labors will be confined to the new field of my choice, where fruit growing is becoming the leading industry. I have of late seen considerable in the papers speaking of the superior advantages of the foothill lands of Placer and El Dorado counties for semi-tropical and more northern fruits. Half has not been told of the value of these foothill lands; indeed, I am surprised at their great fertility, and that they are not more settled up. The scope of country of which I write is known as the slate-rock or thermal belt, extending along the western slope of the Sierra Nevada at an altitude of from 2,000 to 3,000 feet. The rock is a kind of soft slate and soapstone, say from one to four feet beneath the soil, and naturally moist. The hills are rolling and covered with young pines, mostly yellow, with chaparral, black, white and live oak. Some of the country is yet well timbered. In the early days of mining these hills were covered with large pines long since turned into lumber.

I have been acquainted with the fruit growing interests of the Feather and Sacramento rivers for more than 15 years, and have been among orchards from Mendocino to Santa Barbara, and now I think every evidence proves here is a scope of country excelling all in the productiveness and quality of fruit. So important is this fact that two fruit preserving establishments have just been constructed in Placer county—one at Newcastle and one at Auburn. Here are peach trees from 12 to 16 inches in diameter and 20 years old, yet vigorous and bearing delicious fruit. The old orchards are few and small. It is only recently that the practical fruit grower has begun his labors here. Fine almond orchards are being started. This is the home of the almond and prune, and, indeed, of all the valuable fruits. Gooseberries, currants, blackberries, raspberries, Zante currants, tomatoes, sweet corn, etc., grow to perfection. Land is yet cheap and plenty of it; so is water. The rain-fall is twice that of Sacramento. The grain crop looks well. Hogs, poultry and eggs are cheaply raised, and command a ready market. I must say that Auburn sells goods cheaper than any town I know of in California. Located on the line of the Central Pacific railroad and growing in importance, it

cannot but attract the attention of those in search of cheap homes with health and comfort. Here there are no land grants and monopolists—no self-interested schemers to print and scatter flaming accounts among immigrants, as they are doing in some of our counties.

H. W. HULBERT.

Auburn, Placer Co., Cal.

### Santa Maria Valley.

EDITORS PRESS:—In reading your noble paper, for I must say it is "noble" in truth and a blessing to many thousands of farmers and others, who ask you for advice and know they can rely upon what they read. Most of them, like myself, have come to a new country and are starting in business that they know very little about, but are willing and able to work, and their only deficiency, knowledge. I know of many who have looked to you and have now got a fair start in the world and thank you for it; they have put faith in you and have not been deceived.

It gives me pleasure to write you a few lines about this splendid valley, called Santa Maria; if you should think this worth printing you can do so. Santa Maria valley, Santa Barbara county, is about 30 miles long and averages from nine to 10 miles wide, with other valleys branching out of it. We have all classes of soil here, and I wish to state that with proper farming we could raise, most always, good crops, even a dry season like this. The fault lays in the farmers having too much land by half, or else not having enough capital to be able to work it properly.

I notice that wherever you see a nice bit of barley which will make good hay, I find that it belongs to a man who has only about 30 to 40 or 50 acres, who has spent all his time on that amount of land in putting it into good order by plowing deeply and by well pulverizing it with rollers and dragging. The great curse of the valley has been a few good volunteer crops, about two or three years ago and the belief that if a man can only have from 200 to 1,000 acres of good land and can run a gang plow over it from two to three inches deep and then just tickle it with a harrow, that is sufficient. I can tell you that there is not one of these farmers who has this amount of land that will raise a bit of hay this year. In this valley they have done as I say and then sit down and curse for rain. All the land that was planted with potatoes and beans last year is at this time in splendid order, and there will be, I believe, a splendid crop of potatoes, beans and corn raised in the valley this year.

A few farmers are irrigating a little; some have sunk wells and have flowing water, others have windmills and others have turned the Santa Maria river on to the low lands, and others still have been fetching the Laguna into the valley. These men have an eye to business and are not afraid to work and are going to make money this year and those who could have done the same but now see it is too late, and laughed at those who commenced, think the laugh is on the other side of the mouth.

Most all the business people here have had the blues, but everybody that comes from north or south tell us that this is a valley to be blessed because that everywhere else things are ten times worse, except where the country has been blessed with plenty of rain.

The valley, in a few years, will be one of the finest valleys in California and it will not be long before you hear every one loud in its praise.

W. H. S.

Guadalupe, April 4th.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Plymouth Rock Fowls.

EDITORS PRESS:—In the last number of your paper I notice two articles, one editorial by Mr. Eyre, the other a communication discussing the merits of various breeds of fowls, each one of the writers giving a little of his personal experience in the business. By your permission I will give in a few words a little of mine, for it is by comparing personal experience, one with the other, that we are able to determine for ourselves "which is the breed." Having for many years been actively interested in the annual exhibitions of a county agricultural society in Massachusetts, and for the past three years Secretary and Treasurer of the society, also interested in the poultry associations of the State, I had opportunities for examining and studying the best specimens of the various breeds, and hearing the champions of each breed discuss the merits of their favorites. After looking the matter over carefully, I decided that the Plymouth Rock was the fowl I wanted and determined to give them a trial, and this is my experience with them: I procured a sitting of eggs from pure bred fowls, the pedigrees of which I can trace, from which were hatched four cockerels and four pullets. One of the pullets was stolen. I selected the best cockerel and put with the pullets; they were hatched in August



and commenced laying the following February. I allowed each of the pullets to sit twice during that season (should not do that as a rule), and over 70 chicks were hatched; also sold eggs from the same pullets, and over 70 chicks were hatched for other parties. The hen is an excellent mother, taking the best of care of her chicks, but invariably leaving them at three weeks old and commencing to lay the next day. Mine have never failed to do this. The chicks are very hardy and soonest able to take care of themselves. As stated in your editorial article, "the chicks feather out younger and better than the Asiatics." They have proved the most constant layers of any fowls with which I am acquainted. There is no better fowl for the table, and they are always profitable where fowls are sold by weight, as they are of large size. They are also very domestic, never wandering off to a distance if you give them a large range, yet they are more sprightly and intelligent than the Asiatics. It seems to me therefore that I am justified in quoting what is claimed for them by the best breeders, viz: "The Plymouth Rock combines more good qualities than any other fowl." Poultry raising is not my chief business, but coming to this coast as I did on other business, in which, by the way, I am succeeding even better than I anticipated, and knowing that much attention was given in this State to the raising of pure bred poultry, and the Plymouth Rock not then having been introduced here, I decided to bring with me a few of the best from my stock, a little of my experience with which I give you above. The climate thus far seems to agree with them finely, for they are doing well in all respects, and in the matter of laying they are outdoing themselves.

J. L. SKINNER.

Placerville, Cal., April 2d, 1877.

[As Mr. Skinner's name is new to our readers and his residence in our State but lately begun, we take pleasure in stating that he is highly recommended to us by the Secretary of the Massachusetts State Agricultural Society as a gentleman of character and uprightness, and one who was held in high esteem in the State whence he comes.—EDS. PRESS.]

### Carbolic Powder Again.

An inquiry received from Mr. Shepard concerning this powder is similar to some half-dozen letters recently received. It can be properly made only at some chemical works. Some druggists try to impregnate whiting or other substance with carbolic acid, and sell it as carbolic powder; but no druggist, unless he have facilities such as none have on this coast, can make carbolic powder which will prove efficacious and retain its efficacy for any length of time.

I import the powder by the quarter ton, and sell it to customers as an accommodation. I charge for a four-pound package about 10 cents more than its cost by the one-quarter ton. This hardly pays for packing, etc. I have not advertised it because I have not sought to make it a source of profit.

By using it as I direct, any one can raise chicks as well, if not much easier and better, in July and August as in the early spring months. Without it I found it impossible to hatch fowls reared in these months. I used tobacco, lard and snuff, sulphur and other things, but the young chicks would die. The directions for setting the hen, caring for the young, etc., have been given in the PRESS and are embodied in my pamphlet. By implicitly following these directions, any one can raise chickens hatched during any month of the year. I leave home in the morning and remain at my office in town all day, returning only at evening to the farm, but my man follows exactly the directions in the pamphlet, and I have not lost this year a single chick by disease, nor have I a single sickly or puny-looking one among all I am rearing.

M. EYRE, JR.

PEKIN DUCKS AS LAYERS.—EDITORS PRESS:—I have four ducks. One commenced laying January 15th, and the others came in February 1st. Up to and including February 24th, they laid 52 eggs; since February 24th to date, which is 42 days, they have laid 141 eggs.—J. O. H., San Jose.

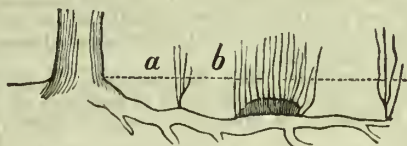
## HORTICULTURE.

### Fruit Tree Suckers.

EDITORS PRESS:—A few stray leaves of the *Gardeners' Monthly* are on my table. They contain proceedings of the Pomological Society, and as far as may be opined, the opening address of the President. The two first pages are missing, so that the author of this excellent address is at present unknown. Speaking of grafting and the reciprocal influence existing between the cion and the stock, he mentions the fact that certain varieties of pear would not readily assimilate with the stock, however vigorous. "We have, in many instances, seen healthful trees sicken and die by the insertion of these uncongenial grafts. So great was the

want of congeniality, that we have seen the stocks throw out successive crops of suckers, and although these were frequently removed, yet the cion would refuse to receive and elaborate the sap in sufficient quantity to nourish it, and the trees would finally die. In such instances the only way to restore the health of the stock is to remove the graft for a cion of its own or some other appropriate sort."

There are some things I would like to learn respecting this very point. The foregoing theory may be accepted as partly true, but not as a general law. Every practical pomologist knows that however vigorous the stock, a peach bud from a tree having the yellows that may be inserted upon it, will carry the disease into the newly made tree, and conversely, that a sound bud will not flourish on a diseased or dwarfed root. The crops of suckers which occasionally appear round standard fruit trees are by no means the invariable sequence of uncongeniality between cion and stock. A seedling locust will send up a solitary sucker from 20 to 50 feet away from its trunk. Let it grow, a single tree will be the sequence; cut off the sucker with a dull spade, deep in the soil on a level with the main root, and the next year you will have two or three springing from the same point. Rupture the attachment of these, one by one, from the main root and the succeeding year you will find half a dozen or more taking their places. I have four standard Beurre Easter pear trees which were planted six years ago. They were about three years old when transplanted. They bear copiously every year, perfect their fruit in size, many of the pears weighing 16 ounces. The great yield of fruit prevents an ordinary increase of new wood. They have thrown up suckers every year since being transplanted, and the suckers have ordinarily been cut off with the spade. Every year the number of suckers increases; I have counted 80 round one tree. Last year I had the roots exposed and the suckers removed. This spring the same process is being gone through with, and here is the result of observations:



Suckers From Wounded Roots.

The horizontal line represents the ground level, one of the main root trunks diverges and is from six to 16 inches below the surface; from awkward cultivation the digging fork scrapes the root bark at *a* and *b*, and during the season one to four suckers appear above ground. When large enough to attract attention, Jerry gets hold of it, and if he cannot pull it out by main force, he sends down the spade and cuts it off. What follows? It is torn from its attachment and a rough, uneven and denuded surface on the main root is made, and from it from six to 12 new suckers appear, which, being removed in the same rough style as the originals, leave a larger wounded surface, and with it a portion of the wood forming the base of the suckers; from which a score of new suckers shoot up the succeeding year. A nodule of solid wood as large, or larger than any man's fist is thus formed on the upper surface of the root, which affords a constant supply of leaf buds and a constant evolution of suckers. I am clear in the belief that it is a physiological fact, when the root bark of many varieties of fruit trees is wounded, or the root bruised or cut off by cultivation or by gophers, the evolution of leaf buds follows the operation. It is so with the locust, the pear, the apple, the plum, the cherry, the fig, and if the wound be on the trunk, below the ground surface, the peach tree will also present the same phenomenon. Wishing to learn the views of others on this interesting point, I withhold any theory of the facts presented. As a practical point, it may be stated that if a sucker or a clump of suckers be cut off from the roots with a sharp chisel or knife, and the wound covered with grafting cement, the trouble will be overcome to a very material extent. But there are conditions in the processes of vegetative life—not necessarily abnormal or traumatic—which give origin and development to underground leaf buds, in spite of all horticultural devices.

Alameda, March, 1877. W. B. GIBBONS.

### Strawberry Growing in California.

We find in the *Pioneer*, of San Jose, an article on strawberry growing, which will be of much interest to many in various parts of our State and to our Eastern readers:

The largest fields are located between San Jose and Alviso, and it is probably along this road that the stranger can get the best idea of strawberry culture in this valley. The great desideratum is water, and as this is also the artesian district, it may be called the home of the strawberry. The most extensive growers are Judge Thomas, Chas. E. Wade, Wm. Boots and Mrs. Shields. They have fields of from 50 to 125 acres, but there are many others who devote from 10 to 40 acres to the business.

The ground is prepared by being thoroughly plowed and thrown up into low ridges about two feet apart; on each side of these ridges the vines are planted, irrigation being accomplished by flowing water through the channel formed

by the furrow between the rows. It is not unusual to see onions and other vegetables growing on the ridges between the two lines of berries. Onions and strawberries do not go very well together on the table, but they do in the field. The runners are kept carefully pruned, except as it is desired to make new plants, in which case they are allowed to grow to the extent necessary for that purpose. It has been the experience of strawberry growers in this county that the plant produces more and better fruit as it becomes older. Judge Thomas has been in the business for 12 years, and the best, the hardest and most productive plants on his place are those which he first set out a dozen years ago.

Our strawberry fields are cultivated almost exclusively by Chinamen. The owner of the fields makes a contract with the Chinese boss to cultivate, pick and pack the berries ready for shipment for half the proceeds of the crop. One Chinaman can take care of two acres of vines except in fruiting time, and then it requires three Chinamen to an acre. It is to be hoped that our people will see the necessity of educating our boys and girls to this work, and thus save the community the money that is paid to the 10,000 Chinamen who are annually employed in our strawberry fields.

The berries are mostly shipped to San Francisco, and from there orders are filled to other portions of the State. They are packed in boxes of four to eight pounds each; the boxes are placed in chests like drawers to a bureau, and in this manner, with a reasonable degree of care, transportation is accomplished with no injury to the fruit. The berries are hauled from the field each afternoon and placed on the cars at the different stations along the road, or on board the boat at Alviso wharf.

The price of strawberries varies with the season. Some years the lowest figure will be 12½ cents per pound, but in extra good seasons four cents is about the price. The market will average about seven cents after the crop begins to come in freely. We have taken considerable pains to get at the financial results of this industry. One of our oldest and most reliable strawberry growers, who has seen the good and bad seasons of the last dozen years, says that the average net profit is \$400 per acre. The least return he has ever had was \$200 per acre, and the highest \$800 per acre. This, of course, is to be divided with the Chinamen, leaving him half, or an average of \$200 per acre per annum for the use of the ground.

The present season promises to be peculiarly favorable to the strawberries. There has been no cold weather to retard their growth, and from present indications we will have the heaviest yield in the history of the enterprise in this county. This, although gratifying to consumers, is not of any great moment to producers. When the yield is heavy the price is low, and *vice versa*. It is a sort of self-compensating industry that yields a good return in spite of circumstances.

## THE VINEYARD.

### The Alden and Blowers Fruit Driers.

EDITORS PRESS:—Referring to your descriptive article of Mr. Blowers's fruit drier, permit me to say that in the Alden factory which we are erecting at this place, 800 trays, each five feet square, will give us 20,000 feet drying surface, which please observe is 416 feet more than Mr. Blowers gets with his 5,000 trays. We will have eight drying rooms, while Mr. Blowers's plan calls for 16 such rooms.

Are you quite sure that a plan which proposes to generate the heat at the bottom of the building, then to convey it up through an enclosed space, and then down through the fruit-loaded trays (which act as dampers or valves) in the drying rooms, is in accordance with the well known laws and principles of science?

Would it not be more philosophical to apply the heat at the bottom of the drying room and let it go up and over the trays in the natural way?

This, you are aware, is Mr. Alden's plan, and it works very well; while the plan now presented by Mr. Blowers has been tried before by Boynton, Bonnel, Hurlburt and other inventors, without success.

The Hurlburt plan gives "large surface," and is better, as I think, than Mr. Blowers's. Large surface for raisins is essential, and the new Alden evaporators offer more than any of the other contrivances; besides, the Alden method moves the fruit (on the trays) in currents of heated air, with or against said currents of air; and herein lies its value and superiority over all other methods. I have examined the various processes and am quite convinced that fruits, etc., can not be dried and be equal in appearance and quality to the Alden, in a drying room where the trays remain stationary. The heat will be greater when it goes in than when it goes out, and it is therefore impossible to get an even temperature and distribution of heat in such a contrivance. In the Alden evaporator each article is subjected to the same conditions of heat, moisture, etc., and under proper management the product is uniformly good.

The great cost of the Alden machinery, etc., is the only objection to the process, but I think there has been more money wasted in fruitless attempts to beat it than would secure an Alden

factory in every important fruit section of the State.

Riverside, Cal., March 29th.

### Comments by Mr. Blowers.

We have endeavored heretofore to avoid a controversy on the points involved in the rival driers which claim popular attention, believing that each side might better present its own claims without comparisons. But the above communication made such direct issues that we could not but endeavor to draw out the other side in order that the claims and counter claims might appear in our columns in connection. For this purpose we sent a copy of the above letter to Mr. Blowers, and we print below his reply:

EDITORS PRESS:—I do not like controversy, but your correspondent from Riverside, Mr. C., having drawn some comparisons without stating his premises or mine fairly, permit me to correct some mistaken ideas concerning my drier, as also the much-tried Alden drier. Mr. C. claims what the Alden Company are going to do at Riverside, but does not tell you that the factory will cost them \$10,000 or \$20,000 and that success pecuniarily, or as a raisin maker, is entirely in the future, and at best is only problematical. Now, my little drier cost less than \$2,500 (5,000 trays included) and I could probably, with the same outlay as the Riverside company, have made driers holding five to 10 times as much as their machine. Mr. C.'s remarks concerning the "heated air passing downward through the fruit-loaded trays, which act as dampers or valves in the drying rooms, etc.," also his comparison to other inventions, using the same plan as mine and having failed, show his entire misconception of my drier and method of drying.

In the first place, I do away with the necessarily expensive wire cloth trays, or perforated trays of any kind. My trays being made of lumber 2x3 feet in size, large enough to handle easily, and costing only 10 cents each (the whole house holding 3,264 trays). These trays are arranged in tiers in the drying rooms in such manner that they form air-tight flues and the drying currents of air do not pass down through the fruit-loaded trays as supposed, but pass laterally in horizontal flues forward and backward, each reverse movement being one tier lower. After the air has become sufficiently saturated with moisture it is passed into the smokestack, all of the time being in air-tight flues, and exhausts into the open air some 40 or 50 feet above its point of entrance into the furnace rooms.

If you will permit I will give my experience in an Alden factory of two-furnace capacity. I took raisins from one-half to three-fourths dried and run the machine night and day for one week, and succeeded in finishing only 340 20-pound boxes of raisins in that time. That factory is said to have cost over \$6,000. I found that the heated air would move slowly and irregularly upward through the fruit, and if on one side of the tray the bunches were larger or the fruit spread thicker, would pass up in streaks—burning some while not drying others. The same effect is seen in other fruits; while in my drier the air passing in flues over the fruit must pass at the same rate of speed over all of the fruit. Moreover, the pressure of the air being downwards, the force of the current is stronger on the fruit (it being on the bottom of the flue) causing the air to pass through and around all of the fruit.

One of the great advantages of my drier for making raisins is the fact that I can fill the whole house in a day if I am driven to that necessity. Not so the Alden; putting in one tray at a time would be a tedious performance if a man had 30 or 40 tons of partly dried raisins exposed to rain. Then, again, my trays being adapted to sure drying and of a suitable size to handle, I can pick my fruit immediately into the tray and never touch it by hand until ready to pack into boxes for market. Not so the Alden. The trays at the Riverside factory being five feet square, they are clumsy and must be filled at the factory and handled by two men, and the fruit being subjected to frequent handling is necessarily broken up and can't be first-class.

Mr. C. is quite convinced that very expensive machinery is necessary to move the trays while in the process of drying, while I and some others find it much more easily done by simply moving the air and applying it where needed by opening and closing transom doors, and my trays are so convenient to handle that the fruit is handled as cheaply as so much hay, and the fruit being picked in the field one set of men will put as much in the drier as they would hay in the barn. I also found in the Alden that as the air passed up and became saturated and cool, a heavy condensation took place on the upper trays of fruit, giving them too much the taste, looks and aroma of stewed fruit. My success in that Alden experiment led me to believe that as long as money was worth any interest whatever, a cheaper and more effective drier must be had. After making experiments and also taking warning by seeing money wasted in fruitless attempts to make the Alden factories of this State a paying investment to their stockholders, (if I am wrong in this statement it would give me pleasure to be corrected, as I know good men who have the stock), I succeeded in making a cheap, effective drier, so simple

Continued on page 234.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Golden Gate Grange.

Meetings will be held on the second and fourth Tuesday evenings of each month at Grange Hall, Grangers' Building, corner Davis and California streets, S. F. All Patrons visiting the city are cordially invited to attend.

J. D. BLANCHARD,  
Master Golden Gate Grange, S. F.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Agricultural Education.

#### Lecture by Prof. Hilgard at Walnut Creek Grange.

The following is an abstract of a lecture delivered before Walnut Creek Grange on Saturday, April 7th, by Eng. W. Hilgard, Professor of Agriculture at the State University:

It has been announced that I would lecture here to-day. I would rather have had it called a talk, for I have no set lecture to deliver. I wish to talk to you about what is of real, live interest to you, and to me—the ways and means by which the interests of agriculture and of education preparatory to the practice of agriculture may best be promoted, and right here in addressing you, members of the order of Patrons of Husbandry, I am saved a good deal of trouble in being able to take for granted what at other times I have had to go to much trouble to prove, viz.: that in agriculture as well as in other professional pursuits, it is intelligence and brains that carry the day in the end. The fundamental declaration of your Order says, that "the amount produced will be in proportion to the intelligence of the producer. Success will depend upon his knowledge of the action of natural laws, and of a proper application of their principles." And one of its objects is expressly declared to be "to lighten labor by diffusing a knowledge of its aims and purposes, and to expand the mind." Now, on that basis, you and we of the University cannot possibly quarrel, though we might differ a little as to the precise way of managing some details. Your Order has, of course, other business objects; but with these the University is not in any way directly concerned. So far as your objects and ours run parallel, we seem to be agreed. Yet, as was said at San Francisco the other day, there has been antagonism, want of co-operation. With the historical causes of this state of things we are not now concerned. The live question is, can we afford to allow it to continue, when no real cause for disagreement exists? I think not. The agricultural department of the University cannot be a success, nor can the agricultural population be benefited by it to any great extent, unless there is co-operation. We must co-operate to be successful.

#### Complaints Against the University.

The University has been blamed chiefly on two grounds: First, not being complete as to the means of instruction; second, for not making students perform manual labor.

As to the first point, assuredly nobody knows and feels the insufficiency of the means and appliances more keenly than we of the University. If there is any one concerned in the affairs of the University who thinks otherwise, I am not aware of the fact. It is brought to the notice of every member of the faculty every day and hour of the session in every department of instruction. In my own, no one more appreciates the fact that the field that should be covered is so vast that it is not within the power of any one man who knows himself and the subjects he has to deal with, to do justice to all. Out of the great mass I have selected some of the most fundamentally important, and at the same time most familiar to me. The University Register tells you what they are—there is nothing put down there that is not actually taught. We have lately lengthened the agricultural course by nearly a year by throwing economic botany—the course treating of cultivated plants and their varieties—into the second, instead of the third year. This gives more time for the agricultural course proper. I consider that up to the end of the third year, our present course is a pretty good one, which could not be changed to much advantage even if the number of instructors were increased to the extent that it should be. But beyond that point things might be improved. I do as much as one man can carry and do well, and the rest must come in time. You miss in the course laid down a good many things that ought to be there; so do I—and more than that, I miss grievously a great many of the appliances for instruction in those portions of the course where ocular demonstration alone can give the student a satisfactory comprehension of the subject. For instance, a garden of economic botany, where all the important cultivated plants could be shown in the growing condition; and a collection of agricultural products, and of implements, and a host of things, too costly to be thought of at present. Well, as Rome was not built in a day, so it

takes time to gather round a university all the desirable means of instruction, which are much more costly than most persons outside of the profession of teachers imagine.

But some say that the money that ought to have been spent on the Agricultural Department has been appropriated to others. That is a troublesome question, about which many good people might dispute for a long time and no two agree as to details. I accept the situation as I find it, but I will add this much: the University of California seems to me to have been placed where it is by a pressure of circumstances quite analogous to those that have controlled the development of the Illinois State Industrial University. That institution was started as an agricultural and mechanical college pure and simple, with a literary department, in accordance with the provisions of the Morrill bill. But as there was no other State University for the Illinois boys to go to, it happened that for every one student of agriculture there came four or five desiring to pursue other studies. So the literary instructors had to be multiplied, the institution being forced into the position of a "university" by the pressure of public demand. Has not something like this happened at Berkeley? And if it has, is not the public quite as much to blame as the Regents, if blame there is? Had you, gentlemen, sent a big class of your sons to enter the agricultural course, would the institution not inevitably have developed in that direction? And that brings me to the vexed question, why our agricultural colleges have so few students, and why so few of these, even, take to farming afterwards.

#### "Practical" Education.

Some say it is all because these colleges do not teach what is wanted for practical purposes; and they would take them in hand and convert them into big farms and workshops, on the pretence that this is what would be truly practical.

As usual there is some truth and a good deal of misapprehension about this sweeping assertion. Those who make it would have us go over all the weary experience of other countries. The problem of technical education is not fully solved, but its solution certainly does not lie in the direction of the substitution of mere drill in handicraft for that which your fundamental axiom declares to be the condition of success in agriculture.

In 1871 I was sent by the Board of Regents of the University of Mississippi to attend a meeting of men connected with instruction in agriculture, at Chicago, in order to ascertain, and then report on, the best plan for the organization of the agricultural college of Mississippi. I will read you a few extracts from my report, which was adopted as the basis for the future college by the Board, but never carried into full effect for want of means. I have found no reason to change my views since this report was written.

If there is any inherent reason why instruction in agriculture should differ in general method from that which has for a long time been proved the best for other technical pursuits, I cannot see it. That method embraces three consecutive stages, to wit:

1. A groundwork of general education, which teaches the pupil, besides the fundamental "Three R's," the use of his faculties, in the more advanced branches belonging to general culture.
2. Instruction in the principles underlying the art, with such amount of practice only as is requisite to fully illustrate and inculcate the principles.
3. A period of apprenticeship, or a "practical course," as it is termed in Europe, during which the pupil performs actual work in an establishment conducted upon business principles.

The first two periods may be made to overlap to a considerable extent with advantage. The attempt to overlap considerably, or to combine, the last two, is the indigestible morsel that has worried our American technical schools so persistently. We are pre-eminently a practical people, and this looks practical, even though, unfortunately, it is not practicable. It is especially impossible where the limited time of four years only is allotted to both periods. Especially as regards the wide field covered by agricultural science, imperfectly prepared as our boys come to the University, it takes all of the four years, and it ought to take more, to get them posted in even the rudiments, with the aid of about the same measure of practical illustration as that given to chemists in the laboratory.

Why should any of this precious time be given to mere manual exercise in operations with which every farmer's son at least is familiar? It is not, surely, for the trifling advantage of learning how to plow or hoe a little better, that you will be willing to defray your son's expenses at the college. You send him that he may learn the why and the wherefore, the reasons why we plow and hoe at all, and how and when to do it to the best advantage. For if that is not what you want, then much better send him at once to some well-managed farm, if your own is not in that category.

#### Need of Thorough Training.

In agriculture, as well as in all technical pursuits, a mere smattering of knowledge is especially dangerous to the young, whose native conceit, so apt to be in direct proportion to the imperfection of their knowledge, is untempered with the experience and common-sense judgment of a ripper age.

A good knowledge of principles renders the acquisition of mere handicraft very easy; while imperfect knowledge is a will-o'-the-wisp which leads its possessor into many more absurdities than the mere handicraftsman, who follows the average practice of his forefathers. Agricul-

tural practice has, in the course of time, approached so near correctness, that where the margin of profit and loss is wide, the mere "practical man" very often is quite as successful, for the time being, as his better-informed competitor. It is when or where this margin is narrow, either from natural causes or from exhaustive culture, that the knowledge of principles is indispensable to financial success. And is not this one of the reasons why most of our agricultural colleges are thinly attended? So long as an unexhausted soil yields full returns to the nearest scratching of the plow, and a floating population cares little what becomes of the soil after it is "skinned," it is not very surprising that the study of agricultural science should be popularly esteemed a luxury.

Of course this is a temporary state of things, and in California somewhat tempered by the obvious necessity, in so many cases, for a resort to artificial means. Hence, perhaps, a more than usually lively interest in the subject of industrial education.

But when we look at the perfected state of our mechanical appliances in agriculture, the conclusion is inevitable that the scientific education of agriculturists is a much more pressing necessity than the multiplication or improvement of mechanical devices. It is the power of correctly observing, and reasoning upon facts, that is mainly needed.

(Concluded next week.)

### Grange Meetings.

Bro. Blakie Pilkington, Lecturer of the California State Grange, will address the farmers and Grangers at the following places:

Lower Lake.....	Saturday.....	April 21st.
Kelseyville.....	Monday.....	April 23d.
Lakeport.....	Tuesday.....	April 24th.
Ukiah.....	Thursday.....	April 26th.
Cloverdale.....	Saturday.....	April 28th.
Healdsburg.....	Tuesday.....	May 1st.
Yountville.....	Wednesday.....	May 2d.
Rio Vista.....	Friday.....	May 4th.
Walnut Creek.....	Saturday.....	May 5th.

These meetings are open to all, and farmers who are not Grangers are cordially invited to attend, as questions of vital importance to them will be discussed.

It is expected that the members of the Granges where meetings are to be held will exert themselves in bringing out a good attendance.

April 1st, 1877. J. V. WEBSTER, W. M.

### From the Granges.

#### Stanislaus Co. Pomona Grange.

ED. PRESS: There will be a meeting of Stanislaus County Pomona Grange at Grange Hall, Modesto, on the third (3d) Monday in April next, at 11 o'clock A. M., for the purpose of electing officers, etc. Fifth Degree will be conferred on the evening of the first day; at all other times the Grange will be open to all Fourth Degree members in good standing. All the Granges in the county are invited to elect and send delegates thereto. Fourth Degree members are cordially invited to attend. All privileges will be accorded them except that of voting.

H. W. BROUSE, Master.

V. E. BANGS, Sec'y.

### Election of Officers.

SALIDA GRANGE, No. 8, STANISLAUS CO.—J. D. REYBURN, M.; W. H. CHANCE, O.; B. F. PARKER, L.; A. H. ELMORE, C.; Wm. G. WOODSON, Sec'y; J. G. ELMORE, T.; D. A. DAVIS, S.; B. T. ELMORE, A. S.; W. McHABISON, G. K.; Mrs. M. J. WILSON, Ceres; Mrs. Eliza PARKER, Pomona; Mrs. Sallie ELMORE, Flora; Miss Belle FEAGANS, L. A. S.

PICNIC IN COLUSA COUNTY.—The Sun of April 7th says: The Grangers of the county have determined on having a grand picnic at Sycamore on the 1st of May. A committee of Colusa, Grand Island and Antelope Granges have the matter in hand. They have invited the State Lecturer, Mr. Pilkington, to be present on the occasion and address them. A cordial invitation is extended to everybody, but everybody is expected to bring a basket of provisions. All intoxicating liquors will be kept off the grounds, and strict order will be kept.

MEETING OF STATE EXECUTIVE COMMITTEE.—A full board met on Tuesday of last week. The old committee were also present, to consider the settlement of accounts with farmers who shipped wheat during their administration. The whole matter was finally referred to the directors of the Grangers' Bank, and we understand that a satisfactory settlement will probably be made soon.

TEMESCAL GRANGE LECTURE.—Professor E. W. Hilgard, of the State University, will lecture before the Grange in the school-house at Temescal on Tuesday evening, April 17th, at seven and a half o'clock. Subject, "Soil Improvement and the Maintenance of Fertility." Patrons and all interested are invited to be present. The lecture will be such that no one will regret attending.

FINANCE AT GOLDEN GATE GRANGE.—We omitted to state in our notice of the discussion of the finance question at Golden Gate Grange on the 4th Tuesday of April, that the meeting was to be an open one, and the public generally are invited to attend.

### Meeting of Golden Gate Grange.

According to announcement, a meeting was held at Golden Gate Grange on Tuesday evening to discuss the subject of education. Worthy Master J. D. Blanchard presided, and the meeting was well attended. Patrons were present from several counties, and interest was manifested in the stirring speeches which were made. There were also present, by invitation, President Le Conte, Prof. Joseph Le Conte, Prof. Hilgard and Prof. Kellogg, of the State University.

It was expected that Bro. E. S. Carr and Sister Jeannie Carr would be present and take part in the meeting, but the sad bereavement which has befallen them in the death of their son rendered it impossible. Warm expressions of sympathy for the afflicted brother and sister were made at the meeting.

The first speaker was Bro. E. Hallet, of Butte. He was strongly in favor of public education, unsectarian and compulsory. He favored the elimination from them of the studies that were not needed in the daily walks of life, and the substitution of those that would fit the scholar to take his or her part in the world. Algebra, music and similar studies he thought were superfluous. He advocated the doing away of high schools, and the substitution of technological schools. He thought, also, that the schools should not be left entirely to professional teachers, for, in his opinion they were apt to get into a rut, and did not like to teach anything that was not in the text-books. He also favored giving all schools lower than the grade of grammar to female teachers.

Prof. Joseph Le Conte was next called upon to give his ideas upon the subject before the meeting. He spoke of certain misconceptions of the aims of educational institutions, and then made a few remarks on the subject of practical education. We give in brief some of the points which were made:

First, the idea of a practical education. It is a preparation for the work of life. What that preparation is depends upon our idea of life. If, for instance, our idea of a life for farmers is a high one, our idea of practical education for farmers is a high one. If we are to look upon him as a man working in an endless routine, then his education can be nothing more than a school education, and after that the practice on the farm. For this the elaboration of an expensive education is needless.

If, however, we are to have a farmer ready to push his business forward by means of all the light which the sciences can throw upon his work, our idea of practical education is higher. But the sciences need be followed only so far as they apply to his work. Thus take chemistry so far as it relates to soils and plant growth, economic botany, zoology, so far as it relates to stock breeding, etc. But yet when a man comes to gain a good idea of agricultural chemistry he will have a good idea of general chemistry. And thus it is with the other sciences. And when you push a man thus far he will have a very good scientific culture. But is a man to stop here. It is one of the avowed objects of the Grange to secure for farmers the influence they deserve in the making of the laws of the country. To enable men to do this, they must be trained in other branches of knowledge in order that the farmer may be prepared to occupy his proper place among men.

If we look over the catalogue of the University we shall see that at least half of the studies are embraced in the needs which I have stated are required in the education of farmers. Now the idea should be to build on special features upon the general foundation which is laid. It is impossible for a single professor of agriculture to teach all the branches of chemistry, botany, zoology, and all the practical outgrowths from these, such as horticulture, stock-breeding, veterinary surgery and others. What we need is to provide instructors in these departments.

It has been suggested that the school of agriculture should be separated from the other parts of the university. If this is done there will be need to furnish it with all the fundamental branches of instruction which are now in working at the University. The University combines the needs of six colleges. If they should be separated each would be obliged to support a faculty of this kind for itself. It would rather seem to be the dictate of wisdom to add good special features and build up the department of agriculture upon the general foundation which is now available.

An interesting paper was read by W. Lecturer Thompson, which was prepared for the meeting by Hon. E. S. Carr, who was prevented from attendance at the meeting by the great bereavement which now presses down upon him. Dr. Carr reviewed the progress of technical education in Europe carefully and then turned to this country. He noted the doings of the agricultural colleges which combined labor and instruction, gave facts showing the amounts of labor required, and stated that the presidents of these institutions pronounced the combination of labor and study a success. He quoted from an address by President Abbott of Michigan, to the effect that it is found impossible to return young men from the college to the farm unless the labor be introduced in the schools. If they go through four years without labor they lose the taste for it.

Dr. Carr afterward reverted to the subject of



education and taxation. The schools built by the people's money should devote the money to the practical workings of the institution. No money should be devoted to the erection of grand educational monuments. These should be constructed by individual endowments if at all.

Dr. John Le Conte, President of the University, being called upon, stated that he came to learn and not to speak. He stated that he had from the first advocated the establishment of a first-class and effective school of agriculture at the University and had labored to that end. They had not made the progress which they desired, from the fact that the students had not been sent there to pursue the agricultural course, and, lacking this necessary patronage, they had been still further cramped by the denial of appropriations, so much so that now there is no money at all to carry on the outdoor experiments and improvements which are needful.

Brother J. Earl stated his belief that an agricultural education could be best obtained apart from the professional schools.

Brother McConnell, of Sacramento, spoke vigorously on the need of back-bone among the scientific men of the day.

Brother Woodward, of Stockton, made an eloquent and forcible address. He was in favor of a high standard for farmers. He thought it would be a mistake to try to divorce agriculture from the general culture of the schools. He held that no elevation is too high for a farmer to aspire to, but that culture must go into his occupation as a farmer, as it is the very element in which lies success. One of the most glorious conditions of the Order is that woman is as good as man, and both sexes should assist each other in the labor of life. He had been a pedagogue for 20 years of his life, and was considered competent to teach. But if he should apply for such a position now, it would be refused because he was not a good musician, or for some other equally absurd reason. He thought the entire school system was wrong and should be remodeled.

Bro. G. W. Colby, of Butte, made a stirring speech. He said the highest perfection of the farm requires the highest education. A perfect farmer must understand chemistry, mineralogy, botany and mathematics—even the higher mathematics, for it would be a great help if a farmer could handle the chain and the level so as to lay out his own fields. Greek, Latin and Hebrew were not necessary, but the general studies which appertain to the higher education are pertinent to farm progress, and through them agricultural advancement must come. He believed the University was stepping out upon a broad idea of culture, and should be maintained. He knew many students from the University and they were taught practical lessons. The University puts women also upon an equality with men, and that is true Grange doctrine. Let us give them credit for all that is good and high in the institution. Educational standards should not be lowered. What we need is to apply the items of instruction so that they shall be practical. We need to educate our children intellectually, morally and physically, and that will be a practical education.

A speech was made by Mr. Winn to the effect that the graduates of the University came out into the world with no occupation by which they could earn a living, and he introduced some resolutions to the effect that the meeting approved no education which did not give a man a trade by which he could earn his bread.

Bro. I. C. Steele, of Pescadero, spoke upon the resolutions as follows: It seems that we need a personal devil in this life to blame for our own shortcomings. When young men swagger around the streets, swearing and smoking, it is the fault of their parents. It is not the fault of the educators when young men turn out worthless and unable to gain an honorable living. The teachers can discipline them when they are under their immediate care, but how are they responsible for what is done out of the hours of school?

I hardly understand the drift of the resolutions which have been presented, but if they are intended as a slur at the institutions of this State, I shall oppose them. If our institutions are not perfect let us improve them. We must not cast slurs upon them. There is no more certain way to break down a thing than to sneer at it. It is said that all the young men of the State cannot be educated at the University. There is no one in this room that does not know that. But what we want is to send promising young men there and educate them into the cause of things so that they can come back into the rural schools and instruct our children. We ought to know more about the principles which underlie our practice and govern our success; this can only be gained by promoting the study of the higher sciences which discover this truth.

As long as we continue to fill the heads of our children with the idea that some occupations are higher than the farm, we cannot make farmers of them. No system of education can do it. We fill their minds with notions which teachers could not root out in 20 years. If we want the University to educate our children for farmers let us send them there for that purpose. We want the underlying truths which are applicable to agriculture taught in our country schools, and for this purpose we must have thoroughly educated teachers, such as the University can furnish.

After Mr. Steele's speech the resolutions were on motion set aside for the present.

A very excellent address was made by Prof.

Kellogg of the University, which we regret we have not space to report. He said he knew there was no aristocratic feeling among the students in the University. Nearly half of the students were the children of poor men and many of them supported themselves during their course by their own efforts. There was no looking down among the students upon this class of young men. They stood fairly upon their merits and were respected for their intellectual acquirements. Some of the very best students in the University were young men who were working their way. He enforced the idea also that the reason why more young men were not educated in agriculture was because their parents did not send them to the University for this purpose. They let them get the idea that other occupations were better and when they came to the University and demanded to be taught certain branches, the University could not but comply with their demands. The mistake lies in the early training of the young men. They must be won to agricultural pursuits before they leave home and then they will ask to be educated in this line when they come to the University.

As the hour had become late at this time, a greater part of those present withdrew and soon after an adjournment was taken.

## AGRICULTURAL NOTES.

### California.

#### ALAMEDA.

ORANGES AND GRAPES.—*Independent*, April 7: A day or two since we visited the beautiful little eight-acre vineyard of Mr. Siegrist, at Mission San Jose. He keeps it in first-rate condition, and manufactures several superior kinds of wine, both white and red. His oranges are large and fine looking, and being near the foothills, are not affected by the frosts. He takes the utmost pains with his grapes and oranges, as well as with a variety of garden growths. Several of these latter had their tops clipped off by the sparrows. Where as much pains are taken as Mr. Siegrist bestows, and it is situated in so favorable a locality with so mild a climate, men of his skill and perseverance cannot fail to be successful in raising the best of grapes and oranges, superior kinds of wines and garden growths of the choicest character.

CENTERVILLE FRUIT PRESERVING COMPANY.—We have looked over Secretary Yates's annual report of the Centerville Fruit and Vegetable Preserving Company, just made. We learn from it that the company is not a success financially, and is heavily in debt. No doubt the property will have to be sold to pay the debts—and if some energetic man should buy it, it is probable that it might be so managed as to become profitable, as other like establishments have been made elsewhere. We can state in this connection that the fruit dried here has been of an excellent quality, and is really worthy of the patronage of all who live in this vicinity, not less than of those abroad.

#### COLUSA.

GOOD CROPS.—*Sun*, April 7: Crops on the Glenn farm and, in fact, in the entire upper end of the county, never looked better. There is the only place we have heard of volunteer wheat that will make anything. Mr. Bayless has on his place a splendid crop, that is now the third year that it has been left to volunteer. They have had all the rain they need in that part of the county.

#### FRESNO.

DRY FARMING—DEEP PLOWING.—*Republican*, April 7: In the *Republican* office may be seen several bunches of green wheat, measuring three feet in height, with well formed heads from four to six inches long, and looking as thrifty as could be wished at this season of the year. These bunches were pulled up in the field of John Hansen, about four miles west of Centerville, and are fair samples of 70 acres of wheat which has grown this season with no other moisture than the rain, and upon soil which is very sandy, as will be seen by that about the roots. This wheat was headed out before the last rain, and it was calculated would yield a ton of hay to the acre had more rain fallen, but now it will give a handsome crop of either grain or hay. This land was plowed early in the winter a year ago, and then deeply cross-plowed in the spring, after the grass and weeds had all started, but had not matured, and after the rains were over. The land was sown to wheat immediately after the first rain last fall, and the wheat came up and has continued to grow slowly during our winter of drouth and when the surrounding country was as destitute of vegetation as a floor. But little more than three inches of rain has fallen on this land, yet a reasonably good crop of grain will be made. To the question, "Do you think farming in this county without water can be made profitable?" Mr. Hansen replied very emphatically, "Yes, I do." He has tried it six years in succession without a failure, and with profit. He is satisfied that where feed grows as it does on the plains in ordinary years, grain will also grow if properly put in. He fully appreciates the great value of irrigated land, but thinks those who cannot get water need not wholly abandon dry farming.

#### KERN.

RAIN.—*Californian*, April 7: On the day of publication last week a heavy storm of rain and hail, accompanied by thunder and lightning,

visited us. The rain fell in sheets and the great streams of water rushed through the streets like the overflow of the river. It proved the heaviest storm of the season, and although there has been no suffering for want of water on the island, the long warm rain must do immense good. For three days the storm continued in the mountains, and it is estimated that the snow has fallen to a greater depth during the time than during all the winter. There is a fair promise of a spring rise to meet all the wants of late crops.

#### LOS ANGELES.

EXODUS OF SHEEP.—*Herald*, April 7: While the late rains will enable us to keep a great many more of our sheep than was thought possible, the exodus has already begun and will be continued. In the last 10 days fully 120,000 sheep have been put en route to Arizona and other points from Anaheim and the southern end of the county. Quite 30,000 more will follow from time to time. These departures will so reduce the number of sheep that the rest can be bled over the summer. A movement, on a scale almost as large, we suppose, is taking place in other portions of the county. The wool situation is had enough as it is, but it would have been infinitely worse if we had not had the late showers. Up towards the San Geronio pass the rains were much heavier than in the valleys of Los Angeles county, and the feed is abundant there. It will not be necessary to make any removals in that section.

#### SACRAMENTO.

THE GROWING SEASON.—*Record-Union*, April 7: The cool, cloudy weather we are having, and which we have had a greater proportion of the time this spring than usual, is the next best thing to rain for the crops. The condensation and absorption of moisture by the soil during the night, in the form of dews, is very near, if not quite, equal to the evaporation during the day-time. Such weather continued during a greater portion of this month and next, will help out the crops wonderfully, and at harvest we shall probably be as much delighted by a yield beyond our expectations as we were last year disappointed by a falling below our calculations. We have always noticed, in this State, that in a dry, or moderately dry, season the straw grows comparatively light, while the grain fills well and yields comparatively heavy. We may expect this to be the case this year, under any circumstances, and if we continue to have cool, favorable weather, as we may hope to have, and do not have dry, north winds, as the indications are that we will not, we may look for a very fair average, or even more than an average, crop of the small grains. There is sown along the river bottoms and on the tule islands a considerably greater area of land than there has been before for a number of years, and we think more than there ever was before, and this grain all promises, and will most likely give, an unusually large yield, while the coast counties and some of the bay counties, having suffered none from the drouth, will also make unusually large crops. None but the large plains of the San Joaquin and Sacramento are really suffering much for want of rain yet. The northern portion of the Sacramento valley has had rain enough and is not suffering, but will make average crops.

#### SAN BENITO.

CATTLE MOVING.—*Advance*, April 7: Three hundred head of cattle, the property of Mr. Henderson Brown, passed through town on Thursday morning. They are tramping onward to the grass lands of Sacramento valley, where they will be fattened for the market. Mr. Brown has secured pasturage at the rate of 50 cents a head per month. He has left 150 head to graze upon his ranch where he believes they will find feed enough from the grass and a reserved stock of 100 tons of hay to pass through the season without loss of flesh.

SAN FELIPE WELLS.—Nearly every land owner at San Felipe is determined to have an artesian well for irrigating purposes. There are already more than 50 flowing wells in the vicinity, some of which are discharging a considerable quantity of water. Two well-boring companies from Gilroy have contracts for sinking about a dozen wells, and Chase & Sargent have just received an outfit of tools and will commence at once to bore for water on their respective ranches. The subterranean springs are reached at depths varying from 80 to 150 feet. One well, sunk within the last few days on Portuguese ranch, is discharging a stream of water sufficient to irrigate 200 acres of land. From the spontaneous flowing wells of San Felipe sufficient feed will be raised to pasture domestic stock, and vegetable and fruit gardens will be amply supplied with moisture. Whether the continued tapping of the subterranean springs will reduce the supply or check the flow of the wells now under full pressure is a question that sometimes casts a shade over the serene thoughts of the San Felipe farmers. It is possible that the wells may yet become so numerous as to make the supply of water somewhat deficient, but we are inclined to believe that the currents under San Felipe are inexhaustible.

#### SAN DIEGO.

ORANGE.—*Union*, April 5: The largest orange grown in California, if not in the world, may be seen in Raffi's fruit store. It was grown on Mrs. Brewster's place in Paradise valley, and while growing had to be supported on the tree in a net bag, in which it is still suspended. The two circumferences, cutting each other at right angles, measure respectively 24½ inches and 23½ inches; while the weight is four and a half

pounds. It will be seen that this orange is considerably larger than the Pumulo orange grown at Riverside recently carried to San Francisco by Mr. Caldwell. The latter weighed three and a half pounds and its two circumferences measured 24 and 22 inches.

THE CROPS.—The last rain storm has been the best of the season, and has proved that with the weather, as with some other things, it is never too late to mend. The protracted drouth had brought people to the abandonment of any hope for this season, and farmers had of late been chiefly occupied in figuring their losses, when lo! such a splendid rainfall has put a fully new face upon the situation. The total fall at San Diego during the storm (as measured by the Signal Observer), is one inch. Inquiry of persons from various points in the interior of the county shows that from two to three and a half inches of rain has fallen from 10 to 40 miles inland, the fall increasing with the distance from the coast. It is the opinion of good judges that, with showers through the month of April we may now expect to harvest at least half the average crop of wheat in this county. Abundant hay will be made, at all events. The beekeepers are in fine spirits. Mr. C. T. Fox thinks this rain will insure from double to treble the yield of honey in the county that we should otherwise have had.

#### SAN JOAQUIN.

FINE WOOL.—*Independent*, April 7: L. U. Shippee, Esq., yesterday shipped one car-load of 15,300 pounds of Merino wool to San Francisco, for which he received the premium price of the season, 21 cents per pound. This is a flattering recommendation of the excellence of his sheep and an indication of how well it pays to raise thoroughbreds.

ARTESIAN WELL.—J. W. Johnson, the extensive land owner and sheep raiser, who lives a few miles northeast of Linden, in this county, is boring an artesian well with the hope of getting in abundance of permanent water. He bored 200 feet or so with a diamond drill, when he struck a boulder that he could not get through. He has recently procured an improved drill from the East, whose smallest bore is nine inches, and its largest 14 inches in diameter. With these tools he is going for water, and we hope he will find it. A portion of his land is hilly and dry, although covered with good soil. A flowing stream of living water upon it will be a great boon.

MORE RECLAMATION.—The work of reclaiming the large body of tule land comprised in District No. 221, lying northwest of Stockton and north of the San Joaquin river, from the Calaveras river to Twenty-one Mile slough, has been in progress for a number of months, and it is expected to be complete before high water can do any damage. The district embraces about 10,600 acres, and is owned principally by H. D. C. Barnhart, George F. Smith, S. C. Hastings and Hager & Doolan, who hold about 8,000 acres, the remainder being owned by other parties. A small levee was constructed last year, and this has been increased to an average height of six to seven feet, with a base of 40 to 50 feet, the levees connecting with the high land at each end. A portion of it is being cultivated this year, and there will be 800 to 900 acres of grain produced. Plowing is being steadily prosecuted, and probably by next season the whole tract will be sown to grain.

#### SAN MATEO.

POPULAR TREES.—*Journal*, April 5: P. Coutts, Esq., of Mayfield, has a nursery of poplar trees, containing many thousands, which he is propagating with a view of setting out in various places over his domain and cultivating for timber as well as ornamental purposes. He thinks the trees at 20 years old, or less, will be very valuable for their timber for manufacturing boxes, etc., besides greatly improving and adorning the now naked fields. Mr. Coutts also realizes their value as fertilizers and producers of moisture in the soil. It is to such men as Mr. Coutts that a country becomes indebted for all practical and valuable results of costly experiments.

#### SANTA CLARA.

GILROY ITEMS.—*Con. Mercury*: If the oldest inhabitant could hush up his memory so that he could recollect Moses's exodus from Egypt, he would say that the exodus from the southern section of the State was about equal to it. Rolling of wheels and bleating of stock is heard day and night. As many as 3,700 head of stock have passed through this city in one day; some of them, so I am informed, were on route for Alviso, to be shipped from there to Catalina island. Our northern freight trains are simply cattle trains. Abbott, Sargent Bros. and others, have been shipping a great many by railroad to the tule country. The prospects for crops are vanishing very fast through the absence of rain. The weather is all that could be desired. No harsh dry north winds have troubled us since our last showers.

#### VENTURA.

CROPS.—*Signal*, March 31: The mountains are covered with snow and more rain will surely follow. A good corn crop is assured and thousands of acres of barley given up as lost will revive and at least make good hay, with what rain we have had, if followed by our usual fogs. If another good rain should fall soon an abundant harvest may be expected and the grass will again spring up, making good green food on the hills. Many anxious souls have been greatly relieved by the showers, and happy faces are seen everywhere.





## Morning.

Night wanes—the vapors round the mountains curled  
Melt into morn, and light awakes the world.  
—Lord Byron.

Now morn her rosy step in th' Eastern clime  
Advancing, sow'd the earth with Orient pearl.  
—John Milton.

Wake up! The sun presents an image in his rays,  
How man can shine at morn to his Creator's praise.  
—Ruckert.

Lo! on the Eastern summit, clad in gray,  
Morn, like a horseman girt for travel, comes;  
And from his tower of mist  
Night's watchman hurries down.  
—H. K. White.

See, the time for sleep has run;  
Hie before or with the sun,  
Lift thy hands and humbly pray  
The Author of eternal day,  
That as the light, serenely fair,  
Illumines all the tracts of air,  
His sacred spirit so may rest,  
With quick'ning beams upon thy breast,  
And kindly cleanse it all within  
From darker blemishes of sin;  
And shine with grace until we view  
The realm it gilds with glory too.  
—Thos. Parnell.

## Housekeeping.

Deck your house from inward out.  
Let there be an inmost shrine  
Where to praise with gifts devout  
Love both human and divine.

After that, the holiest room  
Heap with choicest things that grow;  
Spare not gold nor silver show,  
Ainbergia, nor forest bloom,

Man's wrought marvels daintiest,  
Colored canvas, chiseled stones,  
Comforts few, but all that's best,  
Each that special beauty owns.

Then as worldly station calls,  
All your home in order set,  
Nor through hasty pride forget  
Chambers still outrank the halls.

After, if you more can spend,  
Neatly decorate the shell;  
Next your crumbling fences mend,  
Lay your road-beds deep and well

But beware, lest these beguile  
Care on outward things to waste;  
Save in heart-cells fair and chaste,  
Where does fortune really smile?  
—*"Home and Society," Scribner for April.*

## A Lunch with Aunt Mary.

[Written for the Press by NELL VAN.]

"Come with me to Aunt Mary's to-day, Susan," said Brother John's wife, as we passed through the crowded thoroughfare as the town clock, striking twelve, warned us of the hour of lunch. "Oh no," said I; "it's lunch time; we'll take a car and hasten home, for I begin to feel hungry, don't you?" "The very reason I want you to step around the corner there, and make Aunt Mary's acquaintance and partake of a most excellent lunch prepared by her own dear hands," said my sister-in-law earnestly. I did not like to offend the good creature; but I had often heard of Aunt Mary's hygienic mode of cooking and of her peculiar views on what reformers call "orthodox food," so I dreaded to become acquainted with the lady and her one-idea system of living. I had often held discussions with Brother John's wife on the subject of plain food, and though we both agreed that certain rich dishes gave us dyspepsia, still to sit down to a lunch of bran bread and baked apples was not to my mind; although Delia had assured me that both John and I would be actually astonished at the delicious things Aunt Mary concocted, from making health a study and preparing fruits and grains in the most healthful and appetizing manner. "Will you come, Sue?" said she, noticing my silence as these thoughts flitted through my brain. "I'd rather not, Delia, dear," said I hesitatingly. "Not to-day, at least." "And why not?" asked she impatiently. "You have often promised me you would go, and aunt thinks me very unsocial since John married me and took me up to his father's. In fact, she told me one day she feared I was lost to her now, since circumstances had lifted me into a different sphere. Come now do, Susie, dear, and I will show you my beau ideal of a home." Thus coaxingly she won me over to her view, that to go to Aunt Mary's to lunch would enable us to finish our shopping before returning home and at the same time give me a peep into her ideal home. I consented, and a few minutes' walk brought us to the door of the much-dreaded relative.

John and Delia had been married scarcely three months, and as our family was small and our house large, father had insisted upon their coming to us instead of going to housekeeping at once as they had intended. Delia was a very lovable sister, with tender, affectionate ways, quite good enough for the taciturn John, who

seemed softened down considerably since his marriage. Having lost my only sister some three years before, she seemed to step in to fill the void and consequently we became most excellent friends.

The door-bell had been rung and the door opened by just the neatest little figure in the world. This was Aunt Mary. She met John's wife with a smile and kiss and clasped my hand warmly, bidding us enter, as she was "just setting lunch upon the table," she said, "and the children were soon coming hungry from school." She led the way into the cosiest nook of a parlor and insisted upon taking our hats and shawls, declaring herself "so glad we had come," for it was her baking day, and she had just taken from the oven the nicest squash pies she had seen for a month. Then she asked Delia how was John, and was this really John's sister and how unlike they were, and would I excuse her appearance, for she was her own cook and housemaid. Glancing at the short, wavy hair, which no amount of brushing could improve the appearance of; at the neat chintz wrapper and the long kitchen apron, with not a spot upon it; the bib carefully pinned on each shoulder, which protected the dress and added a charm to the costume, I thought it no wonder Aunt Mary was Delia's oracle.

But we were led to the lunch table in the cheery dining-room. A troop of youngsters were coming in out of the sunshine, one bringing a bunch of flowers for "mamma" that Jenny Moore had given for a paper doll. When they saw Delia they clustered about her and looked shyly at me when mamma presented them each by name, giving me their hands modestly and telling me they were "quite well, I thank you," in reply to my inquiry. We were all hungry and made quite a table full, but Aunt Mary seemed prepared for us. The table was abundantly supplied, and, to my astonishment there was nothing unsavory or out of the set-out. There stood the dish of fruit for a centerpiece instead of a castor. She has no use for pepper and vinegar or condiments, therefore the fruit dish usurps its place on the table upon all occasions, Delia has told me. Then there was cold-sliced tongue, graham gems—no white bread—a plate of jelly tarts and squash pie. I must take a cup of crust coffee, she said, and pouring it out she passed to me a cup of creamy coffee, at the same time relating an anecdote of an old gentleman who had lunched with her the week before. When passing him a cup of it she merely called it coffee, and he took it with the remark, "slow poison." She said nothing, and he doubtless imagined he was drinking the usual preparation of the berry instead of a decoction of well-browned gems. I tasted the coffee and really found it much more palatable than the best French mocha to my taste. Our lunch ended, we all having done full justice to the various dishes, I turned to our hostess and said: "Do tell me, Aunt Mary, if I may be allowed to be so familiar, if this is a fair specimen of your ordinary diet, and if the pastry we have just partaken of is really made hygienically without shortening." "My dear," said the good lady, taking me kindly by the hand, "I have for years made the study of health of the first importance, and in order to gratify the children I have made experiments in simple cooking till now I find that many things may be both wholesome and pleasant to the taste. That pie crust is made simply of flour and a little salt, wet up with fresh butter-milk. No soda, no shortening; and you see the result. The parts are tender and are preferable to cake. The gems when fresh from the oven are crisp and sweet. I would have made fresh had I known of your coming." "And that is the bran bread of which I have often heard," said I. "Never again will I laugh at the diet of the reformers if this is a specimen. The children rosy and robust, with keen appetites, so different from our little folks at home, who pick here and taste a little there, and say they are not hungry." "I am glad to find you, Sue, a convert to Aunt Mary's mode of cooking," said Delia, "and now shall we go? or do you want to spend the whole afternoon with Aunt Mary, learning her art of making hungry folks satisfied."

"We will go, Delia," said I, "but first we must make Aunt Mary promise to come and see us very soon, so that we can have an excuse to come again to make another raid upon her good things. I do believe the dyspepsia would be kept at bay with such a reformed system of cookery."

"My dears," said Aunt Mary, "there is one thing to be remembered. Temperance in all things is our only salvation. Quantity is often as injurious as quality, and simple diet creates an appetite which often tempts one beyond what is prudent. Avoid rich food and much grease, also, warm, raised biscuit, but if you would enjoy good health eat moderately and only at meal time. Take regular exercise, be cheerful, and see that the body is properly clothed. But I will not read you a lecture to-day. Come to me again and I shall be most happy to give you my views on proper living." We bade her goodbye and left the cheerful dwelling-place of one of our practical housekeepers.

A SINKING ISLAND.—The island of Heligoland, situated in the German ocean, and belonging to Great Britain, is reported to be gradually disappearing. It is now less than a mile in superficial extent; but in 1649 it was four miles in circumference; in 1300 it measured 45 miles, and in 800, 120 miles. The encroachment of the sea is effected almost entirely from the north-east, owing to the currents and the direction of the prevailing winds.

## Home.

"Be it ever so humble there is no place like home," that is, if we strive to let the sunshine in, and to make it the spot of peace and contentment which home should be. There is so much depending upon the influences of home that whenever we see one that is mismanaged we are shocked beyond the power of expression. From the cradle out through the sports of childhood to the verge of manhood the warmth of the fireside expands the virtues of the soul into bloom and matures them into sweet and charming beauty, or the coldness of the hearthstone freezes the heart into an unsympathizing, unloving and wicked exclusiveness and selfishness. The soul that begins to live amidst the soft glow of a happy, virtuous and charitable home will never entirely forget that the world is full of sunshine and flowers, although it may, in after life, struggle through many midnights and feel the pricking of many a thorn, or that it was born for heaven, although it may grovel in filth or lounge in the tents of wickedness. In the weakness of human nature nothing on earth is capable often of saving us from the commission of sin, and from scarring the soul from its blistering influences; but it is always safe to conclude that however low a man or woman, whose childhood was passed in the sunshine of a pure home, may fall, that but for these mellowing influences, they would have found a still lower depth. And for the boy or girl who has never known what home was, who has never beheld the sweet, dear face of mother beaming at the fireside more brightly than the fire in the grate ever does, and with greater loveliness than the sun of the morning, the human heart, with all its wealth of sympathizing love, cannot bear too warm or deep a sympathy. To expect a perfect manhood or womanhood from a child who has never known the sweet influences of home is expecting the bud to develop into the flower without the developing warmth of the sunshine. For a perfect development of nature, for the strengthening of all that is pure, and noble, and good in the soul, and the destruction of all that is evil, the home must be depended on. If we would have the boys and girls go out into the world like ministering angels to their kind, if we would have their hearts so full of gentle love that their words would fall upon kindred souls, and awaken their drooping hopes into new life, as the shower imbues the fading grass with fresh vitality, we must train them in the home, and freight them with gentleness at the fireside.

But upon noble manhood and womanhood rest the interests of the whole world. If every man and woman were pure and upright and noble we should have no crime and comparatively little wretchedness. Government would never be in danger of treason's assaults or treachery; mind that is now wasted in wrong-doing would be turned into channels in which its energies would bear rich harvests of blessing for the world; the sword would cease its bloody work, and the tread of armies would no longer shake the earth and blight the verdure and flowers of the field. What a vast responsibility, therefore, rests upon the heads of families, and how few realize it.

If every boy and girl in America had a home to-day, and if every home was what it should be, the abode of virtue, the temple of forgiving charity, the school of industry, culture and gentility, the history of the American Republic 100 years hence could even now be written.

With so much depending upon it, therefore, the management of the home should be the subject of constant, earnest study and ceaseless anxiety. It should always be pleasant—the pleasantest spot on earth to the child. Our children will seek the sunshine and beauties of life, and if the home does not furnish them, they will go elsewhere to enjoy them. Pictures and books and flowers should be abundant, and as beautiful as the means will admit of. Neatness and order should be visible everywhere. Politeness should always characterize the intercourse between the members of a family. Especially should the children be taught the beauties of gentleness, charity and kindness, by its constant and unostentatious practice by the parents, not only toward the children, but toward the world. It must not be forgotten that these tender little hearts are easily hardened, and that nothing will so quickly harden them as a constant exhibition of uncharitableness and cruelty towards mankind. If parents are selfish, and live as if they were natural enemies of their kind, the child develops a similar nature, and goes through life, perhaps, in consequence, without knowing how rich a happiness comes from drying a scalding tear or healing a wounded heart. It is so easy for a man or woman to speak a kind word or to do a kind act, that a failure to do either is almost unaccountable. We do not fully know what happiness is, until we have learned that "man liveth not for himself alone." Velvet carpets, lace curtains, elegant furniture, magnificent libraries, paintings and statuary may adorn the home, but they are powerless to confer happiness, and if an attempt is made to center the affections of the heart upon them, we become less and less happy in proportion to our success in doing it.

It is only when we are charitable, and loving, and kind to our fellows, when we try to cover the ragged edges of the rocks which frown in the pathway of a brother with flowers, that we begin to realize that heaven begins here. The writer is now thinking of a beautiful home. Its rooms and halls are now radiant with sunshine. Its appointments are tastefully elegant. It is a

lovely bower of grace and beauty. It is just such a spot on which selfish indolence would delight to lounge, away from the responsibilities and perplexities of life. But the charming lady who presides over this little place of beauty finds her greatest happiness in ministering to the wants of the needy, and in painting the sunshine upon the clouds which have gathered over less fortunate hearthstones. Closing her elegant piano, and leaving her tastefully ornamented parlors, she seeks pleasure in going into the home of poverty, and with her delicate hands, not afraid of work, assisting to kindle the dying embers upon the hearthstone into a cheerful blaze. She is a friend to the friendless, a sister to those in need of a sister's influence and advice, and a kind Christian, loving mother to an orphan. In a home like hers not only children, but those who are older, learn the grand purposes of life and are mellowed into better beings; and it is to such homes that the world must look for the men and women who are to make it great and noble.—*Western Rural.*

## The Father's Return.

A bright fire was blazing cheerfully on the hearth on a cool autumnal afternoon, casting a glow of comfort around the tidy sitting room. There a mother, surrounded by her "jewels," was anticipating the joy of a re-union with her husband. "There, how much your father will enjoy resting after his long ride," she said, while drawing up an easy chair. Little two-year-old Willie, although deeply interested in "making funny men," left his toys, and with a self-satisfied air, placed a pair of slippers by the large chair, saying, "I will have papa's slippers ready." Another little voice responds: "I will hang up his hat;" and still another, wishing to participate in adding to his comfort, says: "And I will hand him a glass of water." With hearts overflowing with love and gratitude for the dear one who has surrounded them with so many comforts, each has a desire to return his kindness, if only in a feeble way.

What a yearning desire the wife has to deserve the name "helpmeet;" to feel that her education and talents are directed for the good of her household, and that her efforts—although they may seem insignificant, when compared with his business cares—are not ineffectual. Circumstances and custom forbidding her assisting him pecuniarily, a spirit of independence and self-abnegation prompts her to compensate him for his labor of love, not with dollars and cents, but by diligently discharging the duties imposed upon a wife and mother, by good management and economy in the household. Occasionally a feeling of dissatisfaction flits across her when reviewing a day's work, but after considering the time expended on one of the dearest duties of a mother, attending to the wants of an innocent babe, kissing the bumped heads and tying up the cut fingers of the little ones; brushing the hair from the moist brow of her frolicsome boy, after a morning's romp; and superintending the many parts of domestic service, she concludes that her efforts have not been wasted.

How pleasant the thought: "The heart of her husband doth trust in her," to the true home partner! The most complicated details of business are not considered beyond her comprehension, her opinion and views are not deemed unworthy of consultation, or her judgment disregarded.

Were this always the case, there would be less extravagance and fewer pecuniary failures. Let wives prove themselves worthy of this confidence. A happy, unbroken family! What an inestimable gift!

Let us not live, merely for our own happiness and pleasure, taking a contracted view of life, desiring only self-aggrandizement and prosperity, but let us care for the destitute and homeless, sympathize with the bereaved, especially those stricken ones—the widow and fatherless. Whose heart is so selfish and devoid of feeling as not to be moved by the touching thought of a home no more to be made joyous, the light of the household extinguished forever? How often too, that word widow, one of the saddest in our language, is thoughtlessly and jestingly spoken, sending a thrill of pain and a sigh of loneliness to many a broken heart! Let us recommend them to One whose sustaining hand can safely and tenderly guide them.—*F. D. M., in Phrenological Journal.*

FLATTERERS.—These people are met in every class of society. You can never go amiss of them; they are always ready to exaggerate your virtues, your good looks, or something of that sort, merely to gain your exalted opinion, or with some aim which, if achieved, will benefit themselves, and if they find that you are easily influenced by their idle talk, they will lead you wherever they please; and while you think they are fond of your society they are only taking advantage of your weakness in allowing them to possess so firm a hold upon your own mind. Yet there are times when you may be deceived by them and think their praise and admiration genuine; but you will find out your mistake; for if you should fall from the position in life which you now occupy they would be the first to discard your acquaintance, and would slander you as readily as they now sing your praises. A person of good sense will not listen to these people, but turn to them a deaf ear; and when they see that their flatteries are not favorably accepted they will not trouble you again. Then, bear in mind never to allow yourself to be the tool of a flatterer, for flattery is a sort of bad money to which our vanity gives currency.



## Oregon.

Oregon, mountain girl and ocean-washed Oregon! The far-out sentinel State of a great Republic! Mecca of the pioneers' tiresome pilgrimage, we like thee, and why?

We love thee for the grandeur and almost infinite variety of thy scenery, and for the diversity and vastness of thy resources.

We like the wide stretching plains of thy eastern border and the salubrity of thy dry and bracing atmosphere.

We love to gaze upon thy haze-wrapped Blue mountains, as they sleep leaning upon the horizon, and to thread the verdure-clad valleys which dream in their shadows.

We admire thy peerless Columbia, the grandest of American rivers, whose womb is alive with subsistence for a nation, and from the bosom of whose transparent waters is reflected a thousand unspoken beauties. We look wonderingly upon the chain of thy eternal Cascades, binding thy waist, and love to contemplate the trackless snow fields which glitter on the summits of thy majestic Hood, Jefferson and Three Sisters. From these we turn our eyes to the west and are enchanted with the loveliness of three laughing beauties; a trio of fertile valleys, floating islands of green, set in a border of the grandest mountain architecture.

Beautiful in nature, we truly love thee! We like thee for the abundance of thy bread, for the excellence of thy fruits, the variety and fragrance of thy flowers, for the multitude of thy bubbling fountains, and the transparency of thy cooling waters. We greatly love thy genial clime, the softness of thy bending skies and the serenity of thy atmosphere. We love the freedom that sits upon thy mountains, whispers in thy gentle zephyrs, and inspires thy sons and daughters. Fairest of the fair in the family of States! The far-off sister, dressed in stately firs, who fills the laps of her children with plenty and whitens the seas with her cargoes of bread! Thy present beauty who can speak? Thy future glory who can tell? The eyes of home-making thousands are turned to thy valleys, and the Orient grows bright with the radiance of thy coming greatness. Like thee? Yes we do like thee for thy present excellence and thy coming grandeur, but how much we have not words to tell.—N. W. Garretson.

**THE DISTANCE OF THE SUN.**—If some celestial railway could be imagined, the journey to the sun, even if our trains ran 60 miles an hour, day and night, and without a stop, would require over 175 years. Sensation, even, would not travel so far in a human lifetime. To borrow the curious illustration of Professor Mendenhall, if we could imagine an infant with an arm long enough to enable him to touch the sun and burn himself, he would die of old age before the pain could reach him; according to the experiments of Helmholtz and others, a nervous shock is communicated only at the rate of about 100 feet per second, or 1,637 miles per day, and would need more than 150 years to make the journey. Sound would do it in about 14 years, if it could be transmitted through celestial space, and a cannon ball in about nine years, if it were to move uniformly with the same speed as when it left the muzzle of the gun. If the earth could be suddenly stopped in her orbit, and allowed to fall unobstructed toward the sun, under the accelerating influence of his attraction, she would reach the central fire in about four months. I have said if she could be stopped; but such is the compass of her orbit, that to make its circuit in a year, she has to move nearly 19 miles a second, or more than 50 times faster than the swiftest rifle ball; and in moving 20 miles she deviates from perfect straightness by less than one-eighth inch. And yet, over all the circumference of this tremendous orbit, the sun exercises his dominion, and every pulsation of his surface receives its response from the subject earth.—Prof. A. C. Young.

**PAINLESS DEATH.**—In a lecture at the Royal Institution, Prof. Tyndall, speaking of the painless death by electricity, remarked that Franklin was twice struck senseless by the shock. He afterward sent the discharge of two large jars through six robust men, who fell to the ground and got up again without knowing what had happened, neither feeling nor hearing the discharge; and Priestly, too, who made many valuable contributions to electricity, received the charge of two jars, but did not find it painful. Prof. Tyndall said that this experience agreed with his own; that in the theater of the Royal Institution, and in the presence of an audience, he once received the discharge of a battery of 15 Leyden jars. Unlike Franklin's six men, he did not fall, but, like them, he felt nothing; he was simply extinguished for a sensible interval. This may be regarded as an experimental proof that people killed by lightning suffer no pain. Now, the measured velocity of electricity is many thousand times greater than the measured velocity of sensation in the nerves. Hence, the electrical concussion reaches the center of life without any possible announcement by eye or ear or sense of feeling. There is abundant evidence that death by a rifle ball traversing the brain is for the same reason entirely without consciousness or pain. A rifle ball, however, is a tortoise compared with the electric flash.

The strongest influences are those that are silent and indirect.—Anon.

## Young Folks' Column.

### A Farmer I Will Be.

I am a hale and hearty boy,  
As one would wish to see,  
And often, though a little chap,  
I think what shall I be:  
Mechanic, merchant, sailor,  
Ah, none of these for me.  
If ever I should be a man,  
A farmer I will be.

All scenes of nature I admire,  
None else so smiling seem,  
The shady nook, the flowery grove  
And little silver stream;  
But those who lead a city life,  
These beauties seldom see.

If ever I should be a man,  
A farmer I will be.

I love to look at pleasant fields,  
I love the balmy breeze,  
I love to hear the little birds  
All warbling in the trees,  
And those who live a country life,  
Such things as these may see.  
If ever I should be a man,  
A farmer I will be.

I love to furrow up the ground,  
And cultivate the soil,  
I love to see it springing forth,  
The good and luscious spoil;  
For fields of wheat and corn, indeed,  
I dearly love to see.

If ever I should be a man,  
A farmer I will be.

### Cat Capers.

W. Gordon Staples, M. D., C. M., R. N., has a book on cats, in which he tells how you can teach tricks to any intelligent pussy. There, for instance, is the common trick of jumping through your arms. Begin, he says, by holding the arms low between your legs; then hold on one side and make her jump either way; raise your arms higher and higher, till, standing erect, you form a large P, and puss springs through the bend of it; and finally she may be taught to leap over your head—if you are not too tall.

You can, with patience, teach her to go through a hoop—even covered with thin tissue paper (at first this must be oiled, so as to be nearly transparent), or you can dip your hoop in methylated spirits of wine, and she will go through all the same.

Many wonderful stories of cat sagacity are told by the learned surgeon—stories both pathetic and amusing. The doctor once, as he tells us, drowned a favorite animal rather than leave it with people who would not take good care of it. There's devotion for you!

He tells about one pussy who knew certain days in the week. A shopkeeper had a Tom tabby which he kept night and day in his shop, to keep off mice and rats. On Sundays, Tom was allowed to accompany his master home, a distance of nearly a mile, and to remain at home until the following Monday. Pussy got used to this; and as the shop was always kept open until 10 o'clock on Saturdays, Tom regularly left the place and went home three hours before his master. On Monday morning he was always ready to go back with him again. When he grew older, he tired of night duty. So, to avoid this he would leave the shop when his master made signs of putting up the shutters. He would wait a convenient distance till his master came, but finding that he was always caught and carried back, he took to leaving the shop an hour before closing time. His master used to overtake him half way home, but never could lay hands on him.

Here are some more of Mr. Staple's stories: The door of a bird's cage having been by accident left open, the pet canary flew out and at once made for the outside door, which happened to be open. The cat, however, immediately gave chase, and captured the bird in the lobby. Instead of making a dish of Dicky, Tom at once returned and placed the frightened bird at his mistress's feet.

A cat that lived in an out-house was seen one day to take deliberately a portion of her dinner and place it in front of a mouse-hole in a corner. She then retired to a distance and set herself to watch. Not many minutes after a fine, plump mouse came out, gave one look around and, seeing nothing suspicious, commenced to eat the crumbs; while the mouse was thus pleasantly engaged, pussy made the fatal spring.

**ALL ABOUT A PARTY.**—A birthday party was given a little boy in Brooklyn recently, and one of the guests who had occasion, thus described it to a physician the next day: "First we all had some lemonade and sponge cake; then we had birthday cake and ice cream; then we had lots of mixed candies and some nice chocolate; then we had some more lemonade and birthday cake and caramels; and then Hattie Thomas and I had an awful stomach ache, and Johnnie's mother and Miss Mary mixed a big glass full of peppermint water, and after they made Hattie and me drink all we could of it, they gave the rest all round to the others, and Johnnie's mother said she guessed we had better go home."

THREE 16-year-old Port Henry youths one day managed to get railroad tickets to New York, and surreptitiously started out together for the Black hills. They were stopped at Saratoga, and sent home. Their combined cash assets, when overhauled, amounted to \$3.

## Good Health.

### Sprains.

Hall's Journal of Health gives a chapter on sprains, which may contain useful hints to sufferers from them: Sprains or strains of the joints are very painful, and more tedious of recovery than a broken bone. What we call flesh is muscle; every muscle tapers down to a kind of string, which we call cord or sinew. The muscle is above the joint, and the sinewy part is below it, or vice versa, and the action is much like that of a string over a pulley. When the ankle, for example, is "sprained," the cord, tendon, or ligament (all mean the same thing) if torn in parts or whole, either in its body, or from its attachment to the bone, and inflammation—that is a rush of blood to the spot—takes place as instantly as in case of a cut on the finger. Why? For two reasons. Some blood vessels are ruptured, and very naturally pour out their contents; and second, by an infallible physiological law, an additional supply of blood is sent to the part, to repair the damages, to glue, to make grow together, the torn parts. From this double supply of blood, the parts are overflowed, as it were, and push out, causing what we call "swelling"—an accumulation of dead blood, so to speak. But dead blood cannot repair an injury. Two things, then, are to be done: to get rid of it, and to allow the parts to grow together. But if the finger be cut, it will never heal as long as the wound is pressed apart every half hour, nor will a torn tendon grow together if it is stretched upon by the ceaseless movement of a joint, therefore, the first and indispensable step, in every case of sprain, is perfect quietude of the part; a single bend of the joint will retard what Nature has been hours in mending. It is in this way that persons with sprained ankles are many months in getting well. In cases of sprain, then, children who cannot be kept still should be kept in bed, and so with many grown persons.

The "swelling" can be got rid of in several ways; by bandage, which in all cases of sprain should be applied by a skillful physician—otherwise mortification and loss of limb may result. A bandage thus applied keeps the joint still, keeps an excess of blood from coming to the part, and by its pressure causes an absorption of extra blood or other extraneous matter.

Another mode of getting rid of the swelling is, to let cold water run on the part injured for hours.

### Health and Marriage.

The Sanitarian takes strong ground that marriage, at the proper time, is favorable to health and long life. By the statistics of M. Bertelon and others, in a discussion of the subject before the French Academy of Medicine in 1871, from 25 to 30 years of age married men die at the rate of 6; the unmarried 10; and widowers at 22 per 1,000 annually. From 30 to 35 years, the deaths among the same classes respectively are 7, 11 and 19½; from 35 to 40, 7½, 13 and 17½ per 1,000, and the same favorable conditions to the married continue at greater ages. But married men aged from 18 to 20 die as fast as men from 65 to 70.

Among women marriage is not quite so favorable as among men. From 30 to 35, wives die at the rate of 9 and spinsters 11 per 1,000. Under 25 the mortality of wives is a little greater than among single women. After 40 years of age, the longevity of married women is much greater than that of the unmarried.

The probabilities of life in this connection are—a man at 25 who marries has an expectation of 40 years' married life; if he does not marry, his expectation at that age is only 35. A woman who marries at 25 may expect to live until she is 65; if she remains single, to 56 years of age. Widowers and widows are nearly as badly off as those who do not marry.

**NERVOUSNESS AND NERVINES.**—Nervousness is one of the prices we have to pay for civilization; the nervous savage is a being unheard of. For this disorder, which is partly of mental and partly of bodily nature, relief is sought in various ways, and among these we may place the employment of narcotics. The temporary relief afforded by these drugs is very apt to lead those who suffer from nervous sensations to put too much trust in and resort too frequently to them. In the long run they prove most destructive to health. Their use has of late become so frequent as to threaten society with a serious evil. It has been boldly contended that chloral is to be found in the work-boxes and baskets of nearly every lady in the west end of the metropolis, "to calm her nerves." No doubt this is an exaggeration, but it is a fact that New York chloral punch had become an institution scarcely a year after the introduction of chloral in medical practice, and now it turns out that Germany—"sober, orderly, paternally-ruled Germany"—has such a thing as morphia disease spreading among its population. The symptoms are not unlike those of opium eating. Experience suggests that persons suffering from this disease should at once be deprived of the drug. Their willfulness and liability to relapse, however, are so great, that it is said that only about 25% have been seen to recover in a large series of cases.—Cassell's Magazine.

## Domestic Economy.

### Apples Raw and Baked.

We see that our friend, Dr. E. Ware Sylvester, of Lyons, New York, a leading fruit grower, has been lecturing to the Farmers' Club on apples and how to cook and eat them. We quote as follows:

Apples in the raw state are usually eaten between meals, just when one feels like it, especially if he has one to eat. This is not in accordance with the laws of digestion. From two to six hours are required to digest the various articles of food, and if the apples are eaten between the breakfast and dinner, neither one will digest or afford the proper nutrition to the system. By all means let the fruit form a part of the usual meal. When apples are cooked they are without doubt still more valuable as an article of diet, and may form an important part of each meal. A well baked sweet apple is a luxury, and a Spitzenburg or a Tompkins County King, cored, sugared and baked, is luxurious; any apple of fair quality cooked in this manner is very wholesome, toothsome and easily digested. Take a sound apple and wipe it dry, and with a pair of scissors cut off the stem so that the apple will rest firmly on its base, then, with the tin corer, commence at the blossom end, and remove the entire core, being careful not to cut through the apple; fill the hole with sugar (granulated is the best) and place it in a pan with a little water and bake.

Four or five minutes' time only will be required to fill a large baking dish with apples, as you do not have to pare them, and the tin corers can be had at any good hardware store at a cost of seven to 15 cents each. Try this method once and I think you will never abandon it. A dessert made by slicing apples fine and mixing with bread crumbs and sugar, and baked, which is then "frosted" with grape or currant jelly, is quite a favorite in our family. There are a thousand recipes for cooking apples which I need not repeat, and to show you that the world moves, only last week I read on the "bill of fare" at a Broadway hotel, "Salt-pork and apples fried."

**THE QUEEN'S OMELET.**—Place in the frying-pan about one ounce of butter. Break three eggs separately, to see they are fresh; beat them up with a little chopped parsley and a pinch of pepper and salt. The eggs should not be beaten too much, or the white of them separates, and you produce a watery mixture which destroys the flavor and appearance of the omelet. Now the butter is melted, pour in the frying-pan the omelet mixture and stir till it begins to set or thicken, shake the pan occasionally, and fold over the omelet neatly into an oval shape, and when it is of golden color turn quickly into a dish. To be able to prepare a plain omelet is to be able to prepare every kind of omelet. If you require a cheese omelet, introduce into the omelet mixture about a dessert spoonful of grated cheese, with a little pepper and salt, and sometimes a few grains of cayenne pepper. In a sweet omelet no pepper or salt, but a little grated sugar; and just before the omelet is folded in the pan distribute very evenly over a little jam. In preparing an omelet remember five things—a clean pan; the mixture must not be too much beaten; the omelet must not be too large; three eggs are better than six eggs, which make two omelets; they should not be too much cooked; they should be eaten immediately, or they become tough and more like a pancake.

**CRACKING WALNUTS.**—In the familiar process of cracking walnuts—and our young friends understand something about that—we give one light blow to see that the nut is not going to slip, and then with one sharp blow the work is accomplished, and a person who knows how will crack 50 walnuts in succession, with one tap to regulate it and one blow to do the work; and if it happens that the blow he supposes to be sufficient does not do the work, he is astonished. Another person who may have cracked just as many walnuts, but who is deficient in the organ of weight, will strike three or four blows, increasing every time in force, and by and by crush the walnut and make it fly all over the house, and perhaps bruise his thumb or finger.

**BARLEY AND BREAD SOUP.**—Take three ounces of barley, one and a half ounces of stale bread-crumbs, one and a half ounces of butter, one-half ounce of salt, and one-quarter ounce of parsley. Wash and steep the barley for 12 hours, in one-half pint of water, to which a piece of carbonate of soda, the size of a pea, has been added; then pour off the water not absorbed, and add the crumbs of stale bread, three quarts of boiling water, and the salt. Digest these in a salt-glazed covered jar, in the oven, or boil them slowly in a well-tinned covered pan, for from four to six hours, adding the chopped parsley, with the butter, 30 minutes before the expiration of the time of boiling.

**PAINT FOR FLOORS.**—There is but one paint suitable for floors, and that is French ocher. First, if the boards have shrunk, clean out the joints well, and with a small brush give a heavy coat of boiled linseed oil, then putty up solid. Now paint the whole floor with a mixture of much oil and little ocher for the first coat, then, after it is well dried, give two more coats of much ocher and little oil, finally finish with a coat of first-rate copal varnish.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 5.00 14.00 40.00  
Four weeks are rated a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE

ADDRESS all letters to the firm, and not to individual members, or others, who may at any time be absent from our office.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, April 14, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Walter A. Wood & Co.'s Header; New Enterprise in Handling Wool and Stock; What California Has; The Squirrel in Court, 225. The Week; Crops and Prices; Peanut Growing; C. Jones & Co.'s Sale of Short Horns; 232. Wheat Milling and Rust; The Raisin Trade; Personal; Exports of American Bees, 233. The Pacific Power Company's New Building; Patents and Inventions; Notices of Recent Patents, 236.

**ILLUSTRATIONS.**—Walter A. Wood & Co.'s New Header, 225. Mildew and Rust as Seen With the Microscope, 233.

**CORRESPONDENCE.**—Lake County Mineral Springs; Modoc, Siskiyou and Placer Counties; Santa Maria Valley, 226.

**POULTRY YARD.**—Plymouth Rock Fowls, 226-27. Cariboli Powder Again; Pekin Ducks as Layers, 227.

**HORTICULTURE.**—Fruit Tree Suckers; Strawberry Growing in California, 227.

**PATRONS OF HUSBANDRY.**—Agricultural Education; Grange Meetings; From the Granges; Election of Officers; Picnic in Colusa County; Meeting of State Executive Committee; Meeting of Golden Gate Grange, 228-229.

**AGRICULTURAL NOTES** from the various counties in California, 229.

**HOME CIRCLE.**—Morning (Poetry); Housekeeping (Poetry); A Lunch with Aunt Mary; A Sinking Island; Home; The Father's Return; Flatteries, 230. Oregon; The Distance of the Sun; Painless Death, 231.

**YOUNG FOLKS' COLUMN.**—A Farmer I Will Be (Poetry); Cat Capers; All About a Party, 231.

**GOOD HEALTH.**—Sprains; Health and Marriage; Nervousness and Nervines, 231.

**DOMESTIC ECONOMY.**—Apples Raw and Baked; The Queen's Omelet; Cracking Walnuts; Barley and Bread Soup; Paint for Floors, 231.

**THE VINEYARD.**—The Alden and Blowers Fruit Driers, 227-34. Warehousing Native Brandy, 234.

**THE STOCK YARD.**—The Outlook for Stock Breeding in California, 234.

**GENERAL NEWS ITEMS** on page 236 and other pages.

## NEW ADVERTISEMENTS.

Howell's Improved Patent Wagon Brake, C. M. Howell, Andover, N. J.; The New York Watch Co., Dewey & Jordan, S. F.; Palmer Bros., S. F.; Falkner, Bell & Co., S. F.; First Work Drill, Colman Smith, New Haven, Conn.; Head & Schenck's Straw-burning Engines, Ernest L. Ransome, S. F.

## The Week.

History repeats itself, and it does not linger long in the repetition sometimes. The week brings up again the Turco-Russian trouble, and, as is generally the case with a relapse, the war disease shows symptoms more alarming than last October, when we were standing out in the early rains to catch the notes of a conflict which would send the grain markets booming. The tumult of war died away, and the weather clerk, doubtless thinking California could get better prices if she had less to sell, coolly scratched some of our counties from his list. That is where he made a great mistake, for here comes the war for sure, say the telegrams, and here we are with little meat to feed the dogs of war. We will at this time advise the clerk of the elements that California will take her chances in the markets if he will come down with the water, and leave the speculative element out of his other resources.

What delightful days the week has brought! How warm the sunshine! How gentle the breeze! How pure and exhilarating the air! These days make roofs a burden and carpets like a prison floor. These are days when all the world seems out of doors, and nothing between the walls. Who can restrain allegiance to this glorious clime? Sing, birds! Fling out your densest perfume, fields of blossoms! Stand out in clearest outline, mountains! You all are our companions; you are our partners in our sublime possession—California.

ON FILE.—"About Honey Bees," S. W. J.; "Notes from Lake County," W. C. G.; "Merits of Pure-bred Poultry," I. P. L.; "Honey Extractor," J. S. C.; "Farm House Chat," M. M.; "Stockton Grange," Mrs. W. B. W.

## Crops and Prices.

It seems quite certain now that there will be some compensation in price for the comparatively small amounts of produce which our fields in general will yield this year. Of course no one is so poor as he who has naught to sell, and to those farmers whose fields refuse any crop worth the mention, there will be but little consolation in the thought that grain and feed will sell for good prices. But severe as the experience will be to these they are but a part of our productive population, and the majority of our farmers will find their receipts from the season's work much better because of the prices which the season will show. Wheat is now pursuing an upward course, which bids fair to be permanent through the harvest. We gave, about a month ago, full figures and arguments to show that the promise for price for wheat was good, and that the English demand would insure quick sales of whatever surplus we might have to dispose of, no matter whether the Eastern question should result in a general European war or not. The course of the market has shown our belief in this respect well founded. And now again uprisers the war contingency. The next few days will decide the question; and it now appears as though a general struggle was necessary to decide questions which have failed to yield to the arts of diplomacy. It is probable that the war will be protracted, for the estrangement is wide-reaching, and the long conferences would indicate the differences are irreconcilable. The result upon wheat prices will be sharp and considerable. If, in the present short condition of English wheat supplies, there be added the embargo upon shipment of this year's Russian surplus, or perhaps the ruin of it in warlike movements, it is plain to see that prices in the English market will advance notably. It seems, then, that whether there be war or not there will be a good price for wheat because of our reduced surplus and the English shortage, and if the war comes there will be a price which will yield our farmers as much money from much fewer cents. It is certain that our surplus will be smaller than usual. If, indeed, it should but little more than supply our own needs, this fact will still work upon the enhancement of price, because, of course, the price for our wheat will be determined by the foreign market even if we ship but little.

The advantage of good price which will be gained by wheat will improve the rates for all other grains, because our consuming population will soon turn from white bread to barley cakes if the white be considerably advanced in cost to them. Nor will the compensation be in grains alone. Dairy produce will feel the short season, and those dairymen who have been producing for reduced reward during the last 18 months will find their turn for greater prosperity has come. Butter every one eats, and the demand will work its own results. It would be well if our city laboring population would learn the quality of good cheese as a food to sustain hard bodily exertion. No doubt they will learn it if other foods should be unusually high, for consumers are quick to strike the pecuniary balance between foods, when prices are advancing. It is fortunate for our supplies of dairy produce that the sections which produce most largely of these goods are enjoying the advantage of good feed, and are storing up large quantities of the product, for which we believe there will be good and profitable demand before the new season's feed shall come.

Our fruit crop promises well and here the question of compensating prices bids fair to exert an influence. During its season our delicious fruits are not only the cheapest, but the most healthful foods. They freshen and invigorate tired frames and brighten flagging intellects. The advance in other food supplies will awaken doubled interest in the fruit markets and our city laborers will see the pecuniary as well as the sanitary advantage of shouldering the cheap and heavy boxes of ripe fruit which line our streets even to fullness during the many weeks in which they come from the extensive orchards of the State. The beauty of the thing lies in the fact that even a comparatively low price for the large quantities which will be produced will compensate our producers well and yet will put a good article of diet before our laboring city consumers at a rate which will not pinch them as a short grain year would in States whose food resources are not as varied as our own. This is one of the glories of our State, and if our farmers would but avail themselves more fully of the unrivaled fitness of the State for a varied production, we should be still farther freed from the influence which renders many of our wide cereal fields unproductive. For with varied production would follow more careful cultivation and the introduction of irrigating and other facilities, and with these the farmers as well as the city dwellers could revel in the climatic delights of an open winter, conscious that his crops will span the gap in the clouds by means of the resources which cultivation and irrigation would place within their reach.

As we have spoken of fruits above we would also speak of vegetables. The same line of thought applies to them fully. The immense quantities of potatoes and other store vegetables which our farmers can place upon the market will not only pay them well, but will serve the

consuming population with good food at reasonable rates. It is not necessary that potatoes should be as cheap for the coming crop as they were for the last. They were so cheap that the result was a waste, and a waste is never true economy. Potatoes can be sold so as to pay the producer good profit for his toil and yet give the consumer good, cheap food. We trust this may be the result this year.

Thus we have shown that the year will not be without its advantages; returning good prices to the farmers and yet not pressing the consuming classes overmuch if they will but make a wise selection of the products of the soil as they come into the market. There are many other reflections in this connection which we have not space to express, but which will readily recur to the reader. And all of them will, we think, fall in the line we have marked out, that the year will have its general compensations for whatever disadvantages there may arise in special features.

## Peanut Growing.

EDITORS PRESS:—Will you kindly inform me through the columns of your paper the method pursued in raising peanuts, and oblige—W. COREY, Salinas City.

The following comprehensive article was prepared for the RURAL PRESS several years ago by Dr. Q. C. Smith, and in default of later experience on the subject, we reproduce it for the present needs of our readers:

A sandy loam or loose gravelly soil is best suited for their cultivation. Plant as early as the frost will permit and the weather is uniformly warm enough for vegetables, generally, to grow thriftily, as the peanut plant appreciates a long season and continues to grow and perfect nuts, under favorable circumstances, as long as the season lasts.

Pulverize the soil five or six inches deep. Break the pods with a light wooden hammer if you have many bushels to hull, but be careful not to bruise any of the kernels. Reject all that are not fully matured.

There are two distinct varieties of peanuts; the white and the red. The white variety branches out and runs along flat on the ground. The red variety grows upright in a bunch, except when grown upon very rich soil, and its growth is unusually rank.

The red peanut should be planted in drills 12 to 18 inches apart, two kernels together, and the rows should be from three and a half to four and a half feet apart, depending upon the fertility of the soil; the poorer the soil the closer they may be planted, and they will grow on soil too poor to produce weeds. Yet a soil of medium strength is to be preferred.

Harrow the land level; lay it off with a coulter or bull-tongue plow; cover rather lighter than corn. To plant white peanuts, prepare the land as before, check it off four to four and a half feet one way to two and a half the other, with same plow as before. Put two kernels in each check. They should be well cultivated, keeping the soil loose and clear of weeds, and put a little soil around each plant, until they get to spiking; that is, shooting out small straight roots from each joint of the vines into the ground, on the end of which you will notice the young peanuts forming. They should now be left to themselves, at least as far as the vines are concerned; and if they grow well they often shade the space between the rows, so that no weeds will grow there.

In cultivation there should not be a large, high hill or ridge made around the plants, but only a low, broad, flat hill or ridge. And none of the blooms or vines should be pressed down or covered up with soil, as we learned by repeated experiments, made in different soils, and with different varieties, that such procedure is injurious to the plants, and greatly injures and curtails the crop of nuts. They should be gathered before the frost bites the vines. One of the best ways of gathering them is to run a furrow on each side of the row with a bull-tongue plow, close enough to loosen the soil around the plants. Then take a narrow, light grubbing hoe and loosen up the vines that the plow did not, and dig up the vine and turn upside down to dry. If they are of the red variety, after the plow has been run deeply on both sides, they may be pulled up by hand. They should never be gathered in rainy weather or when the ground is very wet.

After they have been turned up for one day in the sunshine, and while the vines are entirely free from dew, they should be put up in small hand stacks, which are made thus: Put a stake, four or five feet long, firmly in the ground, put something such as dry grass, weeds or straw around it to keep the peanuts from the dampness of the ground; then proceed to stack the vines around the stake, with the roots to the center, leaving a small space in the center for ventilation, and when the stack is made as high as desired, cap it with grass or straw, to protect it against the weather and birds. Let them remain in the stack three or five weeks, when they will be ready to pick, sack and send to market. If the crop is large, and any prospect of rain, they (vines and all) should be hauled up and put under shelter, where they may be picked off at leisure. None of the premature nuts should be picked off, as they greatly injure the sale of the good ones, and they add greatly to the value of the vines as hay, which is choice food for milch cows, greatly increasing the quantity and quality of their milk.

The red peanut are much easier cultivated than the white; both usually sell for about the same price in market. The white peanuts are

more oily than the red and usually have only two kernels in one pod; while the red has often three or four. Sixty to 75 bushels is considered a fair crop, but sometimes more than 100 bushels are raised per acre.

As soon as the peanuts are gathered in from the field and the vines put away for hay, turn the hogs into the field and they will glean it well, and sometimes get fat. The land is then in good fix for plowing for wheat.

## C. Jones & Co.'s Sale of Short Horns.

Considering the dry season and consequent scarcity of feed the country is now suffering from, we may congratulate our Short Horn breeders on the successful issue of the above named sale, which took at San Jose on Thursday, the 5th inst., according to advertisement. A goodly number of farmers and breeders were present, and the cattle came before them in fine condition, without being overloaded with fat. The bidding on the first three animals was slow, and the prospect for a good sale looked rather gloomy. No. 1, Cherry 6th, the first cow offered, was secured by Henry Hagan, of Centerville, Alameda county, for \$400. No. 3 was next offered, Jessie Maynard, and bid off to the same gentleman at \$230; next came Portulacca 2d, bought by J. D. Carr for \$225; Maynard's Gem, being No. 2 on the catalogue, did not make her appearance till the fourth animal, when we noticed two or three of our leading breeders come forward, no doubt with a view to secure the prize now offered in what we think no one will dispute being the gem of the herd. Started by Mr. Ashburner at \$300. The contest was sharp and short between him and Mr. Hagan, being finally secured by the latter gentleman at \$390. After this the bidding was decidedly spirited, and the cows and heifers were knocked off in rapid succession, 23 head averaging \$360.

The bulls, four in number, were a good lot, and made an average of \$435 each. Below is the price of each animal, with purchaser's name. We may mention that No. 8 has not had a calf for 17 months, and is not now in calf, also that No. 22 is almost, if not quite, hopeless as a breeder.

No. 1. Cherry 6th, red and white, got by Duke of Mason, 9,898; dam, Cherry, by Pearl, 2,012. Sold to Henry Hagan, of Centerville, Alameda county, \$400.

No. 2. Maynard's Gem, red, got by Master Maynard, 14,881; dam, Cherry 6th, by Duke of Mason, 9,898. H. Hagan, \$390.

No. 3. Jessie Maynard, red, got by Master Maynard, 14,881; dam, Cherry 6th, by Duke of Mason, 9,898. H. Hagan, \$230.

No. 4. Portulacca 2d, red, got by Gen. Sheridan, 5,701; dam, Portulacca, by Gen. Grant, 4,825. Hon. J. D. Carr, Salinas, \$225.

No. 5. Portulacca of Avenue Ranch, red, got by Master Maynard, 14,881; dam, Portulacca 2d, by Gen. Sheridan, 5,701. H. Hagan, \$250.

No. 6. Savannah 8d, roan, got by Baron Airdrie, 9,476; dam, Savannah 2d, by Lee, 5,371. H. Hagan, \$360.

No. 7. 2d Louan of Avenue Ranch, red, got by Master Maynard, 14,881; dam, Savannah 3d, by Baron Airdrie, 9,476. H. Hagan, \$280.

No. 8. Faith of Oakwood, red, got by 9th Duke of Thorndane, 5,603; dam, Faith, by Weclawken, 5,200. Robt. Ashburner, Baden, \$350.

No. 9. Jennie Newham, red and white, got by Mason Duke, 14,875; dam, Faith of Oakwood, by 9th Duke of Thorndane, 5,603. H. Hagan, \$370.

No. 10. Annie Washington 2d, red, got by Financier, 11,956; dam, Annie Washington, by Dick Taylor, 5,508. H. Hagan, \$520.

No. 11. Annie's Beauty, red, got by Master Maynard, 14,881; dam, Annie Washington, by Financier, 11,956. H. Hagan, \$375.

No. 12. Leopardess 8th, red, got by Independence, 14,542; dam, Leopardess 6th, by Duke El Hakim, 5,524. H. Hagan, \$510.

No. 13. Leopardess 9th, red, got by Master Maynard, 14,881; dam, Leopardess 8th, by Independence, 14,542. H. Hagan, \$510.

No. 14. Lady Hughes, red and a little white; dam got by Royal Prince of Fairview, 12,801. J. D. Carr, \$500.

No. 15. Lady Mary, red; dam got by Horatio, 17,350. H. Hagan, \$340.

No. 16. Myra Oxford, red, got by Oxford Airdrie, 12,546. Sylvester Scott, Cloverdale, Sonoma county, \$480.

No. 17. Belle Morris, roan, got by Lord Mayor of Oxford, 4,954; dam, Augusta Morris, by Oxford Duke of Fordham, 4,219. H. Hagan, \$400.

No. 18. 2d Belle of Avenue Ranch, got by Master Maynard, 14,881; dam, Belle Morris, by Lord Mayor of Oxford, 4,954. H. Hagan, \$410.

No. 19. Lorena 3d, red and white, got by Duke of Mason, 9,898; dam, Lorena, dam, Pearl, 2,012. H. Hagan, \$480.

No. 20. May Queen, red, got by Master Maynard, 14,881; dam, Lorena 3d, by Duke of Mason, 9,898. H. Hagan, \$440.

No. 21. Louan of Avenue Ranch, red, got by Mazurka Star, 17,738; dam, Caroline 5th, by Wiley Duke, \$15,727. H. Hagan, \$225.

No. 22. Belle Brent 6th, red roan, got by Baron Airdrie, 9,476; dam, Belle Brent, by Collin Campbell, 3,763. Henry Miller, Gilroy, \$100.

No. 23. 2d Belle of Avenue Ranch, red, got by Master Maynard, 14,881; dam, Belle Brent 6th, by Baron Airdrie, 9,476. H. Hagan, \$400.

## The Bulls.

No. 1. Master Maynard, 14,881, red, got by Maynard Duke, 14,897; dam, Airdrie Belle, by Airdrie Duke, 5,303. H. Hagan, \$500.

No. 2. Mason Duke, 14,375, red, got by Duke of Mason, 9,898; dam, Cherry, by Pearl, 2,012. Charles Hensley, San Jose, \$560.

No. 3. Oxford Duke, red with white marks, got by Mason Duke, 14,875; dam, Myra Oxford, by Oxford Airdrie, 12,546. H. Hagan, \$400.

No. 4. Leopard, red, got by Master Maynard, 14,881; dam, Leopardess 8th, by Independence, 14,542. E. Comstock, Sacramento, \$290.

Although these prices, according to the conditions now prevalent in this State, must be considered as quite good on the average, it is but fair to Mr. Jones to say that he thinks that some of his favorites sold ruinously low. There still remains to him, however, the consciousness of having done a good thing for the State in the introduction of such a fine herd of thoroughbred cattle.



### Wheat Mildew and Rust.

So great is the interest among our farmers in the diseases which have visited their grain fields within the last few weeks that we undertake to give on this page a full review of the subject as it has been disclosed by the examination of our scientific men. We are enabled to do this with the aid of the San Francisco Microscopical Society, an organization which is doing a good work for the farmers of our State by the diligent attention which they give to the minute enemies, both of vegetable and animal origin, which prey upon crops and thus frustrate the efforts of the agriculturist.

At the last meeting of this society the time was almost wholly engaged in reports and examinations of the specimens of rust and mildew which have been submitted. We shall give the results of the investigation, accompanied by some excellent figures of the fungi drawn on the wood from the microscope for us by C. Mason Kinne, the Secretary, and shall conclude with some notes from our exchanges concerning the condition of the diseases in the fields at the close of last week.

#### The Mildew

Has been the subject of a most thorough and careful examination by Dr. H. W. Harkness, who is the leader of studies in fungus growth on this coast. Before giving the text of Dr. Harkness's report, we shall describe the part of the engraving on this page which refers to the disease known as mildew. The figures in the drawing after the sign of multiplication denote that the object is magnified to the number of diameters stated. No. 5 is a fragment of a leaf showing the mildew (*Erysiphe graminis*.) The dark colored spots are conceptacles in which the fungus stores its germs (*sporidia*), and around these is the mass of appendages and mycelium which form the whitish coating which can be seen upon the leaves with the naked eye, and which answer to the clingers and rootings of other classes of plants. No. 7 shows one of these conceptacles with its appendages, and it is broken by pressure to show the germ cells (*asci*) protruding. We notice in one of our exchanges that one gentleman concluded that the dark spots which he saw with a hand lens on the white coating were insects which caused the disease. He may see from this magnified image of the spot that it is a vessel containing the germs of the fungus. No. 6 shows a transverse section of a leaf, with the coating of the fungus somewhat detached to show that it may be removed without injury to the cuticle of the leaf and is consequently growing upon the surface without penetrating the substance.

We are now ready to read Dr. Harkness's description of the fungus as he found it in his examinations. He says:

"The pest which appears for the first time this spring, termed by the farmers 'white rust,' or 'mildew,' is one which may well excite the fears of the agriculturists. It has already invaded the more mature fields within the limits of four or more of our heaviest grain-producing counties, where at least a half million acres of wheat are in great peril, some of it already destroyed.

The first notice of its existence appeared during the first days of March; but owing to absence in a distant portion of the State, I was unable to produce specimens until the 28th inst.

The fungus appears upon the expanded leaves in closely-felted patches of dirty white color; the patches varying from one-sixteenth to one-half inch in length, following the longest diameter of the leaf, equally on both surfaces. When the leaf still adheres to the stalk, it often extends entirely around it, forming a zone, extending upward for an inch or more. With the aid of a pocket lens numerous black spots are observable, closely enveloped in the felted material. [See Fig. 5.]

The more mature spots may be peeled off from the leaf, but the tenacity with which it adheres to it, seems to indicate a union somewhat more intimate than of mere contact, doubtless owing to some contact with the hairs of the leaf.

On examining sections of the leaf and fungi, no suckers are apparent, while the portion of leaf so denuded appears in no manner distorted or broken, but the cuticle remains as smooth as that of the unaffected leaf. [See Fig. 6.]

The leaf at a short distance from the culm soon turns brown and dries, while that portion surrounding the stalk is able to resist, to some extent, the parasite, and when the patches are removed, the surface is still green. In the earlier stages the mycelium is observed creeping over the surface, branching as it extends, its filaments overlying one another until it eventually forms the felted mass above mentioned.

Growing out of the mycelium projections are seen, from which the conidia spores are produced. These appear as upright moniliform threads, bearing three or more oval spores.

These when placed in water throw off germinal tubes. On boiling a portion of the fungus in a solution of caustic potash, the mycelium is destroyed, and a clearer view of the reproductive bodies may be obtained.

At the present stage of development but one form of *pycnidia* is observable, which is nearly globular in shape, and of a dark brown color. From this abundant ovate *stylospores* are ejected. No other forms of *pycnidia*, such as Tulane figures, are at present discernible. Large numbers of other bodies are seen, which prove to be conceptacles. These are spherical in outline, gregarious, and in color dark brown or black,

with cylindrical appendages, which are slightly curved at their terminal point. On rupturing the conceptacles, from 8 to 14 asci appear through the opening. [See Fig. 7.]

These asci are somewhat obovate, with a stout, curved pedicel, by means of which they are attached to the inner surface of the conceptacles. The asci are filled with granular matter, and under the action of iodine are turned of a brownish tinge. All so far examined are immature, no sporidia being formed within the asci. Enough has been determined, I think, to warrant me in regarding it as none other than the *Erysiphe graminis* of De Candolle.

No doubt the sporidia will ere long mature, and then the species may be fully determined.

To what extent the wheat will be damaged by this *erysiphe* it is, of course, impossible to say. Adhering, as it does, so closely to the plant, it doubtless appropriates the juices so necessary for the maturing of the grain to its own sustenance, while at the same time shutting off air and sunlight from the tissues. Its visible effect is a weakening of the stalk, thus engendering decay.

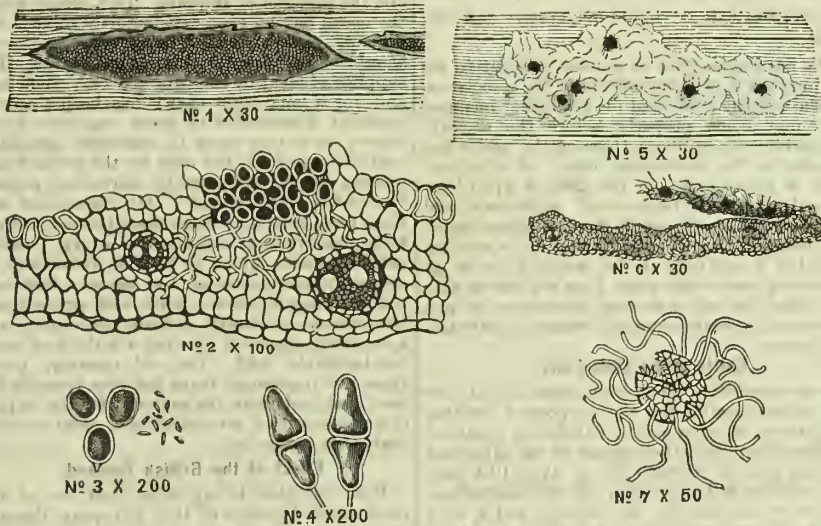
#### The Rust.

The fungus "rust," which has been known to our farmers more or less nearly every year, is quite different from the mildew which has been described above. It was shown at the meeting to which we have referred, by Mr. Kinne and his drawings in our engraving, give a faithful representation of the way in which it is seen in nature under the microscope. Let us first describe the part of the engraving which relates to this fungus. No. 1 shows a fragment of a leaf in which the mass of the rust (*Trichobasis pseudosporae*) have broken out through the cuticle of the leaf. No. 2 is an enlarged transverse section of the same leaf, showing how the growth and multiplication of these pseudosporae ruptures and uplifts the cuticle of the leaf, and how the ramifying rooting (*mycelium*) works its way

spores, I find will instantly free a profusion of minute motile zoospores or spermatia, which can be seen gyrating and moving about in great activity in a manner somewhat similar to bacteria. [See Fig. 3.]

It is not known just how the grain becomes diseased, for microscopic examination shows that the pseudo-spores are too large to enter the leaf through the stomata. Their granular contents if endowed with reproductive powers, possibly may be taken up through the roots and lodged in the general structure, or by effecting an entrance through the breathing pores of the leaf, in either case only wait a favorable combination of circumstances to give them an opportunity to germinate in a plant thus infected; or pseudo-spores carried by the winds to the leaf, finding favorable climatic conditions, may there vegetate, and the mycelium searching out the stomata, no doubt enter and commence its parasitical life. When it is remembered that from a particle of matter not the two-thousandth part of an inch in size, a good sized puff-ball or mushroom will grow in a night, and that a few hours is often time for the *Peronospora infestans*, or "potato blight," to do its work, the sudden appearance of the rust in a field of wheat will be understood. Grain standing on rich ground, in a sheltered position from winds, particularly our drying northerners, infected with the germs of the disease, wait but a shower of rain or warm, moist atmosphere and sunny days to show evidence of the trouble, though it is fortunate that the exact conditions favorable to the development of the fungus are comparatively rare. Were the spores favored with but a fraction of the opportunities given the grain which furnishes them a habitat, good crops of cereals would be the exception, though not nearly all fields attacked are necessarily ruined.

In this connection it may be well to mention that while the damage from rust is often great, many times there is more of a scare than real-



MILDEW AND RUST AS SEEN WITH THE MICROSCOPE.

down through the cells of the leaf substance and saps the foundation of the plant's life. It may be remarked that the behavior of the fungus is the same on the stalks of the plant, and thus its growth is doubly ruinous. No. 3 shows the pseudosporae of the rust (*trichobasis*), or, as they are called by some authorities, unilocular uredosporae of *puccinia*, and around them may be seen the zoospores. No. 4 shows the pseudosporae of *puccinia* or bilocular brand-spores. In this connection it may be noted that the *trichobasis* is considered as one of the phases of *puccinia*.

With these preliminary remarks we pass to some extracts from the report made to the society by Mr. Kinne on the subject of rust:

A few days since I had occasion to examine, with one of our members, Mr. E. J. Wickson, of the PACIFIC RURAL PRESS, some samples of grain from near Colusa. While the rust may no doubt be found in that section, the samples sent were only affected with a mildew or blight which was satisfactorily proven, by the aid of the microscope, to be an *erysiphe*, a fungus which does not penetrate the cell-structure of the leaf, but does its harm to growing plants or vines by a dense growth of mycelial threads spreading over the epidermis, preventing its normal growth and covering the stomata or breathing pores, and thus shutting out the air from the leaf. More recently, Dr. Monser handed me some grain stalks, received by him from Mr. Fowler, of Valley Ford, Sonoma Co., to which I have given some attention, and from which I have prepared objects for examination this evening.

It will be noticed that the leaf is colored with the spores of a fungus, mostly in masses, and others scattered indiscriminately though with great profusion over the surface, after breaking through the cuticle from the cellular structure, while a transverse section, under a moderately high power, shows that the latter is filled with a network of searching mycelium, which tends to sap the life of its host. See figures 1 and 2. Further and more critical examination shows the characteristic features and unilocular uredospore of the true "rust" of the agriculturist, or *Trichobasis rubigo-vera* of the botanist, one of the phases of *Puccinia graminis* or brand. A drop of water applied to another transverse section of a leaf, with the darker masses of pseudo-

these diseases in the grain fields. The latest notes on the subject are gleaned from our exchanges in the counties named: Mendocino, "Oats struck with rust and some seriously injured." Marin, "Many fields in Tomales and Bolinas will prove almost a total loss." Contra Costa, "Mildew is found more or less on the wheat but it grows rapidly nevertheless. Fair crops are expected with showers and cool breezes." Napa, "Wheat in Chiles valley is not hurt by mildew so far as observed. In Rutherford farmers think mildew will not do much injury." Yolo, "The mildew seems dying out with the dry, cold weather." Sacramento, "The mildew or rust will probably injure the grain some, and it is impossible to tell yet how much." Santa Cruz, "Some fields are touched with blight, some seriously injured." Sonoma, "The effect of the blight cannot now be determined, but its appearance has changed for the worse the wheat prospect in this neighborhood." Solano, "Mildew appears in some localities, but farmers do not feel much apprehension about it."

It appears from these notes that the rust is doing its evil work, but that the mildew has not yet developed very dangerous characteristics.

**THE RAISIN TRADE.**—There is a general complaint of the dullness in the trade for California raisins. The *Call* says: The stock still on hand is large and moving off very slowly. One reason of this condition of affairs is the poor quality of a large portion of the fruit, a result of making raisins from good, bad and indifferent grapes; while another reason is found in excessive importation of foreign fruit; and consequent low prices. The great increase in the imports this season from Spain is shown from the following table from Ed. Loring's Malaga circular of February 28th:

	1877.	1876.	1875.	1874.
United States.....	1,311,956	856,277	956,318	1,220,277
British Colonies.....	83,480	37,045	46,609	45,497
Great Britain.....	236,372	219,708	144,633	239,560
France.....	274,470	184,685	81,741	194,768
North of Europe.....	116,368	74,504	55,375	98,970
W. Indies & S. Am.....	71,573	40,187	58,538	51,185
Mediterranean & Portugal.	39,574	20,242	35,841	32,895
	2,134,403	1,432,648	1,379,715	1,883,152
Coastwise & Interior.....	124,597	94,852	56,285	83,848
Total.....	2,259,000	1,527,500	1,436,000	1,967,000

**DISTANCE WALKED IN PLOWING.**—The following, from the *Country Gentleman*, shows the distance required to be traveled to plow an acre of ground at various widths of furrow:

Width of furrow— inches	Miles traveled to plow an acre.	Acres plowed per day of 16 miles travel.
10	9 9-10	1 3-5
11	9	1 1-2
12	8 1/2	1 9-10
13	7 1/2	2 1-10
14	7	2 1/2
15	6 1/2	2 2-5
16	6 1-6	2 3-5
18	5 1/2	3
20	4 95-100	3 1-5
22	4 1/2	3 1/2

For instance, if a man plows a furrow 10 inches wide, he walks nine and nine-tenths miles in plowing an acre of land.

**CALIFORNIA FRUIT AND MEAT SHIPPING COMPANY.**—A corporation under the above title was finally organized in this city Wednesday, with a capital of \$500,000, divided into 50,000 shares at the par value of \$10 each. The objects of the association have been fully described in our columns. The organization was effected by electing the following gentlemen a Board of Trustees for the ensuing year: John Cashin, Nevada City; William Johnston, Courtland, Sacramento county; Charles Grove, Vallejo; J. Earl, Oakland; J. D. Blanehar, San Francisco; W. S. Bailey, Reno, Nevada; B. B. Norton, Reno; Wm. Todhunter, Winnemucca, Nev.; J. M. McKessick, Long valley, Cal. About \$250,000 have already been subscribed to the capital stock of the company.

**ROSES.**—Mr. G. C. Pearson, of South Vallejo, made our sanctum redolent of perfume on Tuesday with a bunch of his choice roses. Mr. Pearson is a devoted roseate and a connoisseur on tints and forms. He brought us several French blooms, among which was a fine "Count Labartha," from Dingee & Conard, of West Grove, Pa. Mr. Pearson finds this splendid French bud growing with him beyond the bud model, and hurrying forth into fully developed beauty. This would not please the French bouquet makers, but it is for all that a form of beauty which one cannot help but admire. We trust our friend may have his life full of roses and free from thorns.

**PERSONAL.**—Wm. J. Lawrie (or his alias.) Description—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion, dark; hair black and small dark moustache. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

**EXPORTS OF AMERICAN BEEF.**—A dispatch from the Bureau of Statistics at Washington says: The exports of fresh beef to Great Britain from New York and Philadelphia in March amount to 6,707,855 pounds, valued at \$590,085, making a total in nine months of 29,908,810 pounds, valued at \$2,677,383.

#### The Effect on this Year's Crops.

It has been a matter of much doubt what would be the result of the unusual spread of



Continued from page 227.

that any one can successfully run it, and so cheap that although not completed when the heavy fall rains come, has much more than paid for itself above all costs of construction in a short run, and the raisins are too well known in the markets to need any reference from me.

If the correspondent from Riverside will point to the various Alden factories of this State, and give their status as paying investments, then I will be open to more criticisms. If he will follow my description he will find my drier entirely unlike those named, and if he understands "the well-known laws and principles of science," he will find that in a siphon water will run up hill a short distance to return down a greater, and that heated air by the same law will go in the other direction. I have fully embodied this principle in my drier, and have the whole lifting force generated by two furnaces to compel the heated air to go as directed. As near as I can estimate, this force will exhaust through the drying rooms and out at the top of the smoke stack 350 cubic yards of air in from four to six minutes, so it can be readily seen that there is no fear of condensing moisture injuring the product, and the draft carrying off the moisture so rapidly, an injurious degree of heat is not necessary. When the Alden companies have made a success of their expensive factories and placed raisins in the market suitable to the present demand, and other kinds of fruit in paying quantities sufficiently cheap for common mortals it will then be time to brush out of the way with an imperious wave of the hand all other driers, such as Boynton's, Bonnell's, Hurlburt's, Blowers's and others. Till then, Mr. Editor, let us all go right along and do the best we can.

R. B. BLOWERS.

Woodland, California.

### Warehousing Native Brandy.

Two weeks ago we printed the text of the new law concerning the storage of native brandy. On Saturday the full synopsis of the forthcoming regulations relative to the establishment of bonded warehouses for the storage of native grape brandy, and its transportation and exportation in bond, prepared by the Commissioner of Internal Revenue under authority of the law enacted March 3d, was telegraphed to the *Call*:

The regulations provide for the establishment of special bonded warehouses, not exceeding 10 in number in any one collection district, for the exclusive storage of such brandy, and provide that such a warehouse may be a room, or a whole building, if the premises are situated in a seaport or market town. The usual precautionary requirements regarding insurance and security of buildings or premises are specified in the regulations. Each warehouse is to be in charge of an officer assigned thereto by the Internal Revenue Bureau. In general the regulations relating to the establishment and discontinuance of grain distillery bonded warehouses are followed, as far as applicable. Under the head of "Removals in bond," provision is made for removals first, from distilleries to warehouses located in the same district; second, from distilleries to warehouses located in other districts, and under the head of "Removals from warehouses," provision is made for, first, removals from one warehouse to another warehouse in the same district; second, removals from one warehouse to another warehouse in another district; third, removals from export; fourth, removals on payment of tax. In all cases of removals from distilleries, the distiller is required, on or about the first of each month, to notify the collector that he intends, instead of immediately paying the tax on spirits produced during the previous month, to remove the same to a special bonded warehouse; and thereupon the collector is required to detail a gauger to gauge, mark, brand and stamp the brandy with a stamp provided by the Act. In case the spirits are for deposit in a warehouse in the same district, the distiller executes a bond conditioned for the transportation of the brandy to a warehouse and its withdrawal therefrom on payment of the tax within three years, or otherwise according to law. In case the removal is to another district, two bonds will be required, the distiller executing a transportation bond conditioned for delivery of spirits into a warehouse, and the owner or distiller executes to the collector in charge of the warehouse a warehousing bond, similar to that required upon the deposit of spirits in a grain distilling bonded warehouse. Provision also is made concerning the necessary entries and reports, and for the immediate assessment and collection of taxes on deficiencies, should any occur. Spirits deposited in a warehouse may be removed to warehouses in the same or other districts, or upon payment of the tax, or for consumption, as before stated under the head of "Removals from one warehouse to another warehouse in the same district." The regulations require executions of one bond only in case of removals from a distillery to a warehouse in the same district, and in case of removals from one warehouse to another warehouse in another district, two bonds are required—one a transport bond, the other a warehousing bond; and in case of removals from distilleries to warehouses in other districts, provision is made for affixing a second stamp, indicative of such removal. As required by the Act, under the head of "Removals for exportation," the regulations governing removals for export under the provisions of section 3,330 of

Revised Statutes, known as Regulations, series six, number seven, supplement number one, with slight modifications, are held to apply to exportations made under the provisions of this act. Regulations concerning withdrawals on payment of tax are in all respects, except as to necessary variance in descriptions similar to those prescribed in Regulations, series 6, No. 7, concerning the withdrawal of spirits from grain distillery warehouses on payment of tax. In the regulations concerning proof required in case of claims presented for abatement of tax in consequence of loss by casualty in special bonded warehouse, or drawback on grape brandy exported after payment of tax, or concerning transfers which may be ordered by the Internal Revenue Bureau in consequence of liability to loss or great wastage, and concerning discontinuance of special bonded warehouses, the existing regulations relative to whiskey are incorporated, so far as applicable, into the regulations authorized and required by the Act under consideration.

Senator Sargent has recommended that bonded warehouses under this act be established in San Francisco, Sacramento, Stockton, Marysville, Napa, San Jose and Los Angeles, to begin with. As there will be expenses for storekeepers and rent, it is important at the outset to keep down the number as much as possible.

## THE STOCK YARD.

### The Outlook for Stock Breeding in California.

In our report of the cattle breeders' meeting last week, we promised in this issue to give in full the address of Hon. Cyrus Jones, of Santa Clara county, President of the society. It is as follows, and will be found suggestive and valuable:

We have again met in annual convention for the purpose of electing officers of the association for the ensuing year, and for any other business that may come properly before the society. The public sale of Short Horn cattle, under the auspices of the association, came off as advertised, at Sacramento, on the 20th of April last. Several herds were represented in the sale, and a goodly number of people were in attendance, but from some cause the sale was not a success. Whether it was held at the wrong place or at the wrong time of the year, I am not able to say. Still, after the sale was over, there were quite a number of animals changed owners at satisfactory prices.

#### Cattle at the State Fair.

Your committee, that was appointed at our last annual meeting for the purpose of drafting resolutions in reference to exhibiting cattle at the State fair, made their report at an adjourned meeting held at Sacramento on April 19th last, and, after a full discussion of the resolutions, they were adopted by the society, and a copy sent to the Secretary of the State Board of Agriculture by the Secretary of this association; and had all the members of this association strictly complied with the requests contained in these resolutions, I verily believe that we would have been granted all we asked for by this time, and it would have been the means of bringing breeders of this coast together and placing confidence in each other; and, gentlemen breeders, there is no denying the fact that our interests are identical, and what is the interest of one is the interest of all. Thus we find it in all business relations, and ours is no exception to the rule. Our semi-annual meeting was to have been held at San Jose in October last, but in consequence of the slim attendance of members the meeting was postponed. During the last year Mr. John Brewster, a member of this association and a breeder of this State, has sold his herd and engaged in the mercantile business, and we hope that he may be rewarded with success.

#### Stock Breeders' Associations.

Stock breeders' associations have been established in nearly all of the States, and there is a good degree of interest manifested in the most of them; indeed, all these organizations are doing good by directing attention to the importance of improvement in stock raising. Every intelligent breeder knows the value of meetings for consultation and interchange of opinion in regard to the best methods of conducting the management of their herds; but the difficulty has been to devise a plan that would secure attendance at such meetings. I can only suggest, as I have heretofore done, for all to act in unison, and in union there is strength. Different topics might be mentioned for discussion, viz: How many crosses should an animal have with a thoroughbred bull to admit it to registry in the herd book? The question is an open one, and breeders differ in their opinion regarding it. I would refer the subject to your consideration.

#### Short-Horn Breeding.

Gentlemen breeders, I must congratulate your stability in the business of Short Horn breeding in this State, and I would entreat you to adhere to the old practice of breeding for excellence in useful qualities—the production of beef and milk, with purity of blood and good pedigree, and there is no such thing as failure. In a new country, where land can be had at a nominal price, with cheap corn and grass for nothing, a man may make something by handling inferior scrubs, but in this State every day's

experience is strengthening the conviction that with high-priced lands and dear feed nothing but the best blood and the best stock can be made to pay. Therefore, it would be well for each breeder when the opportunity presents itself, to graze and feed a few thoroughbred steers in order to exert an influence to increase the excellence of the stock in the hands of the common farmers in your neighborhoods, and I would recommend all new beginners starting in the business to consult their own interests by first examining the different herds of this State, rather than buy on the impulse of the moment animals brought here by interested parties for speculative purposes, and often without recommendation, because in many instances they prove worthless, or non-breeders, and the individual becomes disgusted with the business and leaves his thoroughbreds to roam his fields without care or attention. No records are kept, and it is no wonder that he quits the business in disgust.

#### American Beef in British Markets.

We have no reason to be discouraged or feel alarmed with the breeding of fine stock with the present demand of live and neat cattle for beef purposes in England and Scotland, and I will here quote in part from an agricultural writer: "During the past year much attention has been given to the question of making American supplies of beef available for the English markets, and the scheme has been so fully developed that for the future large shipments will be made. It may, perhaps, seem extravagant to predict that in the near future the farmers of the great West will be watching the quotations of fresh meat in London and Liverpool to determine the price of steers grazing in their pastures, as they now recognize the quotations of grain in these same markets as regulating the price of the wheat or corn growing in their fields. It may seem extravagant to make such a prediction as this, but stranger things than this have happened; and the problem of shipping fresh meat across the ocean having been satisfactorily solved, it is difficult to understand why the movement should be restricted within narrow limits. The supplies of meat in England are very deficient, and for a long time past it has been a serious question, discussed with great eagerness by all classes, as to how meat in sufficient quantities could be provided, not only for the present population, but for the steadily increasing population of the 'little island.' All convenient sections have long since been placed under tribute to increase present supplies and every possible encouragement given to English farmers to increase the production of live stock. But, notwithstanding all these efforts and precautions, the demand constantly outruns the supply, and a necessity exists for opening a wider and more inexhaustible field. The old country, under these circumstances, turns her eyes towards the new, and finds here the material for the supply of her necessities, no matter how great or inexorable they may be."

#### Effect of the British Demand.

It is very plain to my mind that one of the most decided results of this European demand for American beef will be a greater disparity in our market in the prices of first-class and inferior beefs. First-class cattle already command a much larger price than common or inferior cattle, but in the future there will undoubtedly be a still greater difference. Shippers find that in shipping to New York, Boston, Philadelphia, Baltimore and other Eastern markets, it pays better to select first-class animals. It costs as much per pound to ship bones and horns and tough leathery carcasses as it does to ship the ripe, juicy grade, with the small proportion of bone and offal, and so shippers invariably discriminate against inferior cattle and in favor of the best. The shipper to the English market has a still longer route, and he will discriminate still more strictly against inferior cattle and in favor of first-class animals, if he can be induced to take the inferior animals at all. This is an important matter to American breeders.

#### The Demand From Japan.

And we have also quite a demand recently sprung up from Japan for all classes of fine stock, embracing horses, sheep and hogs, as well as cattle, and their supplies will be principally taken from this coast if it is possible for them to get them here, and the Japanese government have their agents in this country making quite extensive purchases at the present time.

Therefore, gentlemen, breed nothing but the best, and be encouraged in doing good, and if I have suggested one thought or word that may be of benefit to the Association of Breeders, I shall have accomplished a good object.

On motion, a vote of thanks was passed to the President for his address.

WOODWARD'S GARDENS embraces an Aquarium, Museum Art Gallery, Conservatories, Tropical Houses, Menagerie Seal Ponds and Skating Rink.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

## DEWEY & CO'S SCIENTIFIC PRESS Patent Agency.

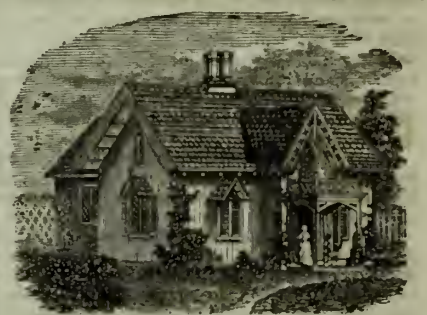


Publishers, Patent Agents and Engraver,  
224 SANSOME STREET, SAN FRANCISCO.

We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.

ORDERS for the GOLDEN PIANO will be received at this office, where further information can be had concerning their excellent qualities and favorable prices.

## CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA.  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

WANTED.  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO KEARNEY, Manager.  
306 Pine Street, San Francisco.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address  
Rev. DAVID McCURE, Principal,  
OAKLAND, CAL.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Bred Angora Goats.

### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## Poultry.

I. P. LORD, BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you save this.*

WHITE LEGHORNS. Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock. Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address, C. P. STONE, Healdsburg, Cal.

Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few sittings of eggs for sale. Eggs always fresh and well packed. For full information, address J. L. SKINNER, Placerville, El Dorado Co., Cal.

LOOK! ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List. ALBERT E. BURBANK, 43 and 44 California Market, S. F.

B. B. RED GAMES A Specialty. Bred from imported stock of Henry Belden and John Douglas strain. I have three yards of the above breed, some of them winners of first prizes in the East. Young stock always on hand. Send for a circular. J. G. ANNEAR, Ceres, Stanislaus County, Cal

### TULE LANDS.

Pasture and Crops this Season.

TO LEASE. Three thousand five hundred acres, well leaved and ready for immediate cultivation. Good crops can be raised this season if put in at once. Also 20,000 Acres of Excellent Pasture.

Also, TULE LAND, leaved and Unleaved, for sale in quantities to suit. Apply to

M'AFEE BROTHERS,

426 Montgomery Street, San Francisco.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

### OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
R. C. HAILE, (VICE PRESIDENT).  
JOHN LEWELLING, (TREASURER).

AMOS ADAMS, (SECRETARY).  
THOS. UPTON.  
I. C. STEELE.

THOS. FLINT  
G. P. KELLOGG  
W. L. OVERHISER

O. HUBBELL.

D. CAMPBELL.

### SHIPPING AND COMMISSION HOUSE.

Grangers' Building, 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

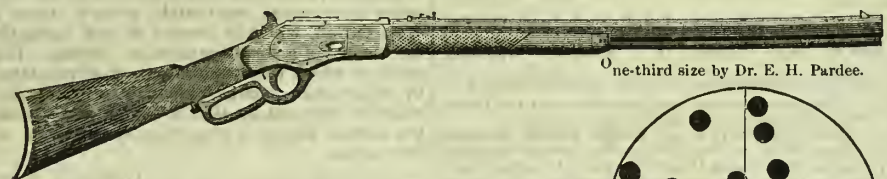
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## Winchester Repeating Rifle.

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

GREAT IMPROVEMENTS ARE NOW BEING INTRODUCED IN ENGRAVING

BY THE Scientific Press ENGRAVING CO.,

AT THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.



CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc. T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

## Practical BOOKS

—AT—

BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

CIVIL ENGINEERS,

FARMERS,

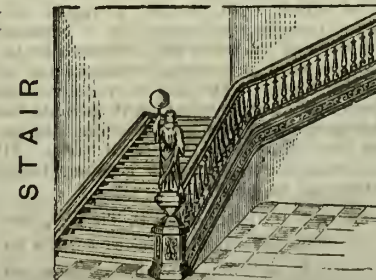
MACHINISTS

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

SANBORN & BYRNES,



Mechanics' Mills, Mission Street,

Between First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Newels and Balusters.

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, \$200,000 00  
ASSETS, DEC. 31, 1876, 310,793 69

### MUTUAL PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76... \$6,202,435.00	\$136,622.18
Less Amount Canceled..... 435,419 00	9,568.38

Amount in force, Dec. 31, '76... \$5,767,016 00	\$127,053.80
Losses paid..... \$16,330.00	

### CASH PLAN.

AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76... \$3,605,935.00	\$71,865.16
Less Canceled and Expired..... 1,587,246.00	28,585.16

Amount in force, Dec. 31, '76... \$2,018,689 00	\$43,280.00
Losses paid..... \$12,718.71	

### OFFICERS.

J. D. BLANCHARD.....PRESIDENT  
I. G. GARDNER.....Vice-President  
G. P. KELLOGG.....TREASURER  
A. W. THOMPSON.....ATTORNEY  
FERD. K. RULE.....SECRETARY

### TRUSTEES.

J. D. Blanchard.....San Francisco  
G. P. Kellogg.....Salinas  
I. G. Gardner.....San Francisco  
Chas. Laird.....Salinas  
Uriah Wood.....San Benito  
A. B. Nally.....Santa Rosa  
A. W. Thompson.....San Francisco  
A. D. Logan.....Colusa  
I. C. Steele.....San Mateo  
G. W. Colby.....Butte County  
A. Wolf.....Stockton  
C. J. Cressey.....Oakland  
J. C. Merryfield.....Dixon  
E. W. Steele.....San Luis Obispo  
C. S. Abbott.....Monterey  
Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

### OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
TREASURER.....J. V. WEBSTER.  
CASHIER.....ALBERT MONTELLIER.  
SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## Buy N. Y. Watch Co's Superior Watches.

C. H. DEWEY. GEO. JORDAN.  
DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware,

Etc., Etc.,

No. 433 Montgomery St., near Sacramento, SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

## American Watches a Specialty.

**\$500** Yearly Profit from 12 Hens, by Hatching Eggs and Raising Poultry by means of horse manure alone. The Centennial and several Gold Medals, and 12 Diplomas, have been awarded to Professor A. Corbett, No. 7 Warren Street, N. Y. Testimonials and Catalogue sent on receipt of a three cent stamp.

### BERKSHIRES.

I am breeding PURE ENGLISH BERKSHIRE PIGS and have them constantly on hand. Also, fifteen two and three-year-old Sows, several of them with Pig. These are mostly from Pigs I imported from Kentucky.

PETER Saxe, Importer.

Residence and Office, 1312 Folsom, Cor. Ninth St., S. F.

THE RURAL PRESS.—This is the best farm and stock journal in the world for the Pacific coast reader. *Italia Delta, Feb. 10.*



### The Pacific Power Company's New Building.

Within the past few weeks the fine, large and new building of the Pacific Power Company, Nos. 19 to 27 Stevenson street, between First and Second has, been opened and a number of enterprising firms have taken advantage of the facilities offered and located themselves there. The building is of brick, four stories high, with a frontage of 100 feet and a depth of 72 feet. It is put up in a substantial manner to stand the jar of machinery, and shafting has been run in every direction so as to be convenient for the requirements of any kind of business needing power. Persons renting space are entitled to a specified amount of power without paying extra for it. The engine and boilers are very handsome, and are from the Newburg Steam Engine Works, Newburg, N. Y. The engine has three foot stroke with cylinder 18x36. It is supplied with an automatic cut-off and runs very smoothly and noiselessly. The boilers, two in number, are 16 feet long by 54 inches. They are very handsomely finished. At present only one is used, so there is considerable unoccupied space in the building. An artesian well 240 feet deep has been sunk on the lot to furnish a supply of water.

The Averill Mixed Paint Company have taken advantage of the opportunity offered by this building to concentrate their business in one place, instead of, as heretofore, having a factory and sales-room in different parts of the city. They now occupy the northwest corner of the lower floor of this new building, having the office in front and the manufactory and store-rooms in the rear. They also have a large room in the second story which is used to store materials used in the manufacture of the paint. In this room is the large mixer run by steam; from this the paint flows in pipes to the room below, where it is tinted and prepared for market. Another of these mills will soon be added to the machinery. In the lower room is a double row of large barrels, one for each of the colors made, and in these the colors are mixed and the paint properly tinted. Heretofore the stirring necessary in these barrels has been done by hand, but the barrels are to be replaced by metal tanks, and the stirring done by machinery. This will greatly simplify the work and will enable them to make the paint entirely by machinery.

The company now make their own boxes which are used to ship the tins of paint in. The lumber is purchased from the Truckee Lumber Company delivered cut in shape, so that the boxes are put together as occasion requires. We are informed that the boxes cost one-third less made in this way. The cans, of which a large number are required, are made by Locke & Montague. The paint is furnished in packages of any desired quantity, small or large. Some persons supposed that the Averill Chemical Paint Company would lose trade by moving on a back street like Stevenson, but such has not been the case. There is a short alley opening into Stevenson street from Market street, at what would be No. 527 1/2 Market, which gives direct access to the building without having to go either to First or Second street. This makes it open on the most central street in the city, and in a first-rate locality for business. The Paint Company state that their cash sales are one-third higher than when they had both the factory and store to sell from. The general sales have been one-third larger in the last month than is usual in the month of March, which indicates a good trade, especially when most business is so dull. The company paid about \$9,000 in dividends last year, and expect to do much better this. Then they had two places to keep running and furnished their own power and they save now about \$500 per month in the present locality, by having power furnished and having the business all together, with improved machinery and better facilities.

Although the whole building is not occupied there are several other firms which have taken space there already. H. E. Bothin, manufacturer of Chartres Coffee and Spices, has steam coffee and spice mills in the lower floor. The Standard Grain Sack Company, J. H. Cove, Superintendent, employs 75 girls and 10 men. W. & J. Steinhart have an overall factory and employ 30 hands. F. C. Hoffman, in the Steam Candy Works, gives employment to 16 hands. M. A. Graham, machinist, has a room up stairs. He makes a specialty of experimental machinery in wood or metal work, and pays special attention to manufacturing light articles and notions of all kinds. John F. Uhlhorn, a printer, also has space in the upper story, which is made easily accessible by an elevator. The remainder of the space in the building has not been partitioned off as yet and will be divided up to suit the requirements of those applying for space.

The gunboat *Rocket* has returned to Victoria from her voyage of inquiry into the *G. S. Wright* mystery, bringing four Kumquut prisoners, who were lodged in jail. Two of the prisoners are charged with scuttling a trading schooner and murdering two of the men some time ago. The others are charged with complicity in killing some of the *Wright* people, who are supposed to have reached the shore from the wreck. It is said that the cash-box of Major Walker, United States Paymaster, who was lost with the *Wright*, is in possession of the Kumquuts. A piece of one of the vessel's masts was discovered.

## PATENTS AND INVENTIONS.

### A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

FOR WEEK ENDING MARCH 20TH, 1877.

188,475. STOVES FOR HEATING SADDLERS. R. Martin, Portland, Ogn.  
188,494. COMPOUND METAL-WORKING MACHINES. R. Bandhauer, Denver, Col.  
188,540. CONVICT SHACKLES. J. L. Quackenbush, Portland, Ogn.  
188,568. ATTACHMENTS FOR INVALID BEDSTEADS. J. P. Beaman, S. F.  
188,587. ORE-FEEDERS FOR QUARTZ MILLS. G. A. Church, Nevada City, Cal.  
188,647. AUTOMATIC FEEDERS FOR FURNACES. E. F. Littlepage, Los Angeles, Cal.  
188,652. SINK AND SEWER TRAP. J. H. Mackle, Oakland, Cal.

FOR WEEK ENDING MARCH 27TH, 1877.

188,731. INSIDE BLINDS. A. T. Elford, Oakland, Cal.  
188,738. BOILER FURNACE. E. Fair, S. F.  
188,748. WINDMILLS. J. Lockhead, S. F.  
188,782. LIFE BOAT. C. Dickinson, Portland, Ogn.  
188,848. MACHINE FOR SETTING THE TEETH OF SAWS. A. Boismet, S. F.  
188,888. CORN PLANTER. C. S. Goethals, Los Angeles, Cal.  
188,910. TRACE BUCKLE. T. J. Hubbell, Yountville, Cal.  
188,940. DRAWERS. A. Packisch, S. F.  
188,957. SEED PLANTER. H. J. Robinson, Carpinteria, Cal.  
188,992. CIGAR-HOLDER. F. H. W. Von Tiedemann, S. F.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

SUBMARINE BORING AND DREDGING APPARATUS.—William B. Hyde, Oakland. Mr. Hyde's invention is a new method of making submarine excavations. It comprises, first, an improvement in the hydraulic system of dredging, in which he uses two pumps, instead of one as heretofore. One pump forces the water through a tube against the material to be dredged, while the other is a suction pump and serves to withdraw the loosened material through an entirely separate and independent tube. Second, an improvement in the system of dredging, consisting in sinking numerous separate holes in close proximity to each other, so that the action of the water upon the bottom of the river will fill the holes with the loose material and thus reduce the general level of the bottom in a corresponding degree. The apparatus employed is peculiar in construction. The boring apparatus consists of a barrel or cylinder of the required length, through which are made two distinct and independent passages. The lower end of this tube or pipe is made flaring or bell-shaped, so that it will press upon the bottom of the bore and exclude the surrounding water. To the upper end of each passage in the cylinder is attached a pump, one of which acts as a force pump to force a stream through one of the passages against the earth in the bottom of the bell-shaped chamber for the purpose of cutting and loosening it up, while the other acts as a suction pump to withdraw the water and loosened material.

BED BOTTOM.—Robt. M. Gruwell and Casey Newhouse, Santa Rosa, Sonoma Co. This invention relates to that class of bed bottoms in which an upper and lower frame is used. The improvements relate, first, to an improved spring connector for sustaining the upper frame in its proper relation to the lower frame; secondly, to an adjustable strap connector for adjusting the tension of the entire series of the springs in the bed in order to convert the bed into a hard or soft bed as desired; thirdly, to an improved arrangement for attaching the upper ends of the outside or border spring to the upper frame; fourthly, an improvement in forming and connecting the upper rings of spiral springs; and, lastly, in the arrangement of the springs so that the number of springs in the bed can be increased in a very simple manner.

IRRIGATING ATTACHMENT FOR FRACTURE BEDS.—J. P. Beaman, S. F. This invention relates to an extension or part of a bedstead, the object of which is to provide a support and means for irrigating or supplying a constant bath of water to fractured and dislocated limbs, for the purpose of preventing inflammation of the wounded parts. This is a very convenient and comfortable arrangement, as it permits the limb being dressed without disturbing the patient or the position of the fractured parts. All the necessary conveniences for accommodating the patient are supplied.

MITERING MACHINE.—John P. Tierney, Sacramento. This invention relates to certain improvements in mitering machines, these improvements being more especially adapted to a machine for which letters patent were granted to the same inventor in August, 1873. It would be impossible to give an intelligible description of this invention without the aid of engravings.

SLOP-HOPPER.—Miles M. Harvey, S. F. This invention relates to an improved slop-hopper and stretch trap for outside drains, and it consists, first, in constructing the hopper with a bell-shaped attachment to its bottom, which not only forms a part of the trap but serves also as a foot or base for the hopper to stand upon when it is lifted off of the trap; secondly, in a simple manner of connecting the hopper with the trap, and, thirdly, in an improved trap. This device is very simple and can be cheaply constructed. The hopper can be readily removed to be cleaned out and as readily replaced, while the trap arrangement is self-cleaning and forms a perfect water-valve, which will prevent any gases which may be generated in the drain or sewer from being discharged through the hopper into the open air.

VALVE AND CUT-OFF.—John C. H. Stut, S. F. This is an improved balance slide valve and drop cut-off, and it consists mainly in a novel construction of a hollow valve balance by receiving the steam to its interior and, provided with cut-off plates which regulate the steam ports. These plates are operated by means of exterior and interior levers, and a peculiar arrangement of angular plates over which the end of the exterior lever moves alternately, so as to form a drop cut-off, which is caused to act instantly by means of a steam cushion or spring. The point at which the steam is cut off is regulated by means of an inclined plane or other device, which is operated by the governor and adjusts the angular plates in proportion to the speed of the engine.

SPRING MATTRESS.—A. C. McMaines, S. F. This patent covers certain improvements in that class of spring mattresses in which a number of spiral springs, sufficient to form the entire body and surface of the mattress, are simply connected together by a suitably connecting device. The improvements are on a patent previously granted to the same inventor, in the method of joining these springs together, thus greatly improving this class of mattresses.

REFLECTOR.—Emil Boesch, S. F. This invention relates to improvements in that class of reflectors on which silvered glass is used for a reflecting surface. The improvements relate to the manner of constructing the frame and mounting the glass sections therein. The method patented protects the silvering of the glass from damage and it does not sweat and spoil. The invention provides a strong durable glass surface reflector, which is protected from damage and which is also light and ornamental.

BUTTON FASTENER.—James C. Teters, S. F. This invention relates to that class of devices for attaching buttons to clothing and other articles of wear, in which the eye of the button, after being passed through a hole in the material, is secured by a tongue which is formed on or attached to a metal plate.

KEROSENE LAMPS.—A merchant returned home about two o'clock at night and found his wife lying on the bed groaning heavily and unconscious. She was waiting his return and at last, tired out, laid herself on the bed, after turning down the wick of a lighted kerosene lamp as low as possible without extinguishing it. In this position of the wick, if the oil is bad, a vapor mixed with an innumerable quantity of specks of soot diffuses itself through the apartment, and so covers the eyes, nose and respiratory organs, that on falling asleep one runs a risk of suffocation. It is always advisable, therefore, in the use of kerosene lamps, to allow the wick to burn brightly or to extinguish it entirely. —*Wiener Medicinische Presse.*

CALIFORNIA VACCINE.—We read in the *Alta* that among the new enterprises of the State is the establishment of a vaccine farm at Baden, in San Mateo county, 12 miles from the city, where heifers are inoculated, under the supervision of Dr. Botsford, with vaccine matter that has never passed through the human system. The lymph thus obtained is preferred by physicians and the general public, and heretofore \$10,000 or \$15,000 have been sent away every year to get material for vaccination, and it was obtained often from sources that did not command confidence, which, we presume, will be deservedly given to the Baden lymph.

FILTERING PAPERS.—What is claimed as a new method of folding filtering papers has been recently introduced in Paris. The filter is made from a square piece of paper, folded at first so as to make a crease at each angle. This is done in two folds. While still triangular in shape, it is folded in creases parallel with the edges, and is then opened out, and commencing at one corner, is again folded so that the creases converge, repeating the operation from each corner, the result being a circular filter, with rigid or corrugated sides presenting a larger surface than the ordinary circular filter.

VERY extensive revenue frauds in the manufacture of tobacco in North Carolina have recently been discovered. Some thirty manufacturers in the county of Surrey are charged with participation in these fraudulent transactions, and have been indicted. The frauds discovered are estimated to exceed one-third the total amount of internal revenue taxes collected in that State.

### General News Items.

A LARGE number of factory operatives in New Jersey are on a strike against a reduction of wages.

The *Pall Mall Gazette* says: Unless Turkey yields to all or nearly all that Russia demands, there will be war before many days.

At the annual commencement of the New York Medical College for Women, nine ladies graduated, including Miss L. J. Kellogg of California.

DR. DIO LEWIS repeated his lecture on "Our Girls" to a good audience in Oakland, on Tuesday evening. He also recently lectured to crowded houses in San Jose and Santa Clara.

JOHN H. CARR, a son of Professor Carr, State Superintendent of Public Instruction, committed suicide at a hotel in Sacramento, on Monday last.

The *Standard's* dispatch from Berlin says: Bismarck will provisionally be contented with four months' leave of absence, but will not quit Berlin before the closing of the Reichstag. It is now doubted whether the question of his resignation will be settled before the reassembling of the Reichstag.

C. M. LOCKWOOD, of New York, Chief Clerk of the Patent Office, has been appointed Chief Clerk of the Interior Department vice Bell, appointed Secretary of the Interior, and F. A. Seely, of New York, Assistant Examiner, has been appointed Chief Clerk of the Patent Office vice Lockwood.

THE Reading Railroad Company has given all the engineers employed on the Germantown and Norristown branch two days in which to determine whether to leave its employ or the Brotherhood of Locomotive Engineers. A Convention of representatives of the Brotherhood is to be held at once in Philadelphia, to determine on a course of action.

It appears that a conspiracy has been discovered for wholesale under-valuation of silk imported into New York. This is accomplished by the aid of manufacturers and agents in Europe, and it is believed by the connivance of the Customs officials. As nearly as can be learned, the average under-valuation is from 30 to 40 per cent. on the importation of many million dollars.

THE settlement between the heirs of Cornelius Vanderbilt has again been brought up on account of differences between William H. and Cornelius J. Vanderbilt. All the heirs with the exception of Cornelius had agreed to accept \$1,000,000, and William had agreed to a settlement on this basis. Cornelius J., however, made a claim of \$2,000,000, and his sister, Mrs. Lafattie, refused to make any settlement until Cornelius J. was satisfied. Meanwhile the will has been admitted to probate.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte, Sutter and Yuba counties.  
G. W. McGRAW—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERLAIN—Sonoma and Marin counties.  
A. U. STRONG—Lake, Napa and Solano counties.  
W. D. WHITE—San Bernardino and Los Angeles counties.  
E. G. LARKINER—Arizona Territory.  
ED. T. PLANK—Dakota Territory (Black Hills.)

WHEN so many poor watches are being sold, it is not too much for us to say that those who buy the New York Watch Company's movements will be sure of a good article at fair prices.

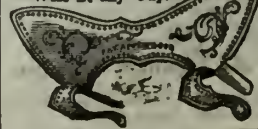
Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.

SUBSCRIPTIONS to the *RURAL* taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

### MOUSTACHE PROTECTOR.

Will fit any Cup.



Gents' Delight. Buss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.

Take the paper that stands by your interests.



# S. F. MARKET REPORT.

## Weekly Market Review.

### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, April 11th, 1877.

There has been more life and activity in the Produce trade than for several months. Prices have been advanced for nearly all kinds of farm productions except Meats and Dairy Produce. In Wheat there has been a sharp advance in the foreign quotations and a speculative movement has sprung up in this market, which has put Shipping Wheat forward. It is of course impossible to tell what endurance there may be in this present feature of the trade, but the general advance we believe to be merely the result of the condition of the English supply (which is reviewed in the foreign review which we print below), and is a surety of a diminished production from our own fields. The advance in England may be seen in the following:

### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	10s 9d@11s —	11s —@11s 4d
Friday.....	10s 9d@11s —	11s —@11s 4d
Saturday.....	10s 11d@11s 2d	11s 2d@11s 6d
Monday.....	10s 11d@11s 2d	11s 2d@11s 6d
Tuesday.....	10s 11d@11s 2d	11s 2d@11s 6d
Wednesday.....	11s 3d@11s 6d	11s 5d@11s 9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	9s 3d@9s 7d	9s 5d@9s 10d
1876.....	9s 8d@10s —	10s —@10s 10d
1877.....	11s 3d@11s 6d	11s 5d@11s 9d

### Flour and Grain Surplus.

We are indebted to W. H. Walker, Secretary of the Produce Exchange, for a statement of the stock of Flour and Grain in the State on the 1st inst. The figures have been collected by the Produce Exchange, and are believed to be approximately correct. The totals compare as follows with those made three months ago:

	Jan. 1st.	April 1st.
Flour, bbls.....	58,800	59,274
Wheat, cts.....	3,640,700	1,094,355
Barley, cts.....	1,458,600	1,075,300
Oats, cts.....	80,700	77,045
Corn, cts.....	142,700	80,456
Rye, cts.....	14,000	10,461

A year ago the stock in the State embraced 48,700 bbls Flour, 1,214,800 cts Wheat, 400,000 cts Barley, 18,800 cts Oats, 92,800 cts Corn and 900 cts Rye.

### The Foreign Review.

LONDON, April 9th.—The *Mark Lane Express*, in its weekly review of the British Corn trade, says: The week has been marked by a somewhat higher temperature and an abundant rainfall, which has further retarded field labor. The continuance of wet weather is beginning to cause uneasiness, as besides preventing the finishing of spring sowing, it injuriously affects winter-sown Wheat, about which some reports are less favorable than heretofore. Generally, however, the reports of the ultimate prospects are hopeful. Dry weather is the great desideratum here and on the Continent. The supplies of Wheat at the principal country markets have again been light, and although the holiday somewhat interfered, the trade has shown a very steady tone, while prices have advanced one shilling. The increased strength noticed last week in Mark Lane has been well sustained. Russian Wheat has advanced one shilling. The week's imports into London were very moderate; the bulk of the supply being from India and Germany. The diminution of receipts of Red Spring from America, and the steady absorption of last October's heavy shipments of California, are the two leading features of the season. The large quantity of California wheat at the beginning of the year is so reduced as to dispel all apprehensions of a depressing effect upon prices consequent on its arrival. The recent marked rise in white Wheat in Liverpool supports this opinion. The stocks of foreign Wheat in London are about 172,000 quarters, or about 270,000 less than the corresponding period of 1876. Since the end of 1876, the stocks have decreased at all the leading ports, though not quite at the same ratio, except at Liverpool, where there is a slight increase, owing to the bulk of Californian being directed to that port, whilst, as compared with this time last year, the stocks of foreign Wheat in the United Kingdom appear to be over a million quarters less. These figures show the inroads made by the excess of consumption over imports, and prove the reasonableness of the late advance and the present healthy position of the trade. The sales of English Wheat last week were 37,099 quarters at 51s, as against 41,376 quarters at 44s 5d last year. Imports into the Kingdom, during the week ending March 29th, were 310,567 cwt. of Wheat, 99,188 cwt. of Flour.

### Freights and Charters.

Freights have continued dull during the past week and rates nominal. The *Commercial News* says: Only one Wheat charter has been drawn and that at last week's quotations, say £2 for iron ships to Liverpool direct and proportionately lower for wooden vessels, at which figure we quote. The suspension of Mr. Friedlander has for the moment suspended all chartering. At the close of the week, 7,871 tons in port under engagement to load Wheat, 19,903 tons disengaged and 10,290 tons miscellaneous. The latest charters reported are: Br ship *Maggie Trimble*, 820 tons, Wheat to Liverpool, £2; *Cork U. K.*, £2 2s 6d; *Continental*, £2 7s 6d; Danish brig *Margrethe*, 174 tons, Wheat and Flour to Cape Town or one other port in the colony. £2 15s.

### New York Grain Market.

NEW YORK, April 9th.—The holders of Wheat are now in a fair way of carrying their point of establishing a much higher range of rates. For several months there has been a stand-off between receivers and exporters, the former contending for an advance, which they claimed was warranted by the statistical position of the cereal, while the latter resisted on the score of plenty and economy. A point has been reached, however, where Europe, and especially England, can no longer pursue the waiting policy, and the export trade of the week has been the largest for some months, comprising something like a million bushels, the activity carrying with it an advance of about 5 to 7 cents per bushel. No. 2 Milwaukee selling up to \$1.54 to \$1.75 in store and afloat, and prime amber and white winter \$1.70 to \$1.76. The strong position of the market is well illustrated, the stock in Great Britain and on the Continent having gradually been permitted to run down to a comparatively low figure, while it is conceded that America is the chief granary from which to meet the requirements on the other side of the Atlantic between now and next harvest; and as the surplus in the country is considerably below the average at this period of the year, holders have a decided advantage, which they will doubtless make the most of. The exports of the week have been promoted by an advance in exchange and extreme low freights, cargoes having been shipped to the United Kingdom out ports as low as 4s 4d 3d per quarter, and 4d per bushel by steam to Liverpool. Flour has also advanced 50c to \$1

per barrel; but Barley and Corn are in turn cheaper, with large exports of the latter at 54¢ per bushel.

### Eastern Wool Markets.

NEW YORK, April 9th.—The Wool market has just passed through an uncommonly dull week. From the opening to the close a desire has been manifest to close out stocks of all descriptions, and the result has been that the prices obtained have generally been low, and in many cases a loss has been submitted to. This untoward and weak feeling is traceable to the fact that large arrivals of new spring California will have a tendency to force prices down to a still lower point, and with this knowledge manufacturers cannot be induced to anticipate their wants beyond the present. Several sales of new spring California were made to arrive, but upon receipt all were rejected, owing to the poor quality and condition of the article. In one case a sale was effected at 22c, and this being rejected, the holder is anxiously offering the lot at a considerable less figure, but has so far been unable to find a purchaser. Fall California meets with some little inquiry, but notwithstanding the low offers, manufacturers exhibit no confidence in the future of the article. Fleece is dull and decidedly weak.

Sales for the week are: 300 bales fall California at 14¢ 17c; 5,000 lbs choice do, 23c; 52 bales slightly burry spring, 24c; 4,000 lbs Oregon, 27c; 355 bags Western Texas, about 14c; 20,000 lbs XX Ohio, 44c; 15,000 X do, 40c; and 134 bales Donsoli, 70,000 lbs spring California, 5,000 lbs pulled do, 14,000 lbs Western Texas, 5,000 lbs Eastern do, 18,000 lbs XX Ohio, 17,000 lbs combing and delaine do, 30,000 lbs unwashed Western, 25 bags No. 1 pulled, 10 do X, 5 do super and 6,000 lbs combing, on private terms.

Boston, April 7th.—Wool is in fair demand. Manufacturers are only purchasing as wanted, and dealers are disposed to close up stocks as fast as possible. Sales of Fleeces during the past week have been 290,000 lbs, including medium and X Ohio and Pennsylvania, at 39¢ 42¢; XX at 45¢ 47¢; XXX and above, 48¢ 50¢. Good average lots of New York, Michigan, New Hampshire and Wisconsin sold at 36¢ 38¢. Combing and delaine steady; sales of 126,000 lbs at from 40c to 50c. Pull d unchanged; sales, 171,000 lbs. Choice lots of Eastern super at 45¢ 46¢. The principal sales have been in the range of 35¢ 40c for super and X. Sales of California have been 283,000 lbs. Fall, 16¢ 24¢; spring, 18¢ 25¢.

### Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Mar. 21.	WEEK Mar. 28.	WEEK April 4.	WEEK April 11.
Flour, quarter sacks..	96,541	44,121	34,933	15,873
Wheat, centals.....	112,748	106,593	93,437	47,677
Barley, centals.....	8,546	10,018	10,509	12,428
Beans, sacks.....	883	1,742	2,235	350
Corn, centals.....	3,661	967	5,208	1,683
Oats, centals.....	3,672	8,550	7,665	3,857
Potatoes, sacks.....	11,703	10,920	6,058	7,220
Onions, sacks.....	1,469	974	573	855
Wool, bales.....	1,572	8,796	5,297	7,095
Hops, bales.....	20	—	8	—
Hay, bales.....	1,149	1,322	744	563

Beans—There is no change in bag prices. The market is reported wavering and uncertain.

Barley—Barley has taken a brisk step upward and the week's sales have been at a higher range. We note sales as follows: 4,000 sks light bay brewing, \$1 55; 200 do bay feed, \$1 52; 500 do feed Chevalier, \$1 57; silver; 800 do do, \$1 60; 300 cts silver; 4000 cts light bay brewing at \$1 55; 800 sks Chevalier at \$1 60, silver; 300 sks Coast feed, \$1 60; 300 do do, \$1 62; 2,600 sks choice Bay hew; \$1 60, gold, on 30 days; 200 do fair do, \$1 55; 850 sks Coast feed in lots, \$1 50; 250 sks Coast feed at \$1 50; 2¢ cental, gold; 200 do light Bay brewing, \$1 55, gold; 1,100 sks Coast feed, \$1 55 per ctl.

Beans—Prices are generally improved, as may be seen in our list below.

Buckwheat—We note sales of 100 sks Buckwheat at \$1 75. The demand is reported dull.

Corn—Corn has scored further points upwards, and the trade is reported strong. We note sales: 500 sks large yellow, \$1 75; 400 sks, \$1 80; 100 sks yellow, \$1 70; 3¢ cts.

Dairy Produce—Butter has held its price during the week and the feeling is better than for months. Cheese is unchanged.

Eggs—Eggs have sold 1¢ 2c better than last week. There have been considerable receipts of Eggs from Utah and Oregon during the last few weeks.

Feed—Feed rates have held firm at the advance noted last week. Hay now joins in the upward movement, and during the last two days has advanced \$8¢ 85¢ ton: the best being now quotable at \$21¢ 82¢. We note sales during the week as follows: Under sharp competition a lot of 21 tons choice Wheat brought \$20; 23 do choice volunteer Wheat and Oat, \$18 50; 40 tons choice Wild Oats, \$17; 23 do poor Wheat, \$15; 37 do good Cow, \$15. The best Wheat is firm at \$18 50; 27 tons fair Clover, \$14; 50 do good Wheat and Oat, \$17 50.

Fruit—Strawberries have become plenty, and the price has fallen, so that the canners have commenced on them, securing some lots at 5¢ 50¢. Oregon Apples have sold at auction at 65¢ 81¢ 25¢ per box. California Lemons show a slight advance for the best lots.

Hops—No Hops have been received during the week. We note a sale of 20 bales at 16¢, gold. Some lots are held at 18¢. The New York market for the week ending March 30th is reviewed by Emmet Wells as follows:

The wet weather has considerably interfered with the movement in Hops this week, and transactions have been on a very limited scale. Prices remain quotably unchanged. We hear of 17c being paid in the interior for fine Hops. The same figure could, no doubt, be realized here, had we the quality to suit. The Cooperstown *Freeman's Journal*, which we consider good authority on Hops, estimates the stock in hands of dealers and growers as between 30,000 and 40,000 bales. It is an unusual large supply at this advanced stage of the season, and unless an extra demand sets in from Europe, we will carry over into the new season, as yearlings, a larger quantity of Hops than for several years past. Fine California and Washington Territory Hops are wanted for export, but there is no stock here. California Hops are reported nominal at 14¢ 17c.

Oats—Oats are unchanged. There is a fair demand. We note sales: 500 sks Coast Feed, \$2 12; 100 sks good Black, \$2 30, silver; 250 sks common Feed, \$2 17, silver.

Onions—Onions have carried the palm for advance in price. The elevation from last week is 50¢ 90¢ per cts, putting the price now for the best at about \$2 40 per cts. We note sales of 50 sks choice Union City, \$2; 300 do do, \$2 20; 60 sks fair Stockton, \$1 75. The stock of Onions is reported in the hands of one firm, which is making hay while the sun shines in their "corner."

Potatoes—Potatoes are no better. They are weak and low spirited.

Provisions—We note a slight decline in the best grades of Beef. The supply is moderate. Mutton is abundant and the market is well supplied with the best grades. Many inferior grades are arriving from the southern counties. The supply of fresh Pork is abundant and prices are lower. The demand for packing is moderate. Cured Meat products and Lard are not materially changed. California Hams abundant and low. Eastern Hams are reported selling below the cost of importation.

Poultry—Hens are plenty and a little cheaper. Young Roosters and Ducks are a shade higher.

Rye—We note sale of 100 sks at \$1 80 per cts.

Vegetables—There are few changes. Cucumbers are now quotable at 50¢ 51¢ 25¢ per dozen, and String Beans, 35¢ per lb.

Seeds—Alfalfa has advanced. We are told that the jobbing rate is \$25¢ 30¢ per cts.

Wheat—Sales have been at the advance noted above. We note the following transactions: 200 sks good Milling, \$2 25; 700 sks good Oregon Milling, \$2 17; 2,000 do choice Santa Clara, \$2 20; 1,600 do choice Milling, \$2 23; 800 do do, \$2 25. A lot of 14,000 cts is reported sold in the interior, equivalent to \$2 22½ here. 11,000 sks choice white Australia to a miller, \$2 20; 1,800 do do, \$2 20; 200 do do, \$2 22; 200 do good Coast, \$2 15 per cts; 1,600 sks choice Milling, \$2 20; 750 do do, 2 20; 200 do fair, \$2 02; 300 do Sonora, \$2 20; 260 cts for Milling, \$2 15; 11,000 do Australia do, to arrive, \$2 20; 420 sks choice Milling, \$2 20; 300 Sonora, \$2 20.

Wool—The receipts of Wool are showing better quality and prices gained are higher. Fall Wool is now about out of the market. One of our large houses cleared out their fall during the week, 90,000 lbs at 10¢ 13¢. In spring Wool we note the following transactions: 160,000 lbs, 13¢ 20¢; 10,000 northern, 20¢; 10,000 straight lot of choice northern, at 26¢; 90,000 spring, 15¢ 23¢. We revise our list of quotations below to meet the grades of Wool now in the market.

### DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., APRIL 11, 1877.	
<b>BEANS.</b>	
Bayo, cts.....	3 25 @ 3 50
Butter.....	1 50 @ 2 00
Pea.....	2 40 @ 2 45
Red.....	3 00 @ —
Pink.....	3 00 @ 3 25
Sm'l White.....	2 25 @ 2 40
Lima.....	2 25 @ 2 37
<b>BROOM CORN.</b>	
Common, lb.....	2 @ 2 1/2
Choice.....	3 @ 4
<b>CHICORY.</b>	
California.....	6 1/2 @ —
German.....	15 @ 18
<b>COTTON.</b>	
Cotton, lb.....	15 @ 18
<b>DAIRY PRODUCE, ETC.</b>	
Cal. Fresh Roll, lb	25 @ 30
Point Reyes.....	30 @ —
Pickle Roll.....	22 1/2 @ 27 1/2
Firkin.....	25 @ 28
Western Reserve.....	16 @ 20
New York.....	— @ —
<b>CHEESE.</b>	
Cheese, Cal, lb.....	12 1/2 @ 15
Old.....	12 @ 15
Eastern.....	12 @ 15
N. Y. State.....	19 @ 20
<b>EGGS.</b>	
Cal. fresh, doz.....	24 @ 25
Ducks.....	22 @ 23
Oregon.....	22 @ 23
Eastern.....	19 @ 20
<b>FEED.</b>	
Bran, ton.....	22 50 @ 25
Corn Meal.....	38 00 @ 40 00
Hay.....	12 00 @ 22 00
Middlings.....	30 00 @ —
Oil Cake Meal.....	38 00 @ —
Straw, hale.....	75 @ —
<b>FLOUR.</b>	
Extra, hhl.....	6 50 @ 7 25
Superfine.....	5 00 @ 6 00
Graham.....	6 00 @ 6 50
<b>FRESH MEAT.</b>	
Beef, 1st quality, lb	7 @ 8 1/2
Second.....	6 @ 7 1/2
Third.....	4 @ 5 1/2
Mutton.....	3 @ 4
Spring Lamb.....	8 @ 10
Pork, dressed.....	4 @ 5 1/2
Dressed.....	7 1/2 @ 8
Veal.....	7 @ 8
Milk Calves.....	6 @ 8
<b>GRAIN, ETC.</b>	
Barley, feed, cts.....	1 55 @ 1 60
Brewing.....	1 65 @ 1 70
Chevalier.....	1 65 @ 1 70
Buckwheat.....	1 75 @ —
Corn, White.....	1 70 @ 1 75
Yellow.....	1 70 @ 1 75
Small Round.....	1 75 @ 1 75
Oats.....	1 70 @ 2 20
Milling.....	2 25 @ 40
Rye.....	1 80 @ 2 00
Wheat, shipping.....	2 25 @ 2 30
Milling.....	2 25 @ 2 30
<b>HIDES.</b>	
Hides, dry.....	16 @ 17
Wet salted.....	7 1/2 @ 9
<b>HONEY, ETC.</b>	
Beeswax, lb.....	25 @ 27 1/2
Honey in comb.....	10 @ 15
Strained.....	6 @ 8
<b>WOOL, ETC.</b>	
Short Free, dusty.....	13 @ 15
Good Southern.....	15 @ 18
Choice Northern.....	25 @ 28
Burry.....	12 @ 16

### RETAIL GROCERIES, ETC.

WEDNESDAY M., April 11, 1877.

Butter, California	35 @ 40	Rice.....	8 @ 12 1/2
Choice, lb.....	35 @ 40	Yeast Pwdr doz.....	1 50 @ 2 00
Cheese.....	18 @ 30	Card Oysters doz.....	1 00 @ 1 50
Eastern.....	18 @ 30	Syrup S F Gold'n.....	21 @ 20
Lard, Cal.....	20 @ 25	Dried Apples, lb.....	10 @ 12
Eastern.....	20 @ 25	Gr. Prunes.....	12 1/2 @ 14
Flour, ex fam, bbl.....	10 @ 10 00	Figs, Cal.....	9 @ 10
Corn Meal, lb.....	24 @ 3	Peaches.....	11 @ 15
Sugar, wh. crisd.....	12 @ 13 1/2	Oils, Kerosene.....	50 @ 60
Light Brown.....	8 @ 9	Wines, Old Port.....	3 50 @ 4 00
Green.....	23 @ 35	French Claret.....	1 00 @ 1 50
Coffee.....	50 @ 60	Cal. doz bot.....	3 00 @ 4 50
Fine Black.....	50 @ 60	Whisky, O K, gal.....	3 50 @ 4 00
Finest Japan.....	55 @ 61	French Brandy.....	4 00 @ 5 00
Candles, Adm'te.....	15 @ 25		
Soap, Cal.....	7 @ 10		

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & CO.]

SAN FRANCISCO, April 11, 3 P. M.	
LEGAL TENDERS IN S. F., 11 A. M., 35¢ @ 96¢. SILVER, 58¢ @ 59¢.	
GOLD IN NEW YORK, 104 1/2.	
GOLD BARS, 880 @ 890. SILVER BARS, 10 @ 15 ¢ cent. discount.	
EXCHANGE ON NEW YORK, 50¢ 55¢ 100 ¢ cent. premium for gold; on London bankers, 47¢; Commercial, 49¢; Paris, five francs \$1 dollar; Mexican dollars, 33¢ @ 34¢.	
LONDON CONSOLS, 96 1/2; Bonds, 120 1/2.	
QUICKSILVER IN S. F., by the Assk, 3 lb, 42¢ @ 42 1/2¢.	

### GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., April 11, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat, 9 @	—	Pacific Glue Co's	1 00 @ 90
Neville & Co's	9 @	Neatsfoot, No 1.....	25 @ 30
Hand Sewed 22x36.....	9 @	Castor, No 1.....	25 @ 30
24x36.....	9 @ 10	Baker's A.....	25 @ 30
24x40.....	10 @	Oliva, Plaguoli.....	25 @ 30
Machine Sewd 22x36, 9 @	—	Possel.....	4 75 @ 5 25
Flour Sacks, halves.....	9 1/2 @ 11	Palm, lb.....	9 @ —
Quarters.....	6 @ 7	Linsed, Raw.....	72 1/2 @ —
Eighths.....	4 1/2 @ 5	Boiled.....	71 @ —
Hessian, 60 inch.....	11 @ 12	Cocconut.....	30 @ —
45 inch.....	8 @ 9	China nut, cs.....	68 @ 70
40 inch.....	7 1/2 @ 8	Sperm.....	60 @ 65
Wool Sacks.....	— @ —	Coast Whales.....	60 @ 65
Hand Sewed, 3 lb.....	50 @ —	Polar, refined.....	60 @ —
Machine Sewed.....	45 @ —	Lard.....	10 @ 15
4 lb.....	55 @ —	Oliphone.....	35 @ —
Standard Gunnies.....	11 1/2 @ 12	Devo's Bril.....	34 @ 35
Bean Bags.....	7 @ 8	Photolite.....	33 @ —
CANDLES.		Nonpareil.....	50 @ —
Crystal Wax.....	17 @ —	Eureka.....	32 1/2 @ 38
Regle.....	12 1/2 @ —	Barrel kerosene.....	30 @ —
Patent Sperm.....	28 @ 30	Downer Ker.....	50 @ —
Elaine.....	50 @ —	Elaine.....	50 @ —
CANNED GOODS.		PAINTS.	
Assorted Pie Fruits.....	— @ —	Pure White Lead.....	9 1/2 @ 10 1/4
2 1/2 lb cans.....	2 75 @ 3 00	Whiting.....	13 @ —
Table do.....	3 75 @ 4 25	Putty.....	4 @ 5
Jams and Jellies.....	4 25 @ 4 50	Chalk.....	14 @ —
Pickles, hf gal.....	3 50 @ —	China White.....	24 @ —
Sardines, qr box.....	1 65 @ 1 90	Older.....	34 @ —
Hf Boxes.....	3 00 @ —	Venetian Red.....	3 1/2 @ —
COAL—Jobbing.		Averill Mixed	— @ —
Australian, ton.....	8 50 @ 9 00	Paint, gal.....	21 7 1/2
Coos Bay.....	8 00 @ —	White & tints.....	2 00 @ 2 40
Bellingham Bay.....	8 00 @ —	Green, Blue &	— @ —
Seattle.....	8 00 @ 9 00	Ch Yellow.....	3 00 @ 3 50
Cumberland.....	14 00 @ 17 00	Light Red.....	3 00 @ 3 50
Mt Diablo.....	5 75 @ 7 75	Metallic Roof.....	1 30 @ 1 60
Lehigh.....	22 00 @ —	RICE.	
Liverpool.....	8 50 @ 9 00	China No. 1, lb.....	5 1/2 @ 6 1/2
West Hartley.....	14 00 @ —	Hawaiian.....	6 @ 6 1/2
Scotch.....	7 50 @ 9 00	SALT.	
Scranton.....	13 00 @ 16 00	Cal. Bay, ton.....	13 00 @ 14 00
Vancouver Id.....	10 50 @ 12 00	Common.....	6 00 @ 8 00
Charcoal, sack.....	75 @ —	Carmen Id.....	13 00 @ 14 00
Coke, hbl.....	60 @ —	Liverpool fine.....	20 00 @ —
COFFEE.		SOAP.	
Saudwich Id, lb.....	21 1/2 @ —	Castile, lb.....	10 @ 10 1/2
Costa Rica.....	20 @ 21 1/2	Common brands.....	4 1/2 @ 6
Guatemala.....	20 @ 21 1/2	Fancy brands.....	7 @ 8
Java.....	24 @ —	SPICES.	
Manilla.....	19 1/2 @ 20	Cloves, lb.....	45 @ 50
Ground, in cs.....	25 @ —	Cassia.....	22 1/2 @ 25
FISH.		Black Pepper.....	48 @ 50
Saeco Dry Cod.....	5 @ 7	Pepper Grain.....	15 @ 17
Boneless.....	2 1/2 @ 3 1/2	Pimento.....	15 @ 16
Eastern.....	7 @ 7 1/2	Mustard, Cal.....	— @ —
Salmon, bbls.....	9 00 @ 10 00	1 lb glass.....	1 50 @ —
Hf bbls.....	4 50 @ 5 00	SUGAR, ETC.	
2 lb cans.....	3 00 @ —	Cal. Cuhe, lb.....	13 @ —
Pkld Cod, bbls.....	22 00 @ —	Circle A crushed.....	13 @ —
Hf bbls.....	11 00 @ —	Powdered.....	13 1/2 @ —
Mackerel, No. 1.....	— @ —	Fine crushed.....	13 @ —
Hf bbls.....	15 00 @ 16 00	Evaporated.....	10 @ —
In Kits.....	3 00 @ 3 25	Golden C.....	10 @ 11 1/2
Ex Mess.....	3 50 @ 4 00	Hawaiian.....	10 @ 11
Pkld Herring, bx.....	3 00 @ 3 50	Cal Syrup, kgs.....	72 1/2 @ —
Boston Smkd H'g.....	40 @ 50	Hawaiian Molasses.....	25 @ 27
LIME, ETC.		TEA.	
Lime, Sta Cruz.....	2 00 @ 2 25	Young Hyson.....	35 @ 50
Cement, Rosen-	— @ —	Country pckd cur-	— @ —
dale.....	2 75 @ 3 50	powder & Im-	— @ —
Portland.....	4 75 @ 5 50	perial.....	50 @ 60
Plaster, Golden	— @ —	Hyson.....	30 @ 35
Gate Mills.....	3 00 @ 3 25	Foo-Chow O.....	35 @ 60
Land Plaster, tn 10.....	10 @ 12 50	Japan, 1st quality	40 @ 50
NAILS.		2d quality.....	25 @ 35
Ass'ted sizes, keg 3 25 @ 4 00	— @ —		
LEATHER.			
[WHOLESALE.]			
WEDNESDAY M. April 11, 1877			
Sole Leather, heavy, lb.....	26 @ 29	26 @ 29	29
Light.....	22 @ 24	— @ —	—
Jodot, 8 Kil, doz.....	48 00 @ 50 00	68 00 @ 70 00	70 00
11 to 13 Kil.....	68 00 @ 70 00	82 00 @ 84 00	84 00
14 to 19 Kil.....	68 00 @ 70 00	87 00 @ 89 00	89 00
Second Choice, 11 to 16 Kil.....	68 00 @ 70 00	63 00 @ 65 00	65 00
Cortina, 12 to 16 Kil.....	68 00 @ 70 00	71 00 @ 73 00	73 00
Females, 12 to 13 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
14 to 16 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
Simon Ulmo, Females, 12 to 13 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
14 to 15 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
16 to 17 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
Simon, 18 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
For Linings.....	68 00 @ 70 00	68 00 @ 70 00	70 00
24 Kil.....	68 00 @ 70 00	68 00 @ 70 00	70 00
Robert Calf, 7 and 9 Kil.....	35 00 @ 40 00	1 00 @ 1 35	1 35
Kips, French, lb.....	1 00 @ 1 35	40 00 @ 60 00	60 00
Cal. doz.....	40 00 @ 60 00	8 00 @ 15 00	15 00
French Sheep, all colors.....	8 00 @ 15 00	1 00 @ 1 25	1 25
Eastern Calf for Backs, lb.....	1 00 @ 1 25	9 00 @ 13 00	13 00
Sheep Roans for Topping, all colors, doz.....	9 00 @ 13 00	5 00 @ 6 00	6 00
For Linings.....	5 00 @ 6 00	1 75 @ 4 50	4 50
Cal. Russet Sheep Linings.....	1 75 @ 4 50	4 00 @ —	—
Boot Legs, French Calf, pair.....	4 00 @ —	4 00 @ 4 75	4 75
Good French Calf.....	4 00 @ 4 75	5 00 @ 5 25	5 25
Best Jodot Calf.....	5 00 @ 5 25	35 @ 38	38
Leather, Harness, lb.....	35 @ 38	43 00 @ 72 00	72 00
Fair Bridle, doz.....	43 00 @ 72 00	30 00 @ 50 00	50 00
Silber, lb.....	30 00 @ 50 00	18 @ 20	20
Welt, doz.....	18 @ 20	17 @ 19	19
Buff, ft.....	17 @ 19	— @ —	—
Wax Side.....	— @ —	— @ —	—



## Nurserymen.



**TREES,**  
**TREES AND PLANTS,**

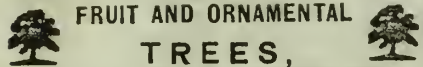
OF EVERY DESCRIPTION, AT THE CAPITAL NURS-  
ERIES, SACRAMENTO. A FULL ASSORT-  
MENT OF EVERYTHING IN THE NURS-  
ERY LINE, BOTH WHOLESALE  
AND RETAIL, AT LOWEST  
MARKET RATES.

ALSO, A VERY LARGE AND COMPLETE ASSORT-  
MENT OF FIELD, GARDEN, LAWN AND TREE  
SEEDS, WHICH WE OFFER AT VERY LOW  
RATES, BOTH TO THE TRADE AND  
PLANTER IN LARGE OR SMALL  
LOTS.

Catalogues, Price-Lists, and Printed Directions free  
on application. Address,

W. R. STRONG & CO.,

Nos. 6, 8 and 10 J Street, Sacramento.



**FRUIT AND ORNAMENTAL**  
**TREES,**

Evergreens and Green-house Plants,  
Comprising Everything New and Rare.

Our stock of Orange and Lemon trees are far superior  
to anything of the kind ever offered in this market. Two  
and three years old. Grafted of choice varieties.  
FRUIT TREES of all varieties in large quantity at re-  
duced prices. Also, Monterey Cypress, Monterey Pines,  
Blue Gums, Magnolias, Acanthas, Roses, etc. Those laying  
out new grounds will find it to their advantage to call  
and examine our stock before purchasing elsewhere.

THOS. MEHERIN,

516 Battery Street,

P. O. Box 722. Opposite Postoffice, San Francisco,  
Agent for the Nurseries of B. S. Fox, San Jose. Send  
for Price Catalogue.

## THE DINGEE & CONARD CO'S

BEAUTIFUL EVER-BLOOMING

# ROSES

Strong Pot Plants, suitable for immediate flowering,  
sent safely by mail, postpaid. 5 splendid varieties,  
your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26  
for \$4; 35 for \$5. For 10 cents each additional, one  
Magnificent Premium Rose to every dollar's worth  
ordered. Send for our NEW GUIDE TO ROSE  
CULTURE, and choose from over 300 finest sorts.  
We make Roses a Great Specialty, and are the largest  
Rose-growers in America. Refer to 100,000 customers in the  
United States and Canada. THE DINGEE & CONARD  
CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

### LOS GATOS NURSERIES,

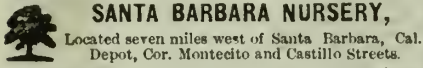
S. NEWHALL, Prop'r, - - - San Jose, Cal.

A large and general assortment of

### Fruit and Ornamental Trees,

Evergreens, Flowering Shrubs, Roses, Greenhouse  
Plants, Grapevines, Small Fruits, etc. I offer for  
sale a well assorted stock. Low-topped,  
sturdy plants a specialty. Address,

S. NEWHALL, - - - San Jose, Cal.



### SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, - - - Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Ever-  
green Shrubbery.

### HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.,

Wholesale Grower of

### ORANGE, LEMON and LIME TREES.

Geo. F. Silvester, Seedsman, 317 Washington Street,  
San Francisco, has samples and will fill orders. Trees  
packed and boxed so as to be safely transplanted at any  
season. Summer months the best for removal.

## 500 CHOICE VARIETIES OF PLANTS

SQUILLS, Camellias, Pond Lilies, Begonias, Ferns,  
Dahlias and Roses, sent safely by mail  
at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

**Trees, Plants** Bulbs. Fall Price List and Bulb  
Catalogue GRATIS, Address, F.  
K. PHENIX, Bloomington Nursery, Ill.

### LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED  
TO CALIFORNIA LANDS AND CLIMATE, AND  
IS DESTINED TO BE USED TO IM-  
MENSE ADVANTAGE.

### PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

### GOLDEN GATE PLASTER MILLS,

LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

### INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

## Seedsman.

## BULBS SEEDS TREES

### SEVIN VINCENT & CO.,

Wholesale and retail dealers in and

### Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and

Ornamental Trees, etc.

We call the attention of farmers and country merchants  
to our unusually low prices. All Seeds warranted  
fresh, pure and reliable. ~~25~~ Trade price list  
on application.

"We have just issued the most complete guide to the  
Vegetable and Flower Garden ever issued upon this coast.  
It is Handsomely Illustrated, and contains full descriptions  
of Vegetables, Flowers, Grasses, Trees, etc., with  
full instructions as to their culture; mailed free on appli-  
cation.

SEVIN VINCENT & CO.,

607 Sansome street, S. F.

P. O. Box 10231.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND  
ABRIDGED CATALOGUE - 128 pages. Embraces a monthly  
calendar of operations, and a price-list of all the leading  
Garden, Field and Flower Seeds, profusely illustrated, with  
brief directions for their culture. Mailed FREE to all ap-  
plicants. B. K. BLISS & SONS, 34 Barclay Street, New  
York. P. O. Box No. 5712.

### RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote, March 7th, 1877,  
that RENNIE'S PRIZE SWING TURNIP yielded more than  
three times as much as the common seed. Price, per  
pound, (in American currency, pre-paid,) thirty cents.  
WM. RENNIE, Seedsman, TORONTO, CANADA.

### SPANISH CHUFA

Address

SEED FOR SALE.

L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

**Trees, Plants.** Spring Lists free. F. K. Puck-  
six, Bloomington Nursery, Illinois.

## TO COLOR BUTTER.

EVERY DAIRYMAN SHOULD USE

Wells, Richardson & Co.'s

### PERFECTED BUTTER COLOR.

It adds five cents per pound to the value.

It gives a pure rich Dandelion color.

It imparts no taste or smell.

It is as harmless as salt.

It is better than Carr

It is better than Annatto.

It is better than any other coloring.

Foreign or domestic, liquid or solid.

A sample sufficient to color fifty pounds of butter  
will be sent to any address, postpaid, on receipt of ten  
cents. Every Dairyman who wishes to realize the highest  
price should give it a trial now.

As an energetic man wishes to act as agent in every  
town. Liberal terms to the right man. For terms and  
territory, address at once,

WELLS, RICHARDSON & CO.,

Burlington, Vermont.

## HEALD'S

BUSINESS

COLLEGE.

No. 24 Post Street,

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its  
teachers are competent and experienced. Its pupils are  
from the best class of young men in the State. It makes  
Business Education a specialty; yet its instruction is not  
confined to Book-keeping and Arithmetic merely, but gives  
such broad culture as the times demand. Thorough in-  
struction is given in all the branches of an English educa-  
tion, and Modern Languages are practically taught. The  
discipline is excellent, and its system of Actual Business  
Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for in-  
struction in all the Departments of the College.  
TELEGRAPHIC DEPARTMENT.—In this Department young  
men and young ladies are practically and thoroughly fit-  
ted for operators, both by sound and paper.

For further particulars call at the College, 24 Post  
street, or address for circulars, E. P. HEALD,  
President Business College, San Francisco, Cal.

Dewey & Co. { 224 } Patent Agt's.  
{ Sansome St }

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm  
Pumping, Railroad  
and Power

### WINDMILLS,

Pumps & Fixtures,

Have been in use on the  
Pacific Coast in the towns  
and farming districts for  
over four years, and where-  
ever they have been sold  
(and there are thousands of  
them out) they are doing  
their work as well as when  
put up. A careful perusal  
of our Circulars gives a fair  
representation of them and  
shows their simplicity.

We are prepared to fill orders for all sizes, from a  
PUMPING MILL to a 24-foot POWER MILL for running  
Machinery, as well as doing the pumping.

### The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now  
been tested to entire satisfaction  
of all, and meets the demand for  
an article of that kind that has  
not been supplied on the Pacific  
Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars  
and information to

### HORTON & KENNEDY,

Managers for California and Pacific Coast,

General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

### H. W. RICE,

Manufacturer of

The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Saw-  
ing and all purposes. These engines burn less fuel than any  
engines in use. Wood-Burning Engines changed to Straw-  
Burners, Saw-mill and Flour-mill Engines. Second-hand  
portable engines and boilers in good repair, cheaper than at  
any other place in the State. New boilers made to order,  
and repairs in the city or country done promptly. Repairs  
made on wood-working and fine machinery. Threshers and  
agricultural machinery made and repaired. ALL WORK  
WARRANTED. Office and works, No. 56 Bluxome Street,  
near Fifth, San Francisco, Cal.

### MATTESON & WILLIAMSON'S



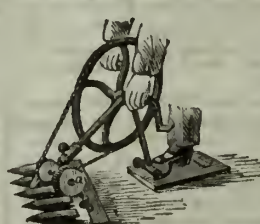
Took the Premium over all at the great plowing Match  
in Stockton, in 1870.

This Plow is thoroughly made by practical men who  
have been long in the business and know what is required  
in the construction of Gang Plows. It is quickly adjusted.  
Sufficient play is given so that the tongue will pass over  
cradle knolls without changing the working position of the  
shares. It is so constructed that the wheels themselves  
govern the action of the Plow correctly. It has various  
points of superiority, and can be relied upon as the best  
and most desirable Gang Plow in the world. Send for  
circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

### NEW PATENT HARVEST SHARPENER.



This cut represents  
a new device for sharp-  
ening the knives of all  
kinds of Mowing and  
Reaping machines. It  
weighs only a few  
pounds and is design-  
ed to carry with the  
Reaper for convenient  
use when required.

The knives can be  
sharpened without  
taking them out or un-  
hitching the team, and  
in less time than it is  
possible to sharpen  
them on the best grindstone. Only one person is required to  
do the work. The Emery wheel, a, is regulated by a set screw  
so that in grinding, the exact bevel can be given to each sec-  
tion. When harvesting is over you will find it a very useful  
machine for grinding knives, axes, chisels, shears, etc.

Address,  
17 New Montgomery St., San Francisco.

## Fraud! Fraud!!

COLLINS & CO'S

### CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior coun-  
terfeit plows and points which are being sold as  
genuine cast, cast steel. The Genuine Steels are  
stamped with our trade mark:

### COLLINS & CO., HARTFORD.

Look for this stamp before buying plows or  
shares, and secure the genuine. Full particulars  
of new and improved plows sent to any address.

COLLINS & CO.,

212 Water Street, New York.

## The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

NURSEYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume 11 Now Ready.

The book is indispensable for every Nurseryman, Flor-  
ist or Seedsman in the country. It gives the name,  
Postoffice and Business of those engaged in any of the  
departments of the Nursery Trade, alphabetically ar-  
ranged by States and Postoffices, making the Book of  
easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,

Publishers, Galena, Illinois.

### MUSIC BOOKS

FOR—

### Schools, Academies & Seminaries.

THE HIGH SCHOOL CHOIR, (\$1, or \$2 per  
doz.) is already a "proved and prized" book in a mul-  
titude of schools, and has songs in 2, 3 and 4 parts, by  
EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by  
EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female  
voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75  
cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so suc-  
cessful as a Singing School book, is also a practically  
good class book for High Schools.

THE WHIPOORWILL, (50 cents) by W. O. PER-  
KINS, (author of the "Golden Robin"), is filled with  
genial, pleasing songs for Common Schools.

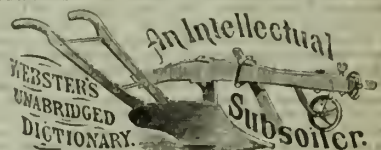
AMERICAN SCHOOL MUSIC READERS, Book I, (35  
cents), Book II (50 cents), Book III (50 cents), are well-  
made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now  
enter so gracefully into School Life, we commend three  
books of uncommon beauty, our Sabbath School Song  
Books, RIVER OF LIFE, (35 cents), SHINING RIVER,  
(35 cents), GOOD NEWS, (35 cents)

Either book mailed, post-free, for Retail Price.

### OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.



### Webster's Dictionary.

10,000 Words and Meanings not in other Dictionaries.

3,000 Engravings. 1,840 Pages Quarto.

FOUR PAGES COLORED PLATES.

W "THE BEST PRACTICAL ENGLISH DICTIONARY  
EXTANT." London Quarterly Review, Oct., 1873.

E The sales of Webster's Dictionaries through-  
out the country in 1873 were 20 times as large

S as the sales of any other Dictionaries.

T One family of children having WEBSTER'S  
UNABRIDGED, and using it freely, and another

E not having it, the first will become much the  
most intelligent men and women. Ask your

R teacher or minister if it is not so, then buy the  
book, and use, and urge its use, freely.

S G. & C. MERRIAM, Springfield, Mass.

## H. H. H.

### HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from  
all parts of the coast show it to be a companion in every  
family. It quickly removes Wind Galls, Spavins, Callos  
Lumps, Sweeney, and all blemishes of the horse, while  
the family finds it indispensable for Sprains, Bruises,  
Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,

Stockton, Cal.

### LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.



# UNION BOX FACTORY, GEO. W. SWAN & CO.,

114 to 124 Spear Street, between Mission and Howard, San Francisco.

## STRAWBERRY BASKETS:

SWAN & CO.'S PATENT, ONE POUND, TIN TOP, PER 1,000,	\$ 9.00
SWAN & CO.'S PATENT, ONE POUND, NO TIN, PER 1,000,	5.55

VERILL MIXED PAINT,

MANUFACTURED BY THE

California Paint Company.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED  
SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

For Sample Cards and Circulars, Address

California Paint Company,

27 STEVENSON STREET, S. F.

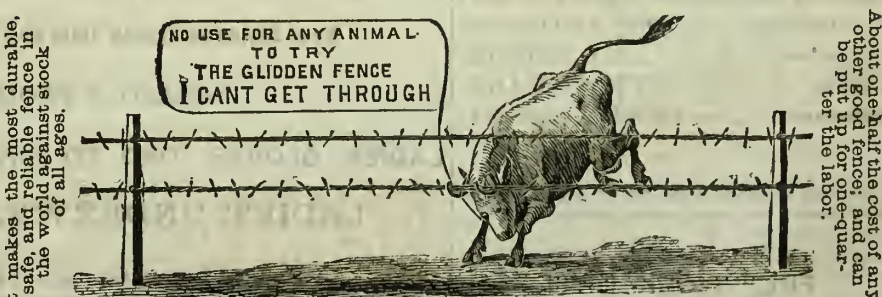
In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.  
Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by  
J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and  
is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb or finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

YOUR NAME PRINTED on Forty Mixed Cards for \$55 & \$77 a Week to Agents. \$10 Outfit Free. Ten Cents. STEVENSON BROS., Northford, Conn. P. O. VICKERY, Augusta, Maine.

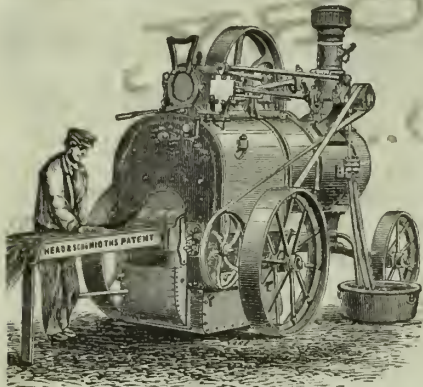
**ROWELL & CHESMAN**  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.  
Publish a book on ADVERTISING, AND HOW  
AND WHERE TO DO IT, that every Advertiser  
should have before making contracts either with the  
papers or through Agents. It contains lists of papers,  
prices, circulations, and much other matter of value  
which will save time and money to those seeking in-  
formation about, or making contracts for Newspaper  
Advertising. Send address on postal card, and this  
book will be forwarded free of charge.

**DAVIS & SUTTON,**  
75 Warren St., New York,  
Commission Merchants in Cal'a Produce  
REFERENCE.—Tradesmen's National Bank, N. Y.; Ell-  
wanger & Barry, Rochester, N. Y.; C. W. Reed, Sacra-  
mento, Cal.; A. Lusk & Co., San Francisco, Cal.  
Newspaper Fileholders.  
Dewey's new elastic fileholders (black walnut), size of  
the PRESS, Harper's Weekly and Scientific American, for  
50 cents. Larger sizes to suit any newspaper, 75  
cents. By mail, postpaid, 10 cents extra. Cash with all  
orders. Patent allowed. Address, Dwyer & Co., Pub-  
lishers, San Francisco.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.



## HEAD & SCHEMOITH'S STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,  
10 Bush Street, S. F.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

Grangers' Bank of California,  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

### OFFICERS:

PRESIDENT AND MANAGER... C. J. CRESSEY.  
VICE-PRESIDENT... JOHN LEWELLING.  
TREASURER... J. V. WEBSTER.  
CASHIER... ALBERT MONTELLIER.  
SECRETARY... FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

### FRET WORK DRILL.

Fancy Wood Workers, Model Makers, Wood Engravers, Mechanics, and all persons who have occasion to drill small holes in wood or metal, will find these machines superior to any other hand device for drilling, and in many respects superior to a power drill, as they can be used in any position, and on any surface, large or small.  
Have fine tempered Steel Bits, and will do the most delicate work without danger of splitting. Sent by mail, with one extra bit, for \$1, (with five extra bits, assorted sizes, for \$1.25.) Nine dollars per dozen.

COLMAN SMITH, New Haven, Conn.

25 FANCY CARDS, all styles, with name, 10c.; 20 Ladies' Favorite Cards, all styles, with name, 10c.; 20 Fancy Scrolls, 15 styles, no name, 10c.; postpaid. J. B. HUSTED, Nassau, Rems. Co., N. Y.

Don't waste your time in reading cheap trash.

## Howell's Improved Patent Wagon Brake.

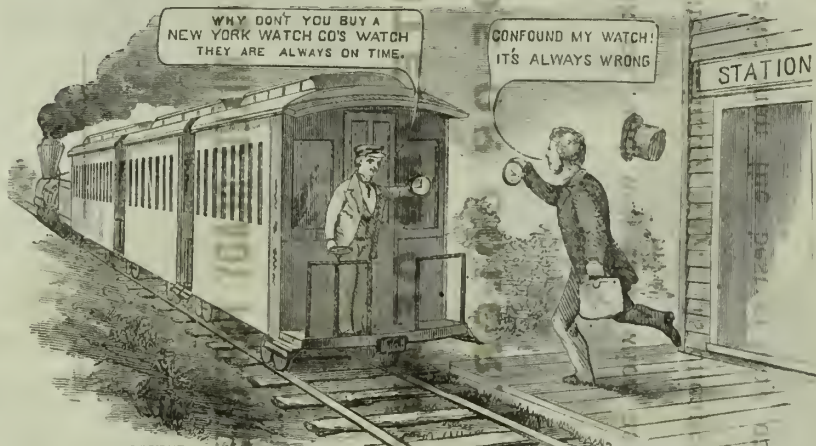


The brake shoes, A, are suspended in front of the hind wheels, by arms of shafts, the inner ends of the latter being secured in a sleeve, B, (dotted lines) underneath the wagon. The shafts not being connected together, and working independently in the sleeve, B, it follows that either brake shoe may be pushed against its wheel without causing a like movement of the opposite shoe. To each shoe is attached a rod, C, which is attached to a pivoted lever, D, and these last by rods to the evener, E. The levers, D, it will be observed, are pivoted to the rear axle, so that the direction of the forces imparted by them to the axle and by the shoes to the wheels, will oppose and neutralize each other through the wheels and the axles. The evener, E, is pivoted to the end of a rod which is connected to an arm of an oscillating shaft suspended from the bolster or front part of the wagon box, and provided with a hand lever, F, for operating the mechanism.

The inventor claims for his brake that it has the following advantages over the common brake: It operates with greater force; it racks a wagon less than any other lock you can attach to it; it imparts an equal force to each wheel, though the diameters may not be equal; in dangerous places you can always rely upon it.

Mr. Howell writes us that many parties are taking off the old brakes and substituting his. Any further information may be had by addressing C. M. HOWELL, Andover, N. J.

## The Value of a Correct Time Piece.



[Scene on the S. F. & Oakland (C. P.) R. R.]

"Be sure you are right, then go ahead." *Dave Crockett.*

But how can you ever be sure you are right? Then stop buying unreliable watches when it costs but a trifle more to get one of the true time keepers made at Springfield, Mass., by the N. Y. Watch Co. They never fail. Prices reasonable and every watch guaranteed by the reliable firm of DEWEY & JORDAN, No. 433 Montgomery Street, San Francisco.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street, San Francisco.

### OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody.

New Styles in Ladies' Hats and French Millinery. New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00.

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

## FALKNER, BELL & CO.'S WOOLAND LIVE STOCK AGENCY.

Office—430 CALIFORNIA STREET.

Warehouse, Corner of 6th and Townsend Streets.

### FIRE INSURANCE AT SPECIALLY REDUCED RATES.

Stock Yards Butchertown, Corner of 14th Avenue and Second St.

Live Stock of All Descriptions Received for Sale.

Farmers, write for your paper

Get the best. Take the RURAL.

## SEEDS. SEEDS.

### IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton

Yellow Flint Corn.

Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in

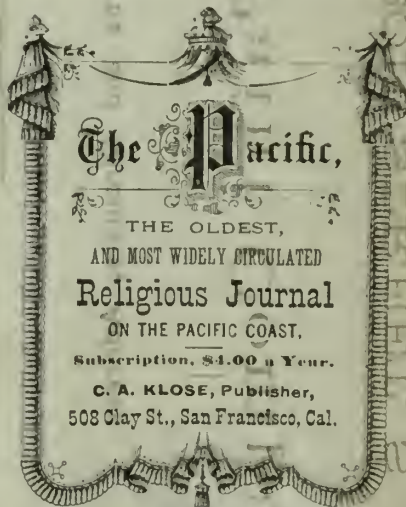


FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application.  
My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL SUBSCRIBERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.



THE OLDEST,  
AND MOST WIDELY CIRCULATED  
Religious Journal  
ON THE PACIFIC COAST.

Subscription, \$4.00 a Year.

C. A. KLOSE, Publisher,  
508 Clay St., San Francisco, Cal.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

Eggs Shipped to

EGGS, \$0.50 per doz.

Any part of the

BRAHMAS

Coast to Hake Af-

LEGHORNS

ter Arrive

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

Patronize papers that avoid humbug advertisements.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, APRIL 21, 1877.

[Number 16.]

## Excavating by Machinery.

A city genius once condoled with a farmer because all the ground in the country was wrong side up and he had to turn it all over before anything would grow. It might also be a subject of regret that so much ground is put by nature in the wrong place, so that so much time and money must be expended in getting it into its right location. This is doubly true when men have to do the moving of earth with plows, shovels, wheelbarrows and wagons, for then it costs a good deal of money to move a little dirt. We saw something in Oakland the other day which promises to throw aside all these expensive apparatus and labor, and we were so interested in the working of the machine that we have secured an engraving of it, as may be seen on this page. It is in brief a machine which digs and shoulders its own load, and then runs off and dumps it and returns for another in a fraction of the time in which half a dozen men could throw the same quantity of earth upon a wagon. But we propose to be more definite than this, both in the description of the machine and the work which we saw it doing. First, to describe the machine:

It is the invention of Jacob Price, Esq., of the Price Press Company, and was patented through Dewey & Co. It is totally unlike other machines made for a similar purpose, differing from them widely in principle, construction, appearance and operation. It is, in fact, a three-wheeled cart, the box being hung low down between the two hind wheels. The forward wheel is a caster wheel, turning freely in any direction and allowing the machine to be turned around in a circle ten feet in diameter. All the wheels are wrought iron, with cast iron hubs and steel tires, and with the exception of the "off" or right-hand wheel, have nothing peculiar about them. The one excepted, however, has a tire 12 inches wide and five-sixteenths of an inch thick, with the spokes set well over the outer edge of it. The inside of the tire is divided up into buckets or pockets, by blades of iron about 10 by 12 inches, one of which is bolted to each spoke. Beneath the box and just inside of the elevating wheel above described, is an ordinary plow, throwing its furrow on the inside of the wide tire into the above mentioned buckets. In other words, the earth is plowed into the wheel and by it carried up and emptied into the earth box. A moment's reflection will show that the buckets are in a proper position to hold the dirt, except when at or near the top of the wheel, where they are of course bottom up, or nearly so, causing them to discharge their contents. At the top of the earth box is a horizontal distributing wheel, driven by the spokes of the "near" hind wheel. This wheel serves to keep the earth level, and make it fill the box chock full in every corner. The load is discharged by turning the three bottom planks on their edge, by means of the lever shown on the left hand of the driver. The lever on the right, is for raising or lowering the plow.

The method of operation is as follows: The elevating wheel and the "off" horses travel in the furrow. The driver lowers the plow, and

the box commences to fill, requiring less than a minute to take a full load. When the box is full the plow is raised, without stopping the team, and the load is driven where it is wanted and discharged in one second, also without stopping. Indeed, there is no necessity for stopping during an entire day's work, either for loading or discharging.

The work which we saw doing in Oakland last week was the grading of a large lot down to the level of the street and delivering the earth in a low spot about 800 feet distant, thus making two well graded blocks from two which were very much out of grade. There were six of the machines working in a circuit, which was 1,600 feet long. We timed these machines and found that the complete circuit from the point of dumping to this point again was between six and seven minutes. The machines were of different sizes. Some carried two yards of earth at a load, and were drawn by four horses. Making a trip in six minutes, 10 in an hour, and 100 in a day of 10 hours, it would move off 200 yards of earth in the working day. This is rapid

repeated rolling. This is, no doubt, a point of considerable importance in the making of roads, trackways for railroads and levees.

The machines are built by the Price Press Company, at the well known works of the Sweepstakes Plow Company, at San Leandro, Alameda county, where the implement will be shown to all who are interested. The city office is with Baker & Hamilton, 17 Front street, San Francisco, where one of the proprietors, Mr. I. J. Truman, may be interviewed concerning the machines.

VALUABLE PAMPHLETS.—We have received through the courtesy of Luther E. Sleight, Esq., two valuable pamphlets, one published by the Department of Agriculture at Washington. One is "The Eucalyptus Globulus," from a botanic, economic and medical point of view, embracing its introduction, culture and uses. It is translated from the French of J. E. Planchon, with an introduction. It is a very complete review

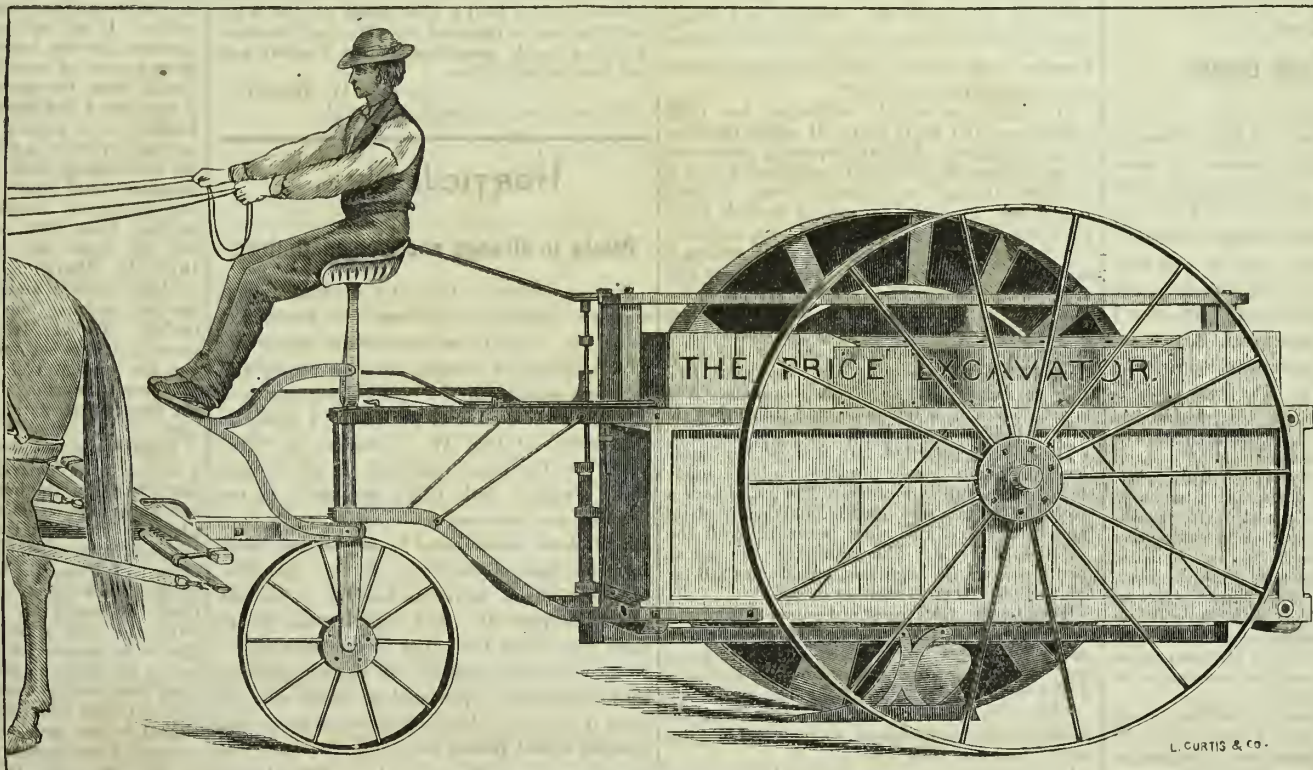
## California Honey for Spain.

Our beekeepers may well congratulate themselves upon the points of progress which they have attained by enterprising effort during the past year. Of course many of these efforts are as yet in process of development, but the promises are great and fit themes for congratulation. We would allude, at this time, to the test which is being made of the foreign markets with shipments of our honey. We have stated before that consignments were made to England. Of the results of these we are not yet informed. We read now in the *Beekeepers' Magazine* that the large shipment of the San Diego product, which Mr. Harbison took with him to New York last summer, has not been permitted to lie awaiting the slow demand of the New York market, but has been pushed across the water, and is now being rapidly passed across the counters at Bordeaux. Thus, at least, we bid fair to turn the tide of gold which flows to Bordeaux from this country in return for the shipments of wine and raisins which they make to us. The account which the *Magazine* gives of the movement to Spain is interesting:

"A caveat was recently filed for protecting all honey stored in Harbison's frames by means of an ingenious device of glass and pasteboard, which, when finished, presents the appearance of the neatest imaginable cap, weighing about two and one-half pounds each. One dozen of these are packed in a crate, and is a prominent feature in the trade, and is continually increasing. It is mostly sent to France, where it was not introduced until this last winter. We know our readers will be astonished when we tell them that a merchant chartered a sailing vessel to go to Malaga, Spain, for a cargo of raisins, and on her outward bound trip she carried no less than 10,000 pounds of Mr. Harbison's honey, protected and packed in this manner, to their branch house in Bordeaux, where it is being satisfactorily disposed of. There is a heavy duty in France on all goods packed in cans, jars or bottles imported into that country, so the trade in honey to that country will be confined to packages. Carpenters were employed, and this honey all made perfectly fast on board the vessel, and notwithstanding they encountered rough weather it was landed in reasonably good order. We are told by packers that they are largely oversold in some more popular styles to go to Europe. All this is extremely encouraging to producers and packers, and if we only persevere in the right course, and put up only good merchantable goods, such honey as we would wish to place upon our own tables, with the natural resources of this country developed by intelligence, we can extend our trade at home and in Europe to an indefinite extent."

The outlook for this season's production of honey is greatly improved by the considerable showers which have fallen during the last few weeks. This week's rains are very grateful, and will rejoice the busy dwellers in the canyons of the south.

It looks now as if war in Europe was inevitable, and would be declared in a few days.



THE PRICE EXCAVATOR.

work, and at 15 cents a yard, the lowest rate for excavating, a machine would earn \$30 per day. Quite a notable feature of the work was the ease with which the horses did the work. It was between three and four in the afternoon when we were at this place and yet the horses were fresh and active as the most exacting teamster could desire, although they had kept up the rate of excavating which we have mentioned since morning.

The value of the machine may be clearly seen when we state some facts from the actual working of it in the hands of Mr. Price. He took a job of excavating upon which the lowest bid by contractors working with plows, shovels, scrapers, teams, etc., was \$9,000. Mr. Price put his price at \$4,000 and cleared \$2,000 on the job. The job at which we saw him at work was taken by a contractor at 16 1/2 cents a yard. The time was dull and the contractor took it low to keep his men at work, expecting to get merely wages out of the job. It was a hard piece of earth and the contractor gave it up, saying he could not make horse-feed at it. Mr. Price took the job at 15 cents per yard for cutting (nothing for filling), and is moving dirt rapidly and will do very well on it beyond doubt. We noticed one other point at the work and that is that the deposited dirt is packed down nearly as hard as a roadbed by the constant passage of the machines, which with their weight and broad wheels produce the effect of

of the tree, and will be of interest to many in this State where the tree has reached such splendid growth. The other pamphlet is an essay on the pear blight as it affects Eastern orchards and works such wide injury. The essay is the result of investigations by Professor Brainerd, of the Patent Office, and is regarded by high authorities as furnishing a satisfactory explanation of phenomena which have been unexplained for half a century. The essay is illustrated. His conclusion is that the blight of the pear tree is caused wholly by excessive solar heat, by which the tender and forming cells are ruptured, the elaborated sap poured out into the disorganized tissues, coagulated and dried, and consequently unfitted for the purposes of nutrition and growth. His practical deduction is that the remedy must be sought not in external applications to the injured parts, nor even by excision, but by planting in suitable soil and in situations that will afford protection from the devouring heat.

SILK WORM EGGS EXPORTATION.—Japan now exports silk worm eggs, principally by way of San Francisco. The route by India has been abandoned. The railroad across the American continent enables Japanese exporters to prolong the season and send off boxes down to the end of the year, which would be impossible by way of Suez. The Messageries' maritime steamers thus lose an important freight.



## CORRESPONDENCE.

### Lake County.

EDITORS PRESS:—I seldom see any mention of this county. I cannot see what is the reason that so few of the farmers of this section think it worth while letting the outside world hear how we are progressing. We may consider ourselves blessed most abundantly with such a season as the present, when from other parts we hear of failures of crops from the drouth and the stock suffering for feed. Taking the whole season through we have had a full average fall of rain. The crop prospects look most flattering. During the dry spell the farmers were enabled to put in all the available land, and the rainfall since has been sufficient to ensure more than our usual crop. We are not scared of north wind, for it seldom blows enough to damage us, and we are sure to have more or less rain during this month. If it rains anywhere in the State it rains here.

Feed is looking splendid and has been abundant throughout the winter. I have not seen it look as well at this time of year during my residence here, nearly five years. Shearing has commenced, being nearly three weeks earlier than usual; the sheep have been fat and thrifty since last fall, so that the wool has made a good and quick growth. Sheep men are in hopes that the wool from these parts will fetch them a somewhat higher price than usual. Cattle have likewise done well and thriven throughout the winter. If some of the stock men in the dried up counties could only get their starving flocks and herds into the mountains here it would make their hearts rejoice.

There is some talk of a railroad into this county by way of Cache creek. There is a great diversity of opinion as to the effect it will have on us. For my part I am in hopes it will come, the sooner the better, and the nearer to this town the better. You shall hear from me again ere long, and I trust that this letter may be of interest to some of your readers.

WM. C. GREENFIELD.

Middletown, Cal., April 8th.

### Foss Valley, Napa County.

EDITORS PRESS:—Yesterday I made a visit in the interests of the PACIFIC RURAL PRESS to Foss valley. This valley is located 10 miles north of Napa. I was greatly delighted with my trip and made notes of matters of interest which I intended to write up for the readers of the PRESS. My route was over a well-kept mountain road and I saw some comfortable homes on going over the mountain. The first I came to was Mr. J. D. Enas. Mr. Enas is engaged in bee culture, and promises some remarks on the subject occasionally. The next place is the home ranch of Mr. Logan. Mr. Logan has some of his ranch set in blackberries. The ranch is under a high state of cultivation and yielding abundant crops of superior fruit. Mr. Logan is also engaged in the poultry business, for which he has a splendid place. After reaching Foss valley I first came upon the attractive looking and well-kept ranch of Mr. William Clark. His place, as first seen from the road, barn, dwelling-house and tool-houses, give an impression of neatness, thrift and convenience, which by no means is lessened by a close examination. Mr. Clark has a farm of 2,000 acres; 300 acres of grain land and the remainder, or most of it, good grazing land.

I next visited Mr. Mosier. He has a large dairy ranch. I judged from a hasty survey of the property that he had been very fortunate in securing so good a location for the business. My first impression on visiting Foss valley was that it was not of as much importance or value as I had supposed. But as I rode around among the farms getting acquainted with the people, learning the considerable extent of the favored region, its fine, warm, sheltered climate, its beautiful romantic views, its grand water privileges from clear mountain streams, I became more assured that it was a nice place to live. I was favorably impressed with the people and their general intelligence, pleasant manners and all the social virtues as far as I observed.

A. N. S.

Capell, Cal., April 19th, 1877.

### Anderson Springs—A Correction.

EDITORS PRESS:—In your last issue is an article giving a description of some important points of Lake county. I would like to invite the writer to come to my place, and I would convince him he did not know what he was writing about when he gave the description of Anderson springs. He says: "Anderson springs are three miles west of Middletown, on one of the head waters of Putah creek. They are little visited except by campers. The waters are cold, and contain iron, sulphur, soda and magnesia chiefly. There are no baths." The above is wrong from beginning to end.

Anderson springs are situated five miles from Middletown, and six from the Little Geysers, in

Napa county, on Little Sulphur creek, in the center of a beautiful grove of oak, pine and spruce timber. There are some 12 springs in all—eight cold and two hot. The temperature of the one which supplies the baths—a white sulphur and iron—is 130° F. There are six bath tubs of the latest approved pattern, and plenty of hot sulphur water to use in them. There is no magnesia in any of the waters of these springs, but principally contain sulphur, iron and soda; and one sour spring, which, in my opinion, gets its acid taste from the presence of sulphurous acid. It is true that it is very much frequented by campers, as there is here one of the most beautiful camping grounds in the State, and finest drinking water; and I will state here that campers are always welcome. The sick and ailing are not always in circumstances to come to the hotel and pay their \$12 per week. Last summer, owing to litigation, we did not open; notwithstanding, we had a full house; but now, as legal matters are at last finally settled, we propose to open on the 1st of May, when there will be a stage line running to the place from Middletown, and on to the Big Geysers; distance, nine miles. Board and lodgings from \$10 to \$20 per week.

I would like you to publish the above facts as a contradiction to your correspondent's mistaken statements.

A. ANDERSON.

Anderson Springs, Lake county, Apr. 13th.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Merits of Pure-Bred Poultry—Non-Setters.

EDITORS PRESS:—The non-setters, as their name indicates, do not incubate or rear young; they comprise the Brown, White, Dominique and Black Leghorns, Hamburgs, Houdans, Crevecoeurs and Polish, also a few other varieties. As a class, they are of medium size, weighing from 10 to 13 pounds per pair. Their main forte is the production of eggs, which, combined with their fine plumage and handsome appearance, make them universal favorites. They are very active, and when given ample range require but little feed.

The Leghorns, widely celebrated for their prolificness, and truly rival all other varieties as egg producers. Pullets frequently commence laying at from three to four months old, and it is not an unusual occurrence for one of these hens to lay 20 dozen of eggs in a single year. They lose no time in wanting to sit, and only stop laying while molting and when taking a short rest. They can be made great pets and seem to appreciate the care and attention bestowed upon them. Our trial with the Brown and White Leghorns has fully convinced us of their superior qualifications, and as we have raised them for several years, we have had time to form quite an accurate opinion. We have a cock and a few hens, and think they do fully as well as in the East.

The Hamburgs are of fair size, with a handsome rose comb, glossy plumage and are models of beauty and symmetry. The cocks have a large flowing tail and hackle, and many claim them to be one of the most beautiful of all the varieties of fowls. The Hamburgs are not as good layers as the Leghorns, but do not fall far below them either in number or size.

Houdans are the largest of the non-setters and frequently raise the scales at 14 pounds per pair. Their eggs are large and many in number. A peculiar characteristic of the Houdans is their fifth toe, which is near the fourth one and has a direction upward. Without this acquisition they are termed disqualified and debarred from the show-pen.

Crevecoeurs are similar to the Houdans, but are not a popular variety in the United States. They are bred quite extensively in France.

The Polish comprise a few varieties of different colors, but their characteristics are mainly the same. They have the well-known tuft or crest of feathers, which gives the fowl and particularly their head a curious appearance. Sometimes this crest is so large as to hinder the fowl from seeing. They are plain and bearded.

I. P. LORD.

Reno, Nevada.

## THE APIARY.

### California Bee Pioneers.

EDITORS PRESS:—Doctor Ira Gordon and myself left New York in December, 1859. We held in charge about 100 hives of bees, which we landed in San Francisco. The doctor took him to Marysville, and he informed me that the first hive of bees were brought to San Jose in 1858, the same corresponding with Captain Elisha Stevens's statements, who relates several incidents relative to this wonderful insect. Mr. Stevens says that he found the first wild swarm and took them up in this State. They emigrated from the San Jose colonies the first or second week in May, 1862, and landed upon

a lot where he had made a pitch, then and now known as Stevens station, about eight miles westerly from San Jose. The bees took up their abode in a sycamore, which the captain severed in two and removed them near his home, and then considered them worth \$100.

And the second wild swarm that he found and secured, entered the ground where some animal had burrowed. By digging down he found the bees had made it their home in a large "man-root" the size of a bucket, which he thinks the squirrels had taken off all except the shell; this was filled with comb and honey, all of which he removed home, and out from which come two new swarms, secured the same season. At another time the captain found two other swarms of bees; both entered the same hole in the root of a tree and ascended up, each into separate bodies.

Another person related to me of finding bees in a crease in the rocks, in the side of the coast mountains, but could not reach them. They sent forth a great number of working bees. It appeared that the swarm had been several years located there.

A gentleman once related the account of his making the discovery of some honey bees lodged in the hide of an animal of the bovine race. As he passed on horseback, in the dead carcass he noticed some winged insects passing in and out at the tail hole, and upon further investigation found them to be honey bees. He rode several miles to procure tubs and buckets, and secured over 200 pounds of good honey. This is a good local illustration of the Bible story of Samson and the honey from the carcass of the lion.

We will now return to the account of the first pioneers—who left Fort Laramie in June, 1844, with 34 emigrant wagons and outfit for over 100 living souls, men, women and children, bound for the Pacific coast, passing over the Rocky mountains. If any person discredits this statement, Captain Stevens says that Messrs. Martin, and James and John Murphy and Moses Steinbergers, Ergis, all of San Jose, Nat Harlin, of Napa, Mrs. Webb, of Stockton, and John Suttivant, of San Francisco, and other heads of families, now living, who belonged to this immigrant party, will corroborate the statement made in your issue of April 7th, about Stevens crossing the Rocky mountains, previous to Colonel Fremont's first expedition, who followed on his trail a good share of the way, and Stevens is offended to this day, because Fremont "took possession of his journal and left him out altogether."

SOLOMON W. JEWETT.

Merino Farms, Kern County, Cal.

## HORTICULTURE.

### Points in Orange and Lemon Culture.

EDITORS PRESS:—It is with extreme reluctance we venture to condemn the theories of those who claim to be professional teachers of any useful art or science, but the precepts of lecturers which seem the result of inexperience, if not contradicted, may do harm. I allude to the lecture of Prof. W. A. Sanders on "Tree and Vine Planting," published in the RURAL PRESS January 20th, 1877; and, much to my surprise, the incorrect precepts set forth have not yet been contradicted by any of the many correspondents of the RURAL PRESS. The Professor's mode of preparing land for an orchard is to first plow the land eight or ten inches deep, then flood the entire surface with water. Now, one such irrigating will destroy land for that season, and, if persisted in, would soon destroy it forever, by leaching the surface soil, and forming a hard pan at the depth the land was plowed. All lands require to be worked after irrigating, not before.

Second. He says all deciduous trees should be transplanted in January, or the first half of February. In California it is often so wet during the entire months of January and February, that land cannot be worked without injury. Deciduous trees can be transplanted with safety at any time after they shed their leaves in the fall, and before the sap starts in the spring.

Third. Nothing could be more injurious than his process of puddling the roots of trees before setting them in the ground, as it pastes all the small, tender roots to the main roots, and prevents a vigorous, healthy growth of the tree.

Fourth. His theory of producing seedling trees exactly like the parent tree is a chimera of his own creating. Nearly all of the different varieties of peach trees in El Dorado county were produced from seeds grown on two or three first trees, by grafting from the best varieties of seedlings. Mr. Foster, of Upper Placerville, had several peach trees in his yard, that bore fruit in 1853, and there were no other bearing fruit trees nearer than Coloma (12 miles), and I do not believe there was a honey-bee in the State at that time; and yet Mr. Webster planted peach pits from one of those trees and raised several different varieties of peaches. Besides, if trees hybridize from the bloom like corn, there would be different kinds of fruit on the same tree, which can only be obtained by grafting. I have in one lot four varieties of almonds, three varieties of apricots, five of plums, and more than ten varieties of

peach trees, and every tree has borne the same kind of fruit for the last five years, although there are thousands of bees feeding on the blossoms every year.

Fifth. His theories in regard to the orange tree are incorrect in every respect. He says the young trees must be sheltered until they acquire a second nature, or habit of growth, like our native trees, dormancy and hardening of the wood in autumn and winter; and to accomplish this, he says the trees should not be irrigated after the middle of August; and he asserts that, by pursuing this course, an orange tree will require no care after it is three years old, and will endure 20° below freezing point. It seems like waste of time to contradict such wrong assertions in regard to a tree that has been cultivated 20 years in California. Young orange trees will not live without water, and September, October and November are the months they need it most. Two years ago part of my orange orchard was not watered after the 14th of October, on account of sickness of my hired man, and the negligence of the man I put in his place, and more than half of the trees so neglected died, and those that lived have made little growth since. Orange trees, after they are four years old, will stand 5° or 6° of freezing for a short time, but 24 hours of such cold would kill to the ground a six-year orange tree; and 20° below freezing would kill every orange tree in the State. He says February is the time to transplant orange and lemon trees, and February is the worst month in the year for transplanting that class of trees, for the reason the ground is colder than at any other time. There have been more than 1,000 orange trees set in orchards for every 100 that are growing in orchards in California to-day. Thousands have been set only to die, for the reason the soil and climate were unsuitable to their growth, but more have been destroyed by the time and manner in which they were set.

I will close this communication by giving my own

### Experience in Orange and Lemon Culture.

For the last six years I have made the cultivation of all tropical trees and plants presumed to grow in California a specialty. My location is one of the best in southern California for the propagation of tropical trees and plants. The land is a rich, sandy loam, well sheltered from cold winds and an abundance of water for irrigating. I set out oranges, lemons, limes, bananas, guavas, loquats, pineapples, and every other variety of tropical tree or plant I could obtain from the nurseries, but for the first three years I lost the majority of all I set out. I followed the general custom of the country, and set my trees in winter or early spring. But the newspapers then as now said oranges and bananas would grow everywhere in California, and everybody bought orange trees at prices ranging from fifty cents to five dollars each, and set them out only to see them die. In 1874 Mr. Shuran and Mr. R. M. Brown both set large orange and lemon orchards on their ranches, and not one of those trees are alive to-day. All of Mr. L. D. Roberts's orange trees that were set out four years ago died, and yet the orange tree grows to perfection in southern California if men would only select the proper places and transplant at the proper time.

During my residence in Central America I noticed the natives there transplanting orange trees in the hottest weather, and I never saw an orange tree shed its leaves from transplanting in Central America. So, in 1874, I adopted their plan for experiment, and purchased of Dana B. Clark 40 orange and 12 Sicily lemon trees, all three years old. Mr. Clark delivered the trees to me on the 3d of July; the trees were packed with straw, but no dirt was removed with the roots. They were set on my place on the 7th of July, and in less than three weeks every tree was growing. They did not shed their leaves, and they have continued to do well since. Encouraged by this success, I contracted with Mr. Clark to deliver on my place, in July, 1875, 300 orange, 200 lemon and 100 Mexican lime trees. The trees were delivered as per contract. They were all set in July, and out of the 600 trees I only lost five trees. Since then I have adopted the plan of transplanting in July, August and September I believe the latter month the best, as the soil is warmer and the tree starts immediately after setting. I never sheltered a tree, the more sun they get the better.

Mr. F. S. S. Buckman, our School Superintendent, set 500 orange trees on his place on the Rancho Ojal, last July, and he only lost two trees, the balance are all growing finely.

Any person who intends to set out an orange or lemon orchard, could try a few trees in July or September for experiment.

Prof. Sanders's theory of changing the nature and time of growth of a tree seems to me ridiculous. On my place there are trees which ripen their fruit every month in the year. Our guava trees bore ripe fruit in December. The oranges and lemons were ripe in January and February, while from the middle of March to the present time, we have been feasting on the delicious loquat, and cherries and apricots will come next. Does the Professor think he can "second nature" any of those trees, so they will ripen their fruit in July? But Mr. Sanders is not the only person whose knowledge of the orange and coffee trees has proved a calamity to the people of California. Until the no frost belt (which we read so much about, and which does not exist), is discovered, blue glass will be a much safer investment than banana bulbs, coffee trees,



pine-apples and mango trees. Let those who can afford it experiment, but don't preach about the profits of those things until somebody has made a success in growing them.

Bearing of Walnut Trees.

In conclusion I will answer Mr. Gillet's inquiry concerning the time of bearing and yield of the English walnut tree, in southern California. The trees usually blossom and sometimes ripen a few nuts the eighth year, but as a rule the walnut tree does not mature any nuts the first year it blossoms. Average nine-year-old trees will yield from 30 to 60 pounds to the tree. Mr. J. K. Gries has 75 walnut trees that were nine years old last summer. His trees blossomed when eight years old, and last fall he gathered and shipped from his 75 trees two tons of nuts, which was over 50 pounds to the tree. There are two large walnut trees in town which average from 200 to 300 pounds to the tree. They are the property of Mr. E. M. Jones, proprietor of the Santa Clara house, and are about 30 years old. The ranches of Mr. Chaffee, Mr. Comstock, Mr. Gilbert, Mr. L. D. Chilson, and my own are all adjoining each other, and all have bearing walnut trees. The above is about the average. I believe Nevada county is too cold for the walnut.

ROBT. LYON,

Ventura, April-10th, 1877.

THE SWINE YARD.

Pork Packing on the Pacific Coast.

The S. F. Journal of Commerce has shown considerable enterprise in working up the facts and figures concerning the packing of pork in this State and showing the immense quantities of imported cured meats, which should be supplied by our own swine growers. We quote: What the market is for hog products will appear from the statistics that are given in the subsequent portion of this article of the quantity and value of pork products manufactured in San Francisco. The figures for the whole State and for the coast that have been given in the reports of the Department of Agriculture, vary so materially from those given by Capt. W. L. Merry, of the San Francisco Board of Provision Packers, that we shall not attempt to reproduce them here, but give Capt. Merry's figures, which are as follows:

	1875.	1876.
Hogs packed.....	160,000	175,000
Hams made, lbs.....	1,610,000	1,700,000
Bacon made, lbs.....	4,350,000	4,380,000
Lard made, lbs.....	2,150,000	2,500,000

The value of packed meat and lard in 1871, 1874, 1875 and 1876 was as follows:

	1871.	1874.	1875.	1876.
.....	\$ 900,000	.....	950,000	.....
.....	.....	.....	1,160,000	.....
.....	.....	.....	1,250,000	.....

Now the population of the city has nearly doubled since then, while the population of the State has increased 60%, so that the value of the goods packed, did it increase proportionately, would have been nearly \$1,600,000 last year, or \$250,000 more than it really was. The

Provision Houses of the City.

Manufacturing and commission, number 31, and do a much larger trade than might be inferred from these figures. The pork packers among them number 14. The provision trade on the coast is represented altogether by 642 houses. Besides hog products these houses in San Francisco deal in butter, cheese and eggs, of which we shall have something to say further on. They are all fully occupied by the business in hand, but as it expands, and as pork packing on this coast attains to the dimensions which it ought to occupy, and the dairy interests become of greater importance, so will the trade grow, and indeed its present is as nothing before what its future shall be. The importation of hams and bacon and lard for a series of years has been as follows:

Years.	Hams & Bacon, lbs.	Lard, lbs.	Pork, lbs.
1860.....	2,351,700	183,010	2,500,000
1865.....	1,923,400	258,300	1,338,400
1872.....	10,236,470	2,237,870	256,250
1873.....	12,067,231	2,122,980	.....
1874.....	7,785,455	2,202,384	.....
1875.....	585,000	910,950	.....
1876.....	5,813,000	2,018,880	.....

The above statistics, while they exhibit considerable fluctuation, also show a steady advance in consumptive requirements. Adding for 1876 the local manufacture to the imports, the result is as follows:

	Hams & Bacon.	Lard.
Imports.....	5,813,000	2,018,880
Locally packed.....	6,080,000	2,500,000
Totals.....	11,893,000	4,518,880

Now it appears from this that the pork packing industry of this city could be \$2,500,000 in value before the needs of the coast would be supplied; in fact this would fall short of the truth, for Oregon, noted for the thrift and energy of her people, has been shipping us hams and bacon since before 1860. Besides the Pacific coast of the United States, which would require more packed than ever our highest total to supply it, as there are large imports to interior points of which we do not hear, there are to be considered the islands in the Pacific ocean and the countries on its coast which used United States hog products in the following values during the fiscal year ending June 30th, 1876:

	Lbs.	Value.
Bacon and hams.....	449,681	\$ 64,157
Pork.....	869,913	93,418
Lard.....	6,356,743	886,452
Totals.....	7,676,337	\$1,044,027

Besides this there are vast quantities of American meats and lard shipped to Australia and New Zealand through England, but which our statisticians do not get hold of. This would increase the sum total considerably, as the Australian colonies consume about 15,000,000 pounds of hams and bacon annually. But adding the above as it is, we find that there would have to be produced five times more in San Francisco than now is, before she could satisfy the present wants of those places which might be supplied by her. And the consumption would increase in all these countries with their introduction. There is a prosperous future before the pork packing industry of the coast, did our farmers give more attention to the important subject of hog raising than they have hitherto done.

SHEEP AND WOOL.

Communication of Scab.

Now that many flocks of sheep are on the move toward new ranges it will be well for careful shepherds to do what they can to prevent any clean sheep from contracting the scab from the new surroundings. We find in the *Willamette Farmer* the following letter, which, although it deals chiefly with Oregon conditions, contains many useful hints for use elsewhere: It is an undeniable fact that the majority of sheep which are driven to this country from the valley break out the ensuing winter with the scab. I believe the principal cause of this is using corrals along the road in which scabby bands have been in before them. I would consequently advise on no account to use a corral from first to last, and even when the sheep arrive at their destination to build a new corral, in preference to using one which might be already there. In fact, I heard a gentleman who brought sheep over the mountains last summer and whose sheep have the scab, say that he believed his sheep got it from a band of scabby sheep that were put into his corral some night on their way to the mountains early in the summer, and which he did not find out till after his sheep broke out.

Many influential flock owners recommend sulphur fed to the sheep with their salt as a preventative of scab.

My experience is too limited to speak personally, but it seems reasonable if it is good in a dip in which it is commonly used, that it would be good fed, as a sure way of reaching the skin. At any rate it is not an extensive experiment and may save many a dollar.

If the sheep are started early in the spring, driven carefully, and when they get to this side, kept in the mountains till the snow comes in the fall, they will be in as good condition to stand the winter as any sheep summered here. Besides the advantage of the mountain range in the summer, this plan will divide the journey and be easier on the sheep. They will not be so liable to contract the scab either after some rain or snow have fallen. If bucks are brought along with the band, they will be wished in some diabolical locality before many days. For it is impossible to apron them with any satisfaction. If they are put on so as to stay they will injure the buck and leave him unfit for use when he is wanted, and they are always getting them off if put on loose. It is therefore better to bring them by themselves, as lambs coming in winter are a great deal of trouble if not so much loss. I brought some sheep to this country by the boat last summer via Portland and the Dalles, and although I have never crossed the mountains, from what I have seen and heard I should be inclined to try that way next time. This as to the best way for the sheep without regard to expense.

A good dog is indispensable in the mountains, being worth a dozen men and less fatiguing to the sheep.

We have had a remarkably fine winter here, with green growing grass all the time, so that all kinds of stock are fat.

ARBORICULTURE.

The Tamarind Tree.

Benjamin Hall writes for the *Florida Agriculturist* the following interesting account of this tree and its growth in Florida: Of this genus there are two species, which are scarcely distinguishable from each other. The *Tamarindus indica*, L. is a native of Egypt and Arabia, and the *Tamarindus occidentalis*, D. C., is native to the East Indies. This very large semi-tropical tree has a small and delicate foliage, somewhat resembling the *Acacia vera*, L., and forms in the tropics one of the most desirable shade as well as ornamental trees. It is planted before the houses in Senegal, Arabia, Egypt and India. In the West India islands, where it has become naturalized, it is cultivated both for the sake of its shade and its acid, cooling, highly grateful fruit, the pulp of which is mixed and boiled with sugar, and forms an important article of commerce. The *Tamarindus indica*, L., is very abundant in Jamaica, growing to a large size, and thrives well in the savannas, but most luxuriantly in the deep, rich brick mold of that island. This tree was very early introduced into England, where it is occa-

sionally known to flower; from which circumstance it may be inferred that it will prosper in Florida, and probably mature its fruit. It is asserted by some that there is but one species of this genus; but the West Indian tamarind differs so materially from the East Indian in the forms of its fruit and the number of its seeds that it must be regarded as specifically distinct. The pods of the West Indian species are from two to five inches in length, containing from two to four seeds; but those of the *Tamarindus occidentalis*, D. C., species grown in the East Indies, are almost twice as long and contain from eight to 12 seeds. The seeds in both species are roundish, somewhat angular, flattened, hard, polished, with a central circumscribed disc at each side, and lodged in a quantity of soft pulp. When ripe, the pods are of a dull-brown color. In Jamaica the pods or fruit are gathered from June to August, according to their maturity. They must be fully ripe, which is known by their fragility or easily breaking on a slight pressure between the finger and thumb. The pulp and sides are first taken out of the pods, and cleaned from fragments of shells, placed in casks, in layers, and the boiling syrup from the sugar-house is poured in just before it begins to granulate, till the cask is filled. The syrup infuses itself into every part of the tamarinds, quite to the bottom, and, when cooled, the cask is headed for future use, or for sale. Occasionally a superior article is made with clarified syrup, which imparts to the fruit a more agreeable taste. The two species described differ from each other not only in size and form of fruit, but in its relative sweetness. The latter are preserved without syrup or sugar, being simply cured with salt. Those employed for domestic use are merely dried in the sun. In the East Indies the acid pulp is also used in the preparation of a sugar beer.

There are a few trees of the *Tamarindus indica* species growing on East river, in Florida, which appear to be adapted to our soil and climate. This tree is possessed of much merit, and is, in every sense, worthy of a more general and extended cultivation. It is easily propagated from its seeds, grows rapidly, and commences to fruit in seven or eight years from time of planting. The seeds should be planted in beds, and shaded from the rays of the sun till the young trees are some eight or ten inches in height. The trees should be transplanted when not exceeding two feet in height, in early spring, after the possibility of a frost has passed, using great care in taking up and resetting, and avoid exposing their roots to sun or wind.

THE EUCALYPTUS.—It seems that some of the eucalypti actually overtop the pyramids in height. A celebrated naturalist, M. Planchon, has given in the *Revue des Deux Mondes* a resume of all that is known about these wonderful trees. He says that while the *Eucalyptus amygdalina* attains a height of 145 to 152 meters (473 to 496 feet), the dome of the Invalides in Paris is only 105 meters high, the Cathedral at Strasburg 142 meters, and the Pyramid of Cheops—the highest building in the world—146 meters. The *Eucalyptus globulus*, although not attaining to the height of the *amygdalina*, is still taller than the celebrated California tree, the *Sequoia gigantea*. It is cultivated on a large scale at the Cape of Good Hope, the southern coasts of Spain and France, the Island of Corsica and especially in Algeria. In Paris it is customary of late to place young specimens of the tree in public squares as a movable summer decoration; and so much is its peculiar form and blue color admired that the inhabitants are quite sorry when, as winter approaches, the plant has to be returned to the greenhouse. In Valencia (Spain) the vulgar name for it is the fever tree. A few years ago a Spanish gardener, visiting Paris, was shown the tree as a novelty. He remarked that it was already a popular specific against fevers amongst the peasants of Valencia, and that it had even been found necessary to plant a guard at the fever tree to prevent its leaves from being stripped. M. Planchon concluded by saying that it is a rare example of a tree indigenous to Australia which has been established in Europe, Asia, Africa and America by right of its utility and beauty.

The Distribution of Animals.

The distribution of animal life, says the *Journal of Chemistry*, is one of the most interesting subjects within the domain of the naturalist. At first thought, the law of distribution seems to be a simple one. "It was long thought," as Mr. Wallace remarks in his recent work on the subject, "and is still a popular notion, that the manner in which the various kinds of animals are dispersed over the globe is almost wholly due to diversities of climate and of vegetation." But it does not require a minute knowledge of the productions of the earth to show us that this is not the case, for countries very similar in climate and physical features are found to have very different fauna. To quote a few of Mr. Wallace's illustrations:

"In the equatorial parts of Africa and America, for example, where very similar conditions of climate exist and the soil in both regions bears luxuriant forests, elephants, apes, leopards and guinea-fowls are found in the former, while in the latter their places are occupied by tapirs, prehensile-tailed monkeys, jaguars and toucans. Again, while in reference to climate and soil, a striking similarity exists between parts of South Africa and Australia, the one has lions, antelopes, zebras and giraffes; the other

kangaroos, wombats, phalangers and mice. Certain districts of North America closely resemble many parts of Europe in soil, climate and vegetation, yet the former have raccoons, opossums and humming-birds; the latter their moles, hedgehogs and true fly-catchers."

The problem is not then so simple as it appears on the surface. Other factors than those of climate and vegetation must be involved, prominent among which is the relation of the existing life of the globe to its past life as illustrated by fossil remains. The geologist must here come to the aid of the zoologist, and the field of study must be widened to take in not merely the earth as it now is but the successive stages through which it has passed in the vast periods whose history is written in the "great stone book" of nature. The present distribution of animals according to Mr. Wallace, is the final product of all the revolutions in organic and inorganic nature which have taken place on the earth from the earliest geological ages.

A New Insect.

Mr. Fairfield presents in the *Phrenological Journal* a cut of a hitherto unknown insect, found in the brain and abdominal tissues of the common house-fly. He has in his possession, mounted for observation, six specimens out of more than 30 observed during a single dissection, besides a large number of ova and of embryos in different stages of development.

This little animal—the most minute of all the insects thus far discovered—is, in the mature state, about 1-500th of an inch in length, exclusive of the legs, by about 1-800ths of an inch in breadth. That is to say, it is somewhat smaller than the larger animalcules found in stagnant water; but has four pairs of fully-developed, four jointed, insect legs; a pair of three-jointed antennae (feelers) terminating in minute hairs, and the usual permanent insect organs. It feeds by means of a couple of sucking disks, which appear to communicate with each other through a minute canal, each disk having, however, a special tube that leads backward to the minute digestive sac. This sac is scarcely larger than an ordinary white blood-corpuscle. The dorsal surface (back) resembles that of the *Argas Americana*, as figured by Professor Packard, and is an elongated convex surface of irregularly disposed cells, without definition into cephalic and thoracic sections. In its embryology the insect passes through a monad stage.

The egg first becomes granular and nucleated; then it puts forth a minute process. Presently it becomes double-nucleated, elongates and shows a disposition to propagate by self-division, exactly after the manner of a monad; but, at a certain stage, this tendency to division ceases, and the anterior cell becomes a center of development for the anterior organs of the animal, while the posterior becomes a hollow cavity, and gives origin to the first pair of legs. The tail, contemporaneous with these changes, thickens and shows a longitudinal striation, as if dividing into four tails, which, however, subsequently assume the consistency of two pairs of four-jointed insect legs. The anterior pair of the legs and the antennae are developed by budding. The animal has no eyes, but is copiously provided with minute hairs, after the usual manner of the insect type. I will not discuss that question in a mere note; but I believe that the entomologist has been the proper progenitor of that numerous family known as acaridae, of which the sugar mites are familiar representatives, and that the long-sought connecting link between monads and insects is at last discovered. The feet, not exhibited in the cut, consist of three claw-like processes, connected (I think, but am not yet certain) by their films of transparent tissue.

EXCRETION OF CARBONIC ACID.—A German chemist has, according to the *Journal of the Chemical Society*, made a long series of careful experiments to ascertain the quantity of carbonic acid given off in respiration and perspiration by different animals. In proportion to their weight, the largest quantity of carbonic acid is given off by birds—mammals come next—and worms, amphibia, fishes and snails form another group in which the excretion of carbonic acid is smaller; of these, worms give off the most and snails the least. Those that live in water give off more carbonic acid to the air than they do to the water; and young animals more than old ones. Experiments with colored light show that under the green and yellow more carbonic acid is excreted than in ordinary daylight; and on comparing light and darkness, it is found that much less carbonic acid is given off during the night than during the day. Among the rays of differently colored light, the milk-white and blue rays come next to the green and yellow in activity; and the red and violet are the least active of all the hues of the spectrum.

RAPID GROWTH.—When we imagine rapidity of growth we are apt to think of the lowest orders of vegetation, and to say of anything that it springs up like a mushroom is meant to be expressive of the most worthless rapidity. There are, however, some very useful plants of the higher types that grow very fast, and of these bamboo is an illustration. How very useful the bamboo is was seen in the Japanese department of the Centennial. Japan would hardly be the Japan we know without it. By some experiments recently made in Algeria, one species (*Bambusa viridi-glaucescens*), has been found to grow over 16 feet high in six weeks. This is over four inches and a half a day and beats our maize even in the warmest weather.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of Sept. 23d for latest insertion.

### Agricultural Education.

Lecture by Prof. Hilgard at Walnut Creek Grange.

(Concluded.)

Unintelligent, unconstructive labor is not naturally attractive. I am not surprised that our boys do not take to it when it is presented in the guise of a hindrance to the mental development they so much need, by occupying their time during the few years devoted to education. To hold them to its performance by college regulations, will assuredly not make them love it more than they have been taught to love it at home. When that has not been done, you must not hold the colleges, or us, their teachers, responsible for it. And if the farm home has not been made attractive by showing them something besides the mere hard work and money-making sides, do not blame us if the intellectual tastes acquired as one of the most precious results of education, do not lead them back to farm-life! I regard as one of the most salutary and important features of your Order, that part of its regulations which tend to make social and intellectual pleasures, more than they now usually are, an integral portion of farm-life.

You have been told that the main reason why our students do not often return to the farm at once, is that labor is not made honorable at the University; and that you must not send them because they will afterwards be ashamed to be seen in their shirt-sleeves, plow or shovel in hand. It is mild to say that this aspersion is simply untrue in fact as well as in spirit. It is true that the students are not compelled to perform manual labor, but they very frequently volunteer to do it both singly and in squads, and I have never seen a student body in which flunkeyism was more severely at a discount. As for the faculty, the spade and hoe are familiar implements to most of them, and you may be sure they do not hide themselves or their shirt sleeves while using them. Labor could not possibly be made more honorable by enforcing it upon unwilling hands.

Again, it is thought by some that such labor should be held as a recreation from study. As for anything that is enforced being properly a recreation, or any paying labor of one kind a recreation from the other kind, you will find it to be one of those fictions which are based upon exceptional cases. The fatigue resulting from intense mental application is not a whit less real than that which you feel after a day's plowing. Few of you will feel like taking up a mathematical book instead of the newspaper in the evening; and so our University boys naturally take to a game of ball, or a scramble up the mountains, rather than to a job of spading, when their study hours are over. No task can ever stand instead of the recreation which is as essential to man as his food, if physical and mental health is to be maintained.

And as for the enforcement of manual labor for the purpose of maintaining the habit, as some insist should be done, I say again, you must make your boys love the farm, and they will not need to have their noses held to the grindstone for the sake of maintaining the habit. That whistle is not worth the time it would take out of their education.

### Separating Schools.

And still there comes the cry that the agricultural colleges must be detached from the universities, that they may be made more efficient under the direct control of the farmer.

How more efficient? By withdrawing agricultural education from the contact with higher culture in other branches, and making your sons mere handicraftsmen, mere hewers of wood and drawers of water? Farmers of California, is that your ambition—is that the way in which the Grange is to fulfill its mission of "lightening labor by diffusing a knowledge of its aims and purposes?" And if this not your meaning, if you do desire that your sons should be made to regard the farmers' profession with pride, and deem it, as it should be, the peer of any other profession; why then should you desire to see the institution where its principles are taught divorced from your State University, where the rest of the educated men of your State are formed? Are you yourselves ready to admit, and to proclaim, that the farmer's occupation is too lowly not to suffer by comparison with others, and that your sons must be put by themselves, in order that they may never learn to make comparisons?

One of the declared objects of your Order is to insure to the farmer a due proportion of political influence. And what, think you, is the reason why this share of influence has not been enjoyed heretofore? Why is it that you yourselves have been voting chiefly for lawyers

and other professional men? Is it not because the education, the general culture that alone fits for political influence, and the professional culture that shows you just where the shoe pinches and how it is to be remedied, has been too much neglected by farmers as a class? And if so, it is assuredly not the labor school from which you can expect the remedy, but from the broader culture of the university.

But there is an historical side of this question. It has been under consideration and trial for many years, both in this country and in Europe, and it has its record. I assert that this record tells overwhelmingly against the separate organization of these colleges (in so far as they are not mere labor schools, which no one pretends were contemplated by the Morrill bill,) and for their affiliation with the universities. It shows that in course of time they have either developed into, or towards, the university; or failing to do so, after numerous vicissitudes, have dwindled down to a second-class boarding or low grade high school. You have been told that this is because the men who were placed in charge did not manage properly, or did not mean that they should succeed. This is simply begging the question, and is palpably incorrect in fact.

And let us see what is meant by the declaration that "The agricultural colleges ought to be under the exclusive control of the farmers of the country." It is not meant that each farmer shall walk in and have his individual ideas tried at the general expense. The "control" then is to be exercised by proxy—delegated, as is the political power. And delegated to whom? Does any sane man suppose that the grand and difficult problem of education, which has occupied the best minds for centuries, is to be solved off-hand by any one charged therewith by a popular vote? It must, assuredly, be given into the hands of men who have made education a life study. And is not this done now, and cannot the farmers exert all legitimate influence upon the policy of these institutions, by means now within their reach, if they will but use them at the proper time? It is so easy to pull down—so difficult to build up, suppose that, instead of the policy of "holding off," which has prevailed since I came to your State, we try that of co-operation for a while. Suppose we hold counsel together, and see what can be done without going over, again, the bitter experience and failures that we have seen elsewhere.

### What the Agricultural Department Needs.

And now, if you ask me what is most immediately needed to increase the efficiency of the agricultural department of the University, I answer: 1. We need greatly increased facilities for instruction and demonstration. First, I should say, a garden of economic botany, in which all the industrially or otherwise important plants can be shown to students in actual growth, and their adaptation to the climate tested. An application for an appropriation to this end was refused at the last session of the Legislature. Second, we need a collection of agricultural implements, both for demonstration and use in the field; and we need funds to keep these things going, and for experimental purposes. 2. We need to know something about the agricultural features of this State, in such a complete and authentic shape that the information can be made available, not only for instruction at the University, but for the information of farmers, settlers and immigrants, who now have no authentic source from which to derive the facts they need to determine what part of the country suits their tastes or necessities. In other words, we want an agricultural survey of the State, and its results put into the shape of a map and plainly written report. We will then be enabled to teach our students, not merely what they should do in certain suppositions cases, but what, in fact and in practice, are the circumstances and difficulties they will have to encounter in their own State. Most of the older States have done this, or are doing it, in some form; I show you, as an example, the map representing the agricultural divisions of the State of Mississippi, and for details refer you to a printed bulletin on the subject, just issued from the University press. 3. To render more available the short space of four years now usually allotted to a course at the University, I deem it of the utmost importance that the rudiments at least of natural science should be taught in the public schools. Instruction now begins in a great degree at the wrong end. Young children are peculiarly eager and willing to learn things objective, that being the time when the perceptive faculties are most prominent; hence the eminent success of the "kindergarten system." Boys now come to us at the University unable to describe the simplest natural object in an intelligent manner, and we have to spend our time and theirs in first teaching them to observe, before we can teach, and interest them in, principles. None but a teacher can appreciate the fearful and unnecessary loss of time thus incurred, for at a later age the reflective and speculative faculties overbalance the perceptive, and the fault committed in early education by putting the wrong end foremost can scarcely be fully remedied.

These are some of the things that need doing, and which are worthy of your best efforts, both as an Order and individually. Again I say to you, instead of "fighting shy" of us as so many of your influential men have been doing, come and see us, counsel with us, try to co-operate with us. I think you will find us co-operative, and not half as much of a "kid-glove" concern as we have been represented to you. If after that

you find that we are incorrigible old fogies, that we do not make labor honorable, nor are inclined to further to the utmost of our ability the cause of industrial education in its broadest sense—then, I say, but not until then, try your hands on revolutionary measures.

### Stockton Grange.

Address by Mrs. W. B. West, W. L.

The following address of Sister West is published by request of Stockton Grange:

"Is it good policy to publish an article having a tendency to let outside parties know our internal weakness? The Grange is symbolical of a farm, and, like the farm, produces tares as well as grain, and only by plowing deeply and thoroughly cultivating the soil can we hope to harvest the one and destroy the other. Shall we call the tares our weakness? If so, then it is not necessary to publish them to the world. They are only too plainly visible to the eyes of all, and we can much better turn our attention to some method whereby we can lessen their number, and fill their places with good seed. This, to me, seems the first work of our Order. What have we to do with or to fear from the outside world, if we have well tilled our soils, sown good seed, and exerted every effort to secure a liberal harvest? What class of persons, society, or any organization is so completely independent of the world as a live and harmonious Grange? It can be a power in itself, so great, indeed, as to demand the attention of all other combinations. What do we need more than a consistent and determined effort to carry out the intent and purpose of our Order? Can we not cast out all discord and inharmonious, by uniting ourselves in some good work, that all earnest and sincere members can cheerfully endorse, and feel that the Grange is stronger than ever before?"

"Let us awake from our fearful indifference, add dignity to labor, and cultivate the social, moral, and spiritual qualities within us; educate ourselves above the common-place prejudices and selfishness of the business world about us; elevate ourselves to a standard beyond the greed and heartlessness of the monopolist, and the corrupt ambition of the politician; institute into our every-day work the practice of the golden rule, and feel we are not brothers and sisters in name only, but in deeds of love, charity and benevolence worthy the name of Patron."

"Why barely keep up our organization, waiting one year or two years to reap something, we scarce know what? The past is irrevocably gone, and with it, what have we inaugurated that has brought forth the desired results so anxiously anticipated? Of the future we can only conjecture from events of the past, but the living present is ever with us. Why not continually receive the benefits we might so surely derive from our united action and feel that the Grange is a fruitful reality indeed."

"Brothers and sisters of Stockton Grange cannot each and every one of us add our mite toward accomplishing the great and good work of our Order? Some thought suggested, some essay recited, or some plan proposed, would create an interest in our meetings and be the means of planting good seed where now weeds and chaff abound. Especially is it important at this time, when so many members are inclined to feel anxious and troubled, that we should exert ourselves to create in the Grange that feeling of sympathy and thought for each other so desirable and so well appreciated, and, for a time at least, make us forget our disappointments and see something bright in our greatest discouragements, realizing that perhaps what to us seems disastrous in the extreme is only the way to success for our more fortunate neighbors, believing, with the poet, 'The world is what we make it.'"

### AMENDMENTS TO THE GRANGE CONSTITUTION.

—Bro. O. H. Kelly, Secretary of the National Grange, has issued notification that the following amendments to the constitution of the Order have been ratified and are now in full force:

"Amend Article I, Section 2, by inserting after the word 'ballot' the following words: Any fourth degree member, in good standing, shall be eligible to office or to receive the degrees in the county, district, State or National Grange, within whose jurisdiction such member may reside, but shall not be entitled to vote."

"Amend Article I, Section 4: There shall be an Executive Committee of the National Grange, consisting of three members, whose term of office shall be two years. The Master of the National Grange shall be *ex-officio* a member of the Executive Committee, but shall not be entitled to vote, except in case of a tie."

**PROF. HILGARD'S LECTURE.**—Prof. Hilgard's lecture at the school-house in Temescal, on Tuesday evening, on invitation of Temescal Grange, was listened to with deep interest by all present. The subject was on maintaining the fertility of the soil; and after the lecture, questions were asked and answered. A vote of thanks to the speaker was adopted. We hope, at another time, to give a report of the points made by the speaker.

### Items Furnished by the Secretary of the State Grange.

#### Sutter Mill Grange.

**Amos Adams.**—Enclosed find check for \$26.70, \$10 of which is to pay for 20 copies of the *California Patron* to be sent to the enclosed list of subscribers. We will try and send a few more names for the *Patron* soon.

Our Grange is prospering and I do not think it has been in really a better condition since its organization; and when I say better I do not wish to intimate that we were ever going down hill. From all I can learn all the Granges, save one, in our county are in a good healthy condition, and although other Granges have and may fall by the wayside, we can assure you the mountain Granges will never trail arms and surrender their principles to petty selfishness and prejudices. If you could be with us on the evening of the 27th of this month at Pilot Hill, whither we go to participate with the members of Pilot Hill Grange, No. 1, in their harvest feast. I can assure you you would ever remember the occasion.—M., Coloma, April 15.

#### Sonoma Grange.

Secretary J. W. Purdy, of Sonoma Grange, writes that, "Our meetings are very well attended, considering our scattered membership; attendance averaging about 20 during the last quarter. Our meetings are always interesting and instructive."

#### Washington Grange.

Bro. Sollars, W. M. of Washington Grange, writes that his Grange is in a prosperous condition. It comes up to the standard fixed by Bro. Wolf, of Stockton, who said on a recent visit, that "whenever the members of a Grange got smarter than their Master, it was evidence that that Grange was in a prosperous condition; this being the case with our Grange I have no hesitation in saying that our Grange comes fully up to Bro. Wolf's standard."

When we get our new organ I wish you and W. M. Webster could come up and see us as we intend to have a harvest feast and a good time generally. Our Grange is 12 miles from Lodi. Come up and we will kill the "fatted calf."

### Taxation.

**EDITORS PRESS.**—At a meeting of the Potter Valley Grange, April 7th, 1877, the resolutions on the subject of taxation adopted January 13th, 1877, by the Vallejo Grange, were read and unanimously approved. The Potter Valley Grange also adopted the following resolutions in support of the above:

WHEREAS, The exemption of mortgages, notes, etc., from taxation is contrary to the letter and spirit of our National and State Constitutions; and

WHEREAS, The Constitution of the State of California demands that all property shall be subject to taxation, and also that equal taxation shall exist; therefore be it

Resolved, 1st, That mortgages, notes, etc., shall be considered valid property, and being such shall be subject to taxation, the same as other property. 2d, That the late decision of the Supreme Court of California in exempting mortgages, notes, etc., from taxation, was in direct violation of the principles of the Constitution of the State of California, and should therefore be revoked. 3d, That the State Grange be requested to bring the mortgage tax question before the Supreme Court of California at as early a day as possible, for the purpose of having a rehearing on the same. 4th, That the Subordinate Granges throughout the State, as well as all taxpayers, be cordially invited to co-operate with us in having this question brought forward as above stated. 5th, That in case it should become necessary, the Subordinate Granges in California be requested to levy a small tax on members in order to create a fund to defray the expenses of litigation before the said Supreme Court of California, and remit the same to the State Grange on demand. 6th, That the taxation of growing grain or other growing crops, before said growing crops shall have reached maturity, is a great evil, and being such should receive the condemnation of all honest men.—E. S. Bigelow, Chairman of Committee; A. H. Slingerland, Sec'y.

Potter Valley, April 7th, 1877.

**THE CALIFORNIA PATRON.**—This popular official organ of our State Grange concluded its first volume with the April number. It begins another year with the same publishers—Bros. A. T. Dewey and W. B. Ewer. The editors—Webster, Adams and Merry—have given the paper enthusiastic labors, and the results attained are very creditable to them.

**SONOMA COUNTY GRANGE.**—The officers of this Grange were installed by State Deputy T. H. Merry, at Santa Rosa, on March 21st. Bro. Merry made a stirring address, and the exercises were concluded with a feast. There was a good representation present, and the spirit manifested was good.

**GRANGE VICTORY.**—Sonoma County Pomona Grange has adopted resolutions of thankfulness to their brothers at the East for the noble victory which has been attained through their efforts in the decision of the so-called Granger cases, and promise co-operation to secure the fruits of the victory.

**FINANCE.**—Readers will remember the discussion on the subject of finance which will be held at Golden Gate Grange, Tuesday evening, April 24th. Bro. J. M. Horner will open the discussion, and the meeting will be open to all who desire to attend.



# AGRICULTURAL NOTES.

## California.

### BUTTE.

**MILDEW.**—*Record*, April 14: We are inclined to the belief that there is more of a scare than reality, in this appearance of the mildew. Until it attacks and breaks up the siliceous coat which strengthens the stalk, it can do no particular damage so long as it is confined to the leaf, like rust; it is believed to be perfectly harmless. The grain swells in spite of it, and the only effect is that the flag dies a little earlier, which is not undesirable when too luxuriant. It may be satisfactory to some to know that, while the grain fields of Dayton have not entirely escaped the much talked of "mildew" or "white rust" yet it has but little terrors for the farmers of that section. They do not regard it as capable of inflicting any serious amount of damage. It appears in spots where the grain is of the rankest and thickest growth, and upon opening and exposing the grain to the atmosphere, emits a stench as of molding grain in the stack. Exposure to the atmosphere seems to cause it to disappear, and it is noticeable that the north winds of the past two or three days have done much to cause it to disappear. Patches of rank growth are noticeably affected by this mildew, while out in the open field it was scarcely to be found, thus leading us to the belief that it was only the soft, spongy growth of grain that it attacked with any severity. The many beautiful fields of summer fallow were entirely free from it. Particularly was this the case with the beautiful fields of Mahlon Gray, and E. J. Cartwright, where the grain stood thick and up to our horse's side, with heads just ready to burst from its concealment and bid defiance to the thousand and one imaginary evils that promise to bring about a short crop. One field of Messrs. Perkins & Eddy appeared to have been touched pretty heavily with the mildew, but seemed to be recovering under the effects of the north wind that was blowing gently over it on Wednesday. Not meeting with either Mr. Perkins or Mr. Eddy, we did not learn the particulars as to this field of grain, but all of the summer fallow fields appeared to be beyond the reach of this new evil. From what we observed in visiting the grain fields of Messrs. Mahlon, George and Samuel Gray, E. J. Cartwright, J. N. Snider, Peter Hansen, R. W. Boydston, W. T. Cory, Wm. Chapman, Josiah and W. H. Troxell, T. V. Fimple, Robert Riley, T. B. Freeland and others, the conclusion was forced upon us that the yield the present season will be as large per acre as it has ever been, and that the acreage sown is greater than usual. The many evidences of thrift observable in the large, elegant and commodious farm houses, and their beautiful surroundings, show the wealth of soil in this portion of the country, and is but an earnest of the many prosperous and beautiful homes that it shall maintain in the near future.

### CALAVERAS.

**HAIL STORM.**—*Citizen*, April 14: Last Sunday a hail storm passed over this section which seems to have fallen in streaks. While here it did no damage; at Zwinger's ranch, a few miles above, the leaves and blossoms were knocked from the trees, and a fine bed of strawberry plants (which afforded the first strawberries of the season) cut to pieces by the hailstones.

### COLUSA.

**CROP PROSPECTS.**—*Sun*, April 14: Agents of the Central Pacific Railroad have forwarded estimates of the yield of wheat in the several counties of the State, and it appears that the conclusion is arrived at that the entire yield of the State will not be more than 7,500,000 cents, of which not to exceed 3,500,000 cents will be for export, against 18,000,000 cents last year. In Butte, Yuba, Napa, Sonoma and Sutter, the yield is placed equal to, if not more than that of last year. Solano is placed at about the same as last year, but we think it will fall much short of that. Colusa is given at a slight falling off, but notwithstanding the fact that there will be a great deal of wheat in the upper end of the county, the falling off from last year will be very marked.

### CONTRA COSTA.

**WINDMILLS.**—*Antioch Ledger* April 14: Every farmer in this valley who has a windmill will be able to raise vegetables of all kinds for table use while his less fortunate neighbors are complaining of the drouth and hard times. The actual necessities of life are few. The prudent farmer who has an acre or two of alfalfa, who saves his straw in seasons of plenty, who thus keeps a cow, raises his own pork, keeps a poultry yard, and by means of his windmill grows his own vegetables, will not suffer for any of the necessities, and may enjoy many of the comforts and luxuries of life, even during seasons like the present. In the Eden Plain district one sees a goodly number of these mills and they are ever accompanied with flowers, trees and vegetables. They are evidences of thrift and will help wonderfully the coming summer.

**THE CROP PROSPECT.**—*Gazette*, April 14: It is now more than a month since our crops have had rain, and considering how little had previously fallen during the winter, they are generally holding out remarkably; the dry, cool, breezy weather of the past two weeks having in great measure destroyed or checked the growth of the mildew that was feeding upon them. It was not reasonable to calculate a month ago, that our crops, then looking so promisingly,

would get no rain during the last half of March and the first half of April; nor that they were to be visited with this new mildew blight. Had these unfavorable conditions been then anticipated very little expectation of any grain crop would have been indulged. And now, without more rain and favoring weather, the prospect is very slim that any crop will be realized from late sown grain, though some of the summer fallow and earliest sown may possibly get through and give a little yield without it.

### FRESNO.

**DOUBLE PLOWING.**—April 14: Adam Kail, living on Mariposa creek, near Plainsburg, last year summer fallowed some ground late in the spring, about ten acres of the ground having been previously plowed early in the winter and crossed-plowed when the spring plowing was done. It was all planted to wheat this last fall. The ten acres double plowed now looks well, and will yield at least ten bushels to the acre; the adjoining land, single plowed, is totally bare, the wheat having been dead for a month. The rainfall of this season has not wet this land three inches deep, and the grain seems to be growing upon last year's moisture. People are yearly learning something new about farming in this valley.

**CHANCE FOR ARTESIAN WELLS.**—According to theory and practical observations of artesian wells, this part of the San Joaquin valley is especially adapted for their operation. The elevated ranges of mountains surrounding this central basin, the surface of which basin slopes gradually toward the center, the various strata of sand, clay and cemented sand, and the large bodies of water rising high up in the mountains, flowing down the channels of the San Joaquin, Kings and Kern rivers, over stratified formations, and their backing up as a lake in the center of the basin, all indicates the practicability of obtaining inexhaustible and abundant flowing water. The process of boring has been much simplified and cheapened during the past few years, and it would seem that sufficient interest might be aroused among the land owners on the plains to at least make one thorough test of the matter for the common benefit of all. For this purpose we would propose the contribution to a well fund, of one cent an acre by all who own land on the plains, and who have not already secured water by ditches. Let a committee of practical, intelligent men be chosen to supervise, and the work begun, and placed in charge of some one of experience. We feel satisfied that there is no question of its success, and wait with interest for some energetic man to put it into shape.

### KERN.

**EDITORS PRESS.**—It is singular that all the rains which have fallen near and about the county seat, in this valley, were showered down at the time of the full of the moon at three consecutive times. The last rain and the best, of near three inches, fell the last moon, and has been of some benefit, and there was considerable snow in the mountains. The day previous to this shower, 300 ewes and lambs were sold by Tom Kerr & Co., for \$100. They had offered them, however, previously the same day for \$80, then \$50.—*J. W. S.*

### LOS ANGELES.

**PUSHING IRRIGATION.**—*Herald*, April 14: Few of our people are aware of the extensive work that is now going on in the direction of developing our water resources. Nowhere is this activity more apparent than in the San Gabriel valley. In a very little while an irrigating improvement of a highly useful character will be completed. It has been carried forward by the Messrs. P. Beaudry, J. de Barth Shorb and other enterprising gentlemen. They have built in that valley five reservoirs, the largest of which will contain 21,000,000 gallons. They are developing a great head of water, which they will distribute over the fruitful San Gabriel plains, adding largely to the beauty and productivity of that favored section.

### MENDOCINO.

**CROPS.**—*Democrat*, April 14: The crops of fruit and grain here and hereabout promise to be abundant; as one pretty well posted said to us the other day, greater than ever known. The season cannot be surpassed. They may have had just as good seasons sometimes during the past, but then the same amount of grain acreage was not in and the fruit growing less extensive. It was thought by some that a few heavy frosts that took place a short time ago might injure the fruit, but the idea proved incorrect. The truth is, that so far as agricultural and farming matters are concerned, Mendocino county knows no such word as "failure."

### MONTEREY.

**THE DROUTH.**—*Castroville Argus*, April 14: There is but one thing to do this year of drouth, when a dearth of money and a scarcity of employments are the unwelcome certainties in store, and that is to "face the music" with the best grace possible. We already see that the grain and hay harvest, even in this most favored portion of the Salinas valley, will be meager; that the demand for laborers from this till plowing time will be exceptionally small—that, in

brief, there will be comparatively dull times in this valley for several months to come.

**IRRIGATION MATTERS.**—Mr. J. B. H. Cooper has thrown up a dam across the stream known as El Zanjón de la Yerba del Manso, about midway between this town and Salinas City, and crossing the railroad through a subterranean flume, 1½x3 feet in size, water is now being conducted over the field immediately west of the track. The intention is to irrigate by this means some 200 acres, and it is certain that with the plentiful water supply at hand there is nothing to hinder the success of the experiment. We are told by Mr. Frank Blackie that from the stream above mentioned he has succeeded in irrigating a piece of about 30 acres, the crop prospect on which is now good, and that it is his purpose to direct water from the same source over another tract of 20 acres, which he expects will add materially to the product of his farm this season. The pumping apparatus of Mr. R. F. Hanna, with which he designs watering from the river about 100 acres of land, is, we are informed, working well. Its operation was, for a while, retarded by defects in construction, but these being remedied it is found capable of raising water in abundance for the purpose in view.

### NAPA.

**THE MILDEW.**—*Reporter*, April 14: Within the past week we have talked to many farmers with a view of ascertaining what effect, if any, the mildew has had upon our crops. Uncle Jesse Grigsby, who is practical and thoroughly reliable, does not see any effect of the mildew thus far. It is with us and we are afraid of it, but it has not hurt much. Late sown grain will be short. Sim Buford reports from Berryessa that the mildew has appeared in spots; that it hangs from the blades and does not appear to have taken hold. It is not general. He is not sanguine in regard to late sown grain. There will be good crops in Berryessa but not as good as last year. Mr. J. L. Marshall says that the mildew has appeared in spots in his neighborhood but as yet has not done any harm. Mr. J. W. Grigsby, who has charge of the Oak Knoll farm, is not as hopeful as some of his neighbors. The mildew has appeared and it may do harm. Mr. A. J. Dollarhide, of Pope valley, reports crops in his region fine and no mildew. In Chiles valley a little mildew appeared, but the farmers say that it was killed by the north wind.

### SACRAMENTO.

**THE CLATTER OF THE MOWER.**—*Record-Union*, April 14th: The clatter of the mower in the alfalfa fields tells of the commencement of the haying season for 1877. The season has been, so far, one most favorable to a heavy growth of vegetation, and the alfalfa meadows generally are covered with a heavy growth of hay of good quality. The cool, cloudy weather we are having is not, however, favorable for its cutting and curing in good condition. Many have deferred the commencement of haying in hopes the weather would change for the better in this respect. While they have been waiting for pleasant weather, the clover has been falling down and losing its leaves, and otherwise deteriorating in quality and value. Between the risk on one hand and the certain loss on the other farmers have hesitated. While the first crop of alfalfa is naturally the best hay of all the crops of the season, it is seldom it can be cured and secured without damage that reduces its quality below the hay of subsequent crops. We fear this may be the case the present season. Though the ground is generally dryer and in better condition to cure the hay on, the grass itself is full of water, resulting from a luxuriant growth, and will require a combination of favorable circumstances to successfully secure it. Great care and frequent turning will be necessary to prevent mildew and heating, and consequent must and ruin. As a general thing, the less alfalfa grass is exposed to the sun in drying the better the quality of the hay. From the present appearances, those who have commenced cutting will have none of this difficulty, but, on the contrary, will find too little sunshine.

### SAN BENITO.

**CROPS IN HERNANDEZ VALLEY.**—*Enterprise*, April 14: There is a nice little spot of agricultural land nestled among the mountains, near the headwaters of the San Benito, called Hernandez valley, which seems to have been particularly favored this season. It is situated about forty miles southeast from Hollister, embracing in the neighborhood of 500 acres, owned principally by Messrs. Vol. Garner, Short, Button and Peterson. We are informed that plenty of rain has fallen there, and the crops look unusually fine. This valley will produce good grain without another drop of rain, and if cut for hay, will yield hundreds of tons.

### SAN JOAQUIN.

**STOCK SALES FOR JAPAN.**—*Independent*, April 10: The Japanese Commission on Agriculture, consisting of Messrs. Oku, Okada, Hassegawa and D. W. Ap Jones, purchased on Saturday of L. U. Shippee, Esq., a herd of five Durham heifers and a band of fine Spanish merino sheep for shipment to Japan. These gentlemen speak in high terms of Mr. Shippee's herds and of the stock of San Joaquin county in general. Mr. Shippee expects to establish quite a trade in stock with Japan. The Commissioners have gone to Kentucky to visit some of the noted herds of that State.

### SANTA BARBARA.

**EDITORS PRESS:**—We had a pretty hard wind from the west and southwest on Tuesday, the 10th inst., which kicked up a big dust and

injured some fruit trees, but otherwise doing very little damage so far as I can learn. It was much the hardest wind of the season. Not a very drying wind, so we did not suffer as much. We still hope for more rain and expect it soon, or it can do the hay and grain but little good. Some of the grain on the moist low lands look pretty well, but some on the higher grounds are past help I think. Farmers are busy planting beans, corn, etc.—O. N. CADWELL, Carpinteria, April 12.

### SANTA CLARA.

**CROPS.**—*Mercury*, April 15: The best informed men upon the subject, predict half a crop of wheat in California this season. In some localities north of us they were favored with a greater abundance of rain and will probably realize an average crop. South and east of us one or two counties will have quarter crops; the larger number have only bare fields in prospective and will not even realize the seed that was sown. In Santa Clara valley we will be exceedingly fortunate if half a crop is gathered upon the average area which has been planted in wheat.

### SANTA CRUZ.

**CROPS IN THE PAJARO VALLEY.**—*Pajaronian*, April 12: Last Saturday we had opportunity of conversing with many of the intelligent farmers of the Pajaro valley, and are enabled to give a fair idea of the present and prospective condition of crops. Wheat is still suffering greatly from a species of rust or mold, although there are some fields that have not been affected to any great extent. This wheat epidemic—if it may be termed such—has accomplished its mission here, and from the fact that fields in the vicinity of Santa Cruz were attacked later, is passing on up the coast. The shower last Sunday did some good, and there are indications that certain fields are recovering somewhat from the disease. Should there be occasional showers, and the usual fogs, one-third of the usual yield will be the result at present. Generally speaking, barley is looking finely, and present prospects are most encouraging for this kind of hay or grain. It is worthy of note in this connection that those fields sown before the first rains of winter, at a time when the ground was perfectly dry, are now the strongest and looking the most thrifty. Would it not be well for farmers to sow grain without regard to the rainy season, say a few weeks before the rains set in, without regard to the condition of the soil? Regarding potatoes, beans, corn, and other summer crops, the prospects are good for the usual enormous yield, for the ground is in good condition for such crops. Fruit also promises well, and from the present outlook the season will not be particularly severe in the Pajaro valley or Santa Cruz county generally.

### SONOMA.

**HEAVY CLIP.**—*Russian River Flag*, April 13: Charles Alexander has just sheared his Centennial Cotswold buck, one-year-old, and obtained 15 lbs of wool. The ewe which he brought on at the same time from Pennsylvania, two-year-old, sheared 14 lbs. He values his buck at \$250, and talks of exhibiting him at the district fair.

**THE FRUIT CROP.**—*Democrat*, April 14: So far as our observation and information extend, the present prospect is very favorable in all portions of this county for an abundant crop of fruit of all kinds. The almonds in many orchards are already as large as a filbert and in some orchards even larger. We have heard of no damage resulting to fruit by the frosts of last week.

**A CHANGE FOR THE BETTER.**—The farmers, who last week had been thrown off their balance by the discovery of the mildew in their growing crops, have now recovered their equilibrium and are satisfied that the blight has affected the February sown wheat only. That sown earlier gives promise of a far more than average yield. Having made the matter a subject of careful examination and inquiry, we think that we are safe in saying that Sonoma county, from the appearance of the grain and unusual acreage sown, will this year produce its largest wheat crop.

### TULARE.

**FRIEDLANDER'S GENEROSITY.**—*Delta*, April 14: In its announcement of Friedlander's failure last week the *Call* attributes his downfall to "generous concessions to San Joaquin agriculturists." It says Friedlander has been a substantial benefit to the State, and has helped to settle large tracts of land in the interior. The 200,000 acres of land owned by this generous citizen of the State, in this valley, was purchased at a cost of about 50 cents per acre in Minnesota, Indian and school-land scrip, and was sold to the settlers for \$5 per acre. The only expression we hear in regard to the great speculator in human bread is that he has sunk low enough to never appear again as an oppressor of laboring men.

## Washington.

**FARM HANDS.**—*Walla Walla Union*, April 7: In view of the indications of enormous crops, the farmers are beginning to study the problem of harvest hands. Last year they were not as plentiful as they might have been, and this year more than ever will be required. The great amount of improved machinery employed in all farm operations now, and the peculiarity of the climate of this country, which allows "harvest time" to be protracted through many weeks, makes it possible to get along with a less number of hands than farmers in the East employ. Still the problem of harvest hands is one that always troubles the man who has large crops to gather.





### "She Who Rocks the Cradle Rules the World."

Dear woman, in the dream of life,  
Adorned with every winning art:  
As mother, daughter, sister, wife,  
She melts the soul, she charms the heart.  
Without her, what were lordly man?  
A rainless cloud—a fruitless tree—  
A world without a sun—a plan  
That ever incomplete must be.  
Her fostering care, devotion, love,  
Seem inspirations from above.

In childhood's hour, beside her chair  
She calls the fragile form;  
She clasps the tiny hands in prayer,  
Safe sheltered from the storm.  
Yet man, ungrateful man, the dart  
Of falsehood hurls with skill;  
And when he's won a woman's heart  
He seeks its love to kill.  
Her lot is to be tried; though pure,  
To sigh, to suffer and endure.

Oh, mothers of a race unborn,  
'Tis yours to speak those grand decrees  
That herald in the promised morn,  
The waiting world's Hesperides.  
Ye are the molds of heralds strong,  
Who guard and glorify our lives;  
The seas in song shall roll along,  
Beneath the splendor of your smiles,  
The beautiful and good shall reign,  
The sinless Eden bloom again.

English Magazine.

### Farm House Chat.

[Written for the RURAL PRESS by MARY MOUNTAIN.]

After enjoying the good things of the RURAL for a few weeks without giving a pen-stroke in return, I begin to feel quite guilty, and especially guilty whenever a worthy topic becomes urgent for its share of attention.

Just now we are enjoying some new "kitchen things," and all the house-mothers ought to know that there is a most excellent new departure in the manufacture of domestic ware, to which we were first introduced

#### At the Centennial.

Of course it was a hot day, and we were wandering about in the building devoted to stoves. No words can show you the glory and splendor of those hundreds of stoves, ranges, furnaces, some as large as a small kitchen and so on down to the dainty little portable stoves, that looked like toys. Some were in full blast—fires "puffing" with tongues of flame the red-hot secret of their superiority to all other combinations of iron, brick or polished steel; so polished, in fact, that we could see our faces in beautiful oven doors, or looking upward, there were our faces again, long and slim, among the elegant adornments of tall office stoves. One large room was filled by the works of a company, whose stoves were so perfect in beauty of design and finish that no one could have been much hurt or surprised if they had been found in the art gallery, claiming close kinship with the dark, grave bronzes.

And here among them was

#### A Shining, Living Bronze,

With a turban on its head, a graceful coffee-pot in its hand and a jolly smile for us as we entered the hot, hot room, so nearly filled with stoves and so wholly filled with a delicious smell of good dinner.

What a surprise to come upon this beaming, tidy colored woman, crooning a camp-meeting chorus and cooking the dinner as quietly as though she was still on the old plantation—"way down on the Swannee river."

The Boston lady was with me, and proud Dinah asked us to stay and see "how elegant the stove do cook. It is re'ly a range, ladies, and heats all over in two, three minutes, so I bake the 'taters and the biscuits and the pudding's same time I be cooking the tomatoes and make the coffee and boil the steak; just one fire and 40 minutes gets my dinner all ready."

While talking to us she was still busy, not with any fuss and hurry, but timing herself by the little watch at her belt, and telling us that the dinner was for "the gentlemen that tends this partic'lar exhibition."

The visit to Dinah would have been truly refreshing if we could have been half as cool as she looked to be, but the intense heat drove us out, and as we passed again through the winding ways of the great stove exhibit, we came upon the

#### Granite Iron Ware.

No woman who has ever lifted, scrubbed and scoured the old-fashioned iron pots or the almost heavier porcelain-lined kettles and stew-pans, could look upon and lift this newly-invented ware without a glad feeling of relief and thankfulness.

The smoothness, the lightness, the beauty of finish, the pretty color inside and outside were

all so exactly after my heart's desire that I felt like joining Dinah in another old camp-meeting hymn, that should say—

"This is the ware I long have sought,  
And mourned because I found it not."

Here was everything to furnish the stove and kitchen-shelves, everything from cup, ladle and tea-pot up to kettles and stew-pans of every size, water-pails and great, broad dish-pans, that will be just the thing to use for cooking large quantities of fruit in the canning season.

Perhaps it will betray a purely vulgar taste to confess that I did rejoice more over that granite iron exhibit than any other one thing found in the whole month of Centennial sight-seeing; and the reason of my joy concerns a great many women and uncounted hosts of little girls who will have to be women if they live long enough. Because (don't you see?) everything that helps to make kitchen work more pleasant and attractive will help to do away with the dislike of it and the neglect of it. Cooking may not be allowed to rank with "high art," but if its appliances and surroundings were made as artistic as they might be made, it would be as "pretty" to cook dinners as to paint pictures; and perhaps the perfect dinner would not then be so rare a thing as the perfect picture or the perfect poem.

Thinking still further of the beauty and dignity of the labor that goes to the building up of human bodies and souls through the furnishing of varied and suitable food, I shall venture to put on record my belief that, in the course of another century,

#### The Science of Cookery

Will advance to its true place, and so high a place that none of its votaries need fear a snubbing from any fellow-laborer in other fields.

But this topic is one of my favorite hobbies, and threatens to carry me so far from my granite iron that I shall forget to tell you how hard it seemed to go on and leave it all behind; and you may be sure I asked if it would be likely to find its way to California.

"Yes," said the agent, "we have only secured our patent in time for the exposition, but we manufacture rapidly, and send all over the country as fast as possible."

Yet I did not expect the other pleasant surprise of finding, just before Christmas, a great store window in town decorated with samples of the pretty ware; not pink-tinted, like the Centennial exhibit, but of a cool, blue-gray color, that does somewhat remind one of real granite. Of course I came home in company with the trimmest little kettle—price, one dollar—and it has a close-fitting cover, a bright, smooth bail, and a little handle at the side to lift it by when you pour out the contents.

One serious fault of the old-fashioned kettles has been the difficulty of pouring from them; and stupidity itself could hardly contrive more awkward shapes than have ruled among manufacturers of domestic wares. Possibly they have seemed more awkward than they really are, on account of being so heavy; but the fry-pans seem always to be made for left-handed people. But my new kettle gave such complete satisfaction it has since been reinforced by a handsome tea-kettle, water-pail and pie-plates of the same sort, and of the following merit:

Always bright without scouring, light, strong, smooth as glass, will not break or crack, and not acted upon by acids;

#### Also Beautiful.

How could I keep the enjoyment of such things all to myself? Must tell RURAL readers so that husbands and fathers can make haste to brighten and lighten the heaviness of kitchen work by introducing this "latest improvement." Nobody has asked me to praise the granite iron, but it deserves the good word, and I want farmers' wives and girls to know about it and enjoy the knowledge as much as we do. It is made in St. Louis and our hardware dealer orders directly from there, getting it cheaper than from San Francisco.

#### Crops About Santa Cruz

Are looking pretty fair, especially the early sown, and pasturage since the January rains has come on better than we expected.

From Soquel comes a rumor of mildew upon wheat, said to be somewhat different from the rust that has occasionally appeared in former years, and so the coast county farmers are not unduly puffed up by the blessed privilege of living within

#### "The Moist Belt."

Ah, but our spring showers are timely and generous. Here in the hills our total rainfall to date is 14½ inches, and in town, six miles away, only about half as much. We are truly thankful for green pastures and growing crops, but all the joy in these good things is tempered with sadness as we remember those whose hopes of "harvest feast" are mocked by barren fields and cloudless skies.

We say to ourselves—"California pluck will carry them through; at least those who understand the country will not be discouraged, knowing that we all have much to learn yet of the chances and changes of our peculiar climate."

#### There's a Lesson in Straw.

Several farmers are ciphering away upon the profit made in burning tons of straw that might have been saved to keep the cattle from starving. It is a simple problem but they can't get the right answer and must learn "to do it another way."

The City of Santa Cruz seems brisk and prosperous, with many new buildings in all stages of

finish and unfinish. Vacant lots are suddenly alive and by some swift magic there are the cozy homes, well planted

"With roses a-bloom on the walls."

### Reflections for a Dry Year.

[Written for the PRESS by "SAN JOAQUINER."]

EDITORS PRESS:—The columns in your paper devoted to Correspondence and Home Circle are usually the most interesting ones to me—where farmers and their wives exchange notes of progress and express their thoughts and feelings. Farming and living varies so much in this State we can always learn some interesting item of experience, and as neighbors are so far apart we farmers' wives can not pick up our knitting and run over for an hour's chat. When heart and brain are weary with the endless round of household care, it does us good to snatch an hour now and then to read or write for others to read, some thoughts for our favorite paper, although we may not advance anything new or valuable. It inspires us with new courage for the battle of life to hear from others engaged in the same warfare. Are not the best writers only those who express in the happiest language the better feelings common to us all?

In writing a first hasty sketch of my California experience, I noticed some things in Mr. Nunnally's letters from Scott valley, but finding the material thus thrown together would make the article far too long, it was omitted. I heartily wish him success with his garden, trees and vines, and hope he will let us know if he succeeds (or if he fails).

It must be remembered last year was an exception; corn was raised in this neighborhood but it cannot be done this year, and may not be for several years to come. The scant vegetation is already dying out. There will be very little if any hay cut in this vicinity. The prospect of fields brown and bare for six, possibly nine months, is not very cheerful. Still farmers are looking quite courageous. As there is seldom any great loss without some recompense, we have the consolation that there will be no rush and vexations of harvest work this year, and we may find some time for intellectual and social improvement. And may we not this dry year learn lessons that will bring forth rich after-harvests?

California's genial clime, where bloom the fairest flowers and ripen the most luscious fruits, should foster happy, generous natures, and kindly sympathies. But I have frequently heard its people accused of being selfish and grasping by new comers.

If this be at all true, it must be the eager pursuit of wealth has made to lie partly dormant the better nature. When an insurmountable obstacle is thrown in the way of further advancement in this direction the mind turns more readily into better channels.

No doubt neighbors will visit more this year; perhaps extend the circle of their acquaintance, stopping at doors they never entered before. A common misfortune will touch and expand the heart; sympathy and kindly feeling take the place of arrogance and envy, and thus the bands of human brotherhood and friendship be closer drawn.

Do we not sometimes make the mistake of feeling that we could begin to live and enjoy life if we only had a few thousand more? and, in striving to acquire it, sacrifice many daily comforts and social benefits we might have enjoyed?

Oh, the children, how fast they grow! While we work and hurry, long before we find the hoped-for leisure they are beyond the little kindergarten school of the mother. But they have not been idle. Truly while we slept an enemy sowed "tares." It is a poor exchange to sacrifice any present improvement of mind or heart, hoping to make up in the future for these losses.

Each day has duties of its own. The lost opportunity can never be made up by any future diligence. What a vain and selfish people we might become were our wishes all granted, our hopes all realized. We never should reach contentment or happiness by attainment of our wishes, and ambition would constantly outstrip our progress, while every good and noble sentiment would gradually die out of our breasts. Not that wealth necessarily dwarfs the intellect or hardens the heart, but the anxious pursuit of wealth at the expense of any nobler, any higher good, always must. And how rich may the humblest life be by keeping the heart and mind aglow with all its tender sympathies.

When in the autumn of our days we no longer engage in life's active duties, how rich a treasure might be the volume of the past, did its every page record only the honest purpose and generous action. Its pictures sunshiny days in which others were made glad. Its songs sweet warblings of gratitude and praise. Its darkest pages—for shadow there will be,

"Into each life some rain must fall,  
Some days be dark and dreary."

All softened with resignation, love and tender sympathy.

No worldly prosperity can compensate us for the happy memories of the past—the consciousness that our lives have been a blessing and a

joy to others. No inheritance for our children equal to the daily loving intercourse of parents striving to impress lessons of truth and honor upon the expanding mind, shaping them to a noble manhood and womanhood. I have been jotting down these reflections for my own benefit, principally, realizing how far short my life falls of what it might be. May there be a germ that will bud and bloom in fairer thought and richer fruit in the heart of the reader.

If this dry year should teach us any useful lessons or in any degree mellow and ripen our hearts, it will not have been in vain. But I must hasten to the kitchen or my patient husband may reflect that one day had been the brighter for more of my presence there.

Ellis, April 10th, 1877.

### Help Our Boys.

EDITORS PRESS:—In the register kept in the office of the "Youth's Directory" may always be found the names, addresses and other particulars of several hundred youths between the ages of 14 and 20 years looking for employment. They are of every tongue and kindred and social condition. Most of them have parents residing in this city, are strong, active and honest, willing, nay, anxious, to work at anything, especially in the country, for a stipulated compensation of \$10 per month, with board, lodging, and, in some cases, transportation hence to their destination, the advance for fare to be afterwards deducted from their first earnings. On these terms and conditions, last year we placed out in rural districts over 700 lads, nearly all of whom have given satisfaction to their employers. In testimony whereof we may be permitted to append the following graceful acknowledgment from the pen of Mr. G. C. Holman, of Lockeford, San Joaquin county, who, last season, hired some 40 boys from this office: "The boys and young men, from 16 to 20 years of age, with scarcely an exception, have been tractable, faithful and industrious, giving better satisfaction than the Chinese heretofore employed. They are generally from respectable and worthy San Francisco families, and consequently well brought up. In the field there has been a spirited rivalry as to who should pick the most, being in marked contrast with the Chinese who, when working by the day, seem ambitious to see how long they can make the job last. I predict that some of the young men will yet make a rise in the world. From my experience, I am satisfied that our hop and fruit growers, and farmers generally, can make selections from our unemployed youth that will better please them than the Chinese now so generally under engagement."

In behalf of a good cause, that of rescuing outcast children from the perils and temptations of street-life in this great city, please inform the readers of the PACIFIC RURAL PRESS that we have on hand, as inmates of this institution, a number of bright, stout, responsible youths—none of the genus hoodlum—who are eager for an opportunity to render faithful service, by contract for the consideration already stated. We make no charges to either employers or employees; nor is there any discrimination between applicants, on account of difference in matters of religious belief. This free home and intelligence bureau for little wanderers is maintained by gratuitous contributions from the public at large, without discrimination of race or creed.

A. P. DEITZ, Supt.,  
1417 Howard street, S. F.

San Francisco, April 10th, 1877.

### Persian Love of Flowers.

Dr. George Birdwood, in an article in the London *Athenaeum*, remarks: "Very beautiful is the Persian love for flowers. In Bombay I found the Parsees use the Victoria gardens chiefly to walk in, 'to eat the air,'—'to take a constitutional,' as we say. Their enjoyment of it was heartily animal. The Hindoo would stroll unsteadfastly through it, attracted from flower to flower, not by its form or color, but its scent. He would pass from plant to plant, snatching and crushing the flowers between his fingers, and taking stray sniffs at the ends of his fingers as if he were taking snuff. His pleasure in the flowers was utterly sensual. Presently, a true Persian, in flowing robe of blue, and on his head his sheepskin hat,

'Black, glossy, curl'd, the fleece of Kar-Kul,'

Would saunter in, and stand and meditate over every flower he saw, and always as if half in vision. And when at last the vision was fulfilled, and the ideal flower he was seeking found, he would spread his mat and sit before it until the setting of the sun, and then pray before it, and fold up his mat again and go home. And the next night, and night after night, until that particular flower faded away, he would return to it, and bring his friends in in ever-increasing troops to it, and sit and sing and play the guitar or lute before it, and they would all together pray there, and after prayer still sit before it, sipping sherbet, and talking the most hilarious and shocking scandal, late into the moonlight; and so again and again every evening until the flower died. Sometimes, by way of a grand finale, the whole company would suddenly rise before the flower, and serenade it with an ode from Hafiz, and depart."



Putting the Baby to Sleep.

A mother writes the following dramatic account of a nursery experience: The young rascal has no more idea of going to sleep than the man in the moon. He deftly clutches me by both earrings, and, throwing himself upon his feet in a manner calculated to make the most fond mamma's teeth chatter, and seizing my frizzes by way of steadying himself, he firmly grasps my back-comb, which he only relinquishes at my most earnest and repeated solicitations. Finding less comfort there than he had reason to expect, he proceeds to explore my eyes, nose, ears and mouth with his chubby forefinger, emphasizing the research by trying his teeth on the aforesaid members. Anatomy exhausted, he turns to pastures new. Do not imagine that I have been an idle recipient of these fond attentions. No! I have been sweetly chanting, trotting and rocking. I have tenderly given "Sweet and Low," "Sleep, Baby Dear." I have done "The Crooked Man," "Humpty-Dumpty," with variations, "Hickory, Dickory, Dock," etc., and having conscientiously finished "Mother Goose"—not even disdaining such unmusical productions as "Pop goes the Weasel" and "Mother, may I go out to Swim," in the illusive belief that they are calculated to stay and fix the wandering eyes and attention of young America—I proceed to more solemn business. I divest myself of earrings, neck-tie and all other snares, and, metaphorically, rolling up my sleeves, I strike into the "Sam tues." "O, to grace how great a debtor" is a comfort to me, but its soporific influence is confined to churches. Baby still pokes and clutches at my throat. "Hold the Fort" still rings out with the heat of combat. Baby evidently intends to do so. Having gone through my repertoire of major tunes with no success, I conclude to resort to heroic treatment. I lay the young man down and firmly clasp him in my arms. Result—a very exasperated boy, a year old, who struggles and squalls most lustily. Being a little stronger, I hold on and solemnly chant, "Hark from the tombs." Five minutes of this innocent diversion convinces me that the child must have a pain. Perhaps the little love has the stomach-ache. His ear may ache. He throws his little fists about fiercely, and as he reaches for water so sweetly, I let him up, feeling that I have been unwarrantably stern and severe. Still I do sometimes wonder how a few judiciously-administered spanks would sound. Having thus solaced myself, we go at it again—sing, scratch, poke, trot, rock, walk, drink, kiss, scold, pet—eyes preternaturally wide open, dinner getting cold down stairs. At length, when we are both exhausted, and those little peepers do close tight, and, snuggling down close to my heart, he resigns himself to the inevitable, how sweet the cherub is!

TELL YOUR WIFE.—If you are in any trouble or quandary, tell your wife—that is, if you have one—all about it at once. Ten to one her invention will solve your difficulties sooner than all your logic. The wit of woman has been praised, but her instincts are quicker and keener than her reason. Counsel with your wife, or your mother, or sister, and be assured light will flash upon your darkness. Women are too commonly adjudged verdant in all but purely womanly affairs. No philosophical student of the sex thus judge them. Their intuitions or insights are the most subtle, and if they cannot see a cat in the meal, there is no cat there. I advise a man to keep none of his affairs a secret from his wife. Many a home has been happily saved, and many a fortune retrieved, by a man's full confidence in his wife. Woman is far more a seer and a prophet than man, if she be given a fair chance. As a general rule, wives confide the minutest of their plans and thoughts to their husbands. Why not reciprocate, if but for the pleasure of meeting confidence with confidence? I am certain no man succeeds so well in the world as he who, taking a partner for life, makes her a partner of his purposes and hopes. What is wrong of his impulse or judgment, she will check and set right with her almost universally right instincts. And what she most craves and most deserves is confidence, without which love is never free from a shadow.

TACT.—People cannot help having been born without tact, any more than they can help having no ear for music; but there are occasions when it is almost impossible to be quite charitable to a tactless person. Yet people who have no tact deserve pity. They are almost always doing or saying something to get themselves into disgrace, or which does them an injury. They make enemies where they desire friends, and get a reputation for ill-nature which they do not deserve. They are also continually doing other people harm, treading on metaphorical corns, opening the cupboard where family skeletons are kept, angering people, shaming people, saying and doing the most awkward things, and apologizing for them with a still more terrible bluntness. If there is one social boon more to be desired than another, it is tact; for, without tact, the career of the richest and most beautiful is often utterly marred.

"THE sentence of the court is," said Judge Porter, a popular Irish magistrate, to a notorious drunkard, "that you be confined in jail for the longest period the law will allow; and I hope you will spend the time in cursing whiskey." "Be jabbers I will, and Porter, too," was the answer.

Young Folks' Column.

Letters to Girls and Boys.—No. 18.

(Written for the RURAL PRESS by JENNIE E. JAMESON.)

DEAR CHILDREN:—It seems rather strange to write letters and never get any answers. I wrote to a little boy and girl a while ago and got what their mama called "two literary curiosities" in return. The little girl—a five-year-old—printed her letter without any pauses, the letters running along like A. B. C.'s, and her mama wrote an interpretation upon the other side. But I shall always keep that letter, for I can seem to see Miss Blackeyes (perhaps you will remember her, the little girl who played school with me, bringing Ida, and Sambo, and Dinah for scholars,) as she bent over the table with a lead pencil in her chubby fingers, hard at work upon that letter. A little boy sits beside me as I write. A tired boy, for he has worked hard for two days.

His name is Ernest. Sunday he went to church for the first time in his life. He was as still as a church mouse; his only complaint being made after he reached home, when he solemnly exclaimed: "Why, mother! they didn't give us a bit of anything to eat there!" He is a funny little fellow, and as apt to get things mixed up. The other day a lady brought a very pretty mat, made of a fox-skin, and showed it to his mama. When she went away she put the mat under her arm. When Ernest's father came home we were astonished to hear the little fellow tell him that "a fox ran through the yard with a lady under his arm." One day he called upon a little boy who lives in the next house. Willie's mama asked him if he had a kittle. "Oh, no!" said Ernest, "my mama won't have any cats 'round she's house. Her's got a canary bird, and birds eats kittens all up." He in the wash-room now, teasing Maggie, the wash-woman, to buy him a little wash-tub. "Cause I did see one in the window when I went shopping with mama yesterday."

That was his Monday's work. His mama took him with her when she went to some of the large stores in Boston. He was the strongest, if not the most fashionable "pull-back" that ever accompanied her upon the street, for he wanted to look into all the shop windows, and examine all the articles placed there for sale, so she must pull him along or leave him.

Such toys, of all kinds, to tempt little folks to tease for pennies, that they may buy something nice!

There are two windows before which children delight to stand. Inside, upon rich carpets, are dozens of dolls in beautiful costumes.

A wedding party with bride and bride-groom, standing before the clergyman, and many friends standing around them, dressed in silk, satin, lace and broadcloth, make many a child wish they could take them all home to their play-room. In another window is a family party. The post-man is giving them some letters, and all are eager to get at least one. A fine old negro servant has one, and shows her teeth in glee. But I could not tell you of half what Ernest saw. His hair has been too long over his forehead, but now he says: "Mama's cut my hair off in the back of my neck to keep it out of my eyes, and I can see pretty well." Isn't he a funny fellow?

HOW A LITTLE GIRL GOT A DIRTY FACE.—On Saturday a lady entered the gallery of a well-known photographer, leading a small child, and gave directions to have its photograph taken. While arranging the child's costume in the operating room, she came to the conclusion that its face was not as clean as was desirable, and that it had taken on sundry specks of dust since leaving home. She called to the operator to know where she could find towel and water. He was in his dark closet, and responded to her call by telling her to go into the dressing room. Noticing a small room near at hand, she took Young America into it, and, finding a basin with water in it, proceeded to wash the youngster's face. She returned and placed the subject in position, under the glare of the skylight, and drew aside as the photographer came in with his plate, prepared to catch the shadow of the youthful countenance. He was surprised to see the child's face very dirty, and called the lady's attention to the little one. "My gracious," she exclaimed, "why it's turned black in the face." Sure enough, the little shaver was every second approaching an ebony hue. Suddenly a light broke in on the photographer's mind. "Where did you wash the child's face?" "In that little room." "There? Why that's one of my operating closets," and he ran into it. "Did you use the water in this basin?" "Yes—why?" "That's a nitrate of silver bath, and you have given that youngster a black skin for good." By this time the child's complexion had changed to a decided black under the action of the light upon the nitrate of silver. Although rather dangerous to use, a light application of cyanide of potassium was made to the child's face, and the color reduced to a strong olive, but some time must elapse before the signs of the nitrate bath will entirely disappear.—Record-Union.

GOOD HEALTH.

Cheese as Food.

We are quite sure that cheese is not given its proper place as a food material. We are aware that some systems do not take to it kindly, and such persons should not press it upon their digestive economy. We are aware also that much cheese because it is poorly made is indigestible. These facts should be borne in mind. And yet as a food possessing great strengthening power and adapted to those who have hard physical labor to perform, there are few foods so satisfactory as rich and well cured cheese. We propose to give some authorities on this point, both for the good of the eater and to contribute toward securing one of our important branches of agricultural production, the demand to which it is justly entitled:

Dr. Austin Flint, one of our most erudite physiologists, says: "Old cheese taken in small quantity towards the close of a repast, undoubtedly facilitates digestion by stimulating the secretion of the fluids, particularly the gastric juice." Here its effect is attributed to a different principle than that of its fermenting quality; but an active ferment may also increase the effect of the gastric juice. Dr. Flint says: "New cheese is a highly nutritious article, as is evident from its composition."

The long experience of English, Scotch and Irish laborers proves cheese to be a wholesome as well as nutritious food. A small quantity of cheese, with them, takes the place of a larger quantity of meat, and enables them to endure such hard labor as the American thinks he can only perform upon a generous meat diet. In Germany farm laborers depend largely upon the curd of milk after being skimmed for butter. This curd is frequently used in a fresh state and makes an important part of the laborer's diet.

It is related of a certain Dane that he could carry a stone so heavy that it required 10 men to lift it on his shoulders; that he performed such wonderful feats of strength upon a diet consisting of large quantities of thick sour milk, tea and coffee. His enormous strength must have been sustained by the curd of the milk. This case refutes the common error, that milk does not furnish a diet for vigorous manhood. There are numerous cases in which a milk diet has sustained the system under the most exacting labor. Wm. Vincent, of Stonington, Ct., in a letter to Dr. Alcott, says: "I have lived principally on bread, cheese, and butter, with a few vegetables, for more than 24 years." He entirely abstained from animal flesh.

The American Encyclopedia says: "The peasants of some parts of Switzerland, who seldom ever taste anything but bread, cheese and butter, are a vigorous people."

Our American women take to little nitrogenous food, owing, perhaps, to their great predilection for the finest flour and much pastry. Their vitality is confessedly much lower than the better class of English women. Women are not such flesh eaters as men, and with their love of sweetmeats the nervous system becomes illy nourished. They may almost be said to be made of starch and sugar. If they would make cheese a more constant article of diet, and use more unbolts flour, with more open air exercise, they would soon become the most healthful and robust, as they are now the most beautiful women in the world.

Cheese is less liable to putrefactive change than flesh, and thus much less likely to develop in the human system those scrofulous diseases attributed to animal food.

Care of the Hands.

"Paul H. B.," in the *Tribune*, has some special instructions on this subject for the ladies who like to keep their hands fair: Ladies who do their own housework are apt, if they do not wear gloves, to have coarse hands. If they happen to dip them into water, they do not take enough time to dry them well before going on with their work. To wipe the hands perfectly dry after their being immersed in water is imperatively necessary, if they wish their hands to look white. To keep the hands from chapping in cold weather use a mixture of glycerine, one ounce; spermaceti, two drachms; olive oil, two ounces. Mix together, with the aid of heat. Apply this every night, and, if time will admit of it, every morning. In winter, do not wash them in cold or hot water. It should be just blood-warm, and no more or less. Do not go out of doors with them uncovered. In summer, use cold water, unless the hands perspire very much, as the hands of some people do. These latter should use tepid water.

In warm weather, a good preparation for the hands is this: Take half an ounce of powdered alum and the whites of two eggs, and mix together. Then add enough bran to make into a thick paste. Apply this once a day, after washing, and, after rubbing the hands together well for a few minutes, wipe off with a soft towel. This will give them a soft, brilliant hue, and check any undue amount of perspiration. What is called cream of roses is also an excellent preparation for the hands, either in winter or summer. It is made as follows, unless you prefer to purchase it at a dollar a bottle: Take compound tincture of benzoin, half an ounce; almond and Malaga oil, of each an ounce; attar of roses, five drops; honey, two ounces; and enough rose water to make the mixture measure six ounces. Apply as often as you will like.

DOMESTIC ECONOMY.

Doing Up a Shirt.

"Aunt Addie" writes to the *New York Times* the following elaborate instructions on this vexing specialty in domestic economy: Have a tub of quite warm water; take your soiled linen the evening before you wish to wash; soap the collar-bands, wrist-bands, and all stained places separately and well; put the lid of the tub down, and leave all night. In the morning put in your boiler two pails of cold water, one paper of washing crystal, and about one-fifth of a cake of soap, shaved up fine; let it boil ten minutes, stirring it around with your clothes-stick; then add three pails of cold water, or enough to cover your clothes well; squeeze the clothes out of the tub, leaving as much soap in as possible; put in the boiler, and set it where it will come slowly to a boil; keep the clothes well under the water with the clothes-stick, and boil 15 minutes; drain them out of the boiler into clean warm water, carefully rubbing each piece by itself; have them wrung tight out of this water, and snapped out so that they go into the rinse-water all loosened out; give them two plentiful rinsings in cold water, and a third in blue water. The blueing requires judgment; you can tell when it is a desirable shade by wringing out of it a napkin. Starch—Have a pan of boiling water; stir your starch to a paste with some cold water, and pour into the boiling water; add a pinch of salt, and to every quart of starch put in three Chinese wax wafers; let boil five minutes, stirring all the time. Have your linen all turned on the wrong side; dip the bosom of the shirts—the wrong side—in the starch as hot as you can possibly handle it, and rub between your hands well; collars and cuffs same way, only have them doubled together; hang with the starch side to the sun; they must be perfectly dried; you can sprinkle them over night or two or three hours before you wish to iron them; if they are desired very stiff, take a heaping teaspoonful of starch and dissolve in half a pint of cold water and then pour on half a pint of boiling water; I put one drop of blueing in a teaspoonful of water and stir it in; dip the bosoms, collars, and cuffs in this and wring tightly as possible; lay the body of the shirt upon the bosom, and roll up very tightly, and put in the basket so that they will keep so; snap out each collar and cuff separately and lay them between dry towels, and roll them very hard and tight. When you iron see first that you have a good fire, and that the lids of the range or your ironing pan are perfectly clean. Have a bowl of clean water and a clean piece of white cloth, a piece of wax in a cloth, and a board with some sand on it; you should have at least two thicknesses of blanket and two of white muslin on your bosom board, and they must be tacked very tight and smooth. I always iron wrist-bands first, then the sleeves, then the neck-band; then put the shirt on the shirt-board, and iron all but the bosom; wring the cloth out of the water in the bowl, and rub over the all bosom; rub downward and pull the bosom into shape. Be sure the iron is immaculate; give it a rub on the sanded board; if they have ever stuck and caused you trouble, then give the wax a quick rub over it, then rub off hard on your ironing cloth, and besides rub the sides of the iron well. Begin to iron the bosom in the center up and down, holding fast to the neck-band and so on out to the sides, so that any wrinkles will come at the very edge; if any wrinkles are in the bosom, or any black specks, rub them out with your damp cloth; you must iron until they are entirely dry, then take your damp cloth—not wet—and rub over the whole bosom, so that it is a little dampened, and then finish by polishing with your polishing iron, rubbing quickly and bearing on; wipe the collars and cuffs off well with a damp cloth, pull in shape, lay over them a piece of clean white muslin, and iron a moment or two; then take off the cloth; iron and finish the same as the bosom; lay them in a large dish, and put it in a plate warmer until they are dry and stiff beyond a doubt. Hang your shirts with the bosoms next the fire until they are stiff also.

BRIGHTEN THE DINING-ROOM.—A writer in the *Prairie Farmer* says: If your dining-room boast neither carved furniture, nor fresco; though it be destitute of gilding and paintings, you can still make it cheerful and attractive. Gather in the sunbeams; let the bright morning rays illuminate the room; if you have a bird, hang it in the sunny window; its happy matin warblings will cheer you; a green vine clambering round the casement will form a pleasing spot for the eye to rest upon; the table with its snowy linen, polished glass and hissing urn, brightened if possible by a few flowers, will complete the pleasant picture, and however frugally the board be spread, if the viands be wholesome and palatable, comfort and good cheer shall be with you as you gather round it.

CORN CAKES.—Three cups of corn meal, one cup of Graham flour, two teaspoonfuls of cream yeast powder sifted together, one cup of cream, and a half a cup of milk, one egg well beaten; stir all together well and quickly; heat your gem ous hot; butter and fill; bake with a brisk heat. Gem tins or forms do not need to be heated before filling, they may be oiled and filled on the table and put into a quick oven.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

Subscriptions, payable in advance: For one year, \$4;  
six months, \$2.25; three months, \$1.25. Remittances by  
registered letters or P. O. orders at our risk.

Advertising Rates. 1 week. 1 month. 3 mos. 12 mos.  
Per line. . . . .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch. . . . .2.00 5.00 14.00 40.00

Four weeks are rated a month.  
Large advertisements at favorable rates. Special  
reading notices, legal advertisements, notices appearing  
in extraordinary type or in particular parts of the paper,  
inserted at special rates.

#### DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. MOORE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these  
Columns.

SAN FRANCISCO:

Saturday, April 21, 1877.

#### TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Excavating by Machinery; California Honey for Spain, 241. Science and Practice; American Pomological Society, 249. Desert Land—Grass as an Agricultural Crop; West Side Irrigation Project; Prickley Confrey, The New Forage Plant, 250. Patents and Inventions, 253.

**ILLUSTRATIONS.**—The Price Excavator, 241. Prickley Confrey, 249.

**CORRESPONDENCE.**—Lake County; Foss Valley, Santa County; Anderson Springs—A Correction, 242.

**POULTRY YARD.**—Merits of Pure-Bred Poultry—Non-Setters, 242.

**THE APIARY.**—California Bee Pioneers, 242.

**HORTICULTURE.**—Points in Orange and Lemon Culture, 242-43.

**THE SWINE YARD.**—Pork Packing on the Pacific Coast, 243.

**SHEEP AND WOOL.**—Communication of Seab, 243.

**ARBORICULTURE.**—The Tamarind Tree; The Eucalyptus, 243.

**PATRONS OF HUSBANDRY.**—Agricultural Education; Stockton Grange; Taxation; Items Furnished by the Secretary of the State Grange; Amendments to the Grange Constitution; Prof. Hilgard's Lecture; The California Patron; Sonoma County Grange; Grange Victory; Finance, 244.

**AGRICULTURAL NOTES** from the various counties in California and Washington Territory, 245.

**HOME CIRCLE.**—"She Who Rocks the Cradle Rules the World" (Poetry); Farm House Chat; Reflections of a Dry Year; Help Our Boys; Persian Love of Flowers, 246. Putting the Baby to Sleep; Tell Your Wife; Tact, 247.

**YOUNG FOLKS COLUMN.**—Letters to Boys and Girls.—No. 18; How a Little Girl Got a Dirty Face, 247.

**GOOD HEALTH.**—Cheese as Food; Care of the Hands, 247.

**DOMESTIC ECONOMY.**—Doing Up a Shirt; Brighten the Dining-Room; Corn Cakes, 247.

**QUERIES AND REPLIES.**—Pests on Fruit Trees; The Moon in Vegetation, 249.

**GENERAL NEWS ITEMS** on page 252 and other pages.

**MISCELLANEOUS.**—The Distribution of Animals; A New Insect; Excretion of Carbonic Acid; Rapid Growth, 243. Don't Dwell on One Idea; Removing Gas from Drinking Water; Morocco Manufacture, 250.

#### NEW ADVERTISEMENTS.

Agricultural Implements, Baker & Hamilton, S. F.; Rice Straw-Burning Engine, Marcus C. Hawley & Co., S. F.; 35 Visiting Cards, D. F. Cooley, Brockton, Mass.; 25 Fancy Cards, J. B. Husted, Nassau, N. Y.

#### The Week.

Again the showers have cleared the air and brightened many faces. The rain area extended over those parts which most have felt the want of it, and by its edging has lapped upon the well-favored regions. The timely coming will lengthen the feed season in some counties considerably, and in others will make grain of hay and hay of nothing. It was a notable rain along the coast of San Mateo county, swelling the streams, and turning the dusty roads into mud, which it was a pleasure to see the wheels upwhirling. Below Pescadero it was pronounced the best of the season, and one of our dairy readers tells us it will increase his production of cheese by a cash value of \$1,000, and his cattle will survive the season sleek and well favored. The same will be true on other of the middle counties, we doubt not.

This season is going to teach many lessons, and none more forcibly than the benefit of thorough culture. Almost everywhere in our grain counties there may be seen occasional ranches upon which the profit of the summer-fallow and the perfect working of the soil shines out so clear in the rich drouth-defying growth that he who rides may read. Good culture husbandry water. It makes the soil a treasure-house, and its sign is nodding heads, while adjacent surface, irritated and winter-worked fields, have naught to hide their hardness. Let those learn the lesson whose conditions make it applicable. There are exceptions to the rule, we know, but it is of wide application.

The week has been a cluster of beauteous days. While we read of wars and floods which will rob thousands of their lives, and thousands more of the fruit of their labors, we live and labor in an atmosphere of peace and security, and enjoy the blessings which are bestowed with bounteous hand.

#### Science and Practice.

The tendency of the day is toward the introduction into our discussions and agricultural newspapers more and more of what is called "Science," and we find this introduction opposed by something which goes under the name of "Practice." There is evidently something of a contest going on between these two champions, and numbers of men who attach themselves to either side. It may be profitable to look into the ground of dispute which makes these two apparently enemies, and discover if they be not indeed in reality friends and in fancy enemies.

What is practice, as related to agriculture? What is the farmer? He is a man dealing with nature in several ways. He is a man who is profited by the works of nature in his fields and in his animals. What is science? Science, generally speaking, is knowing. The science which we most frequently meet aims to be natural science—the science of material—the knowing of nature in her varied forms.

When we ask, then, what has the farmer to do with science, it is equivalent to saying: What has a man, who works by natural laws, to do with a knowledge of those laws? Let us illustrate with the dairyman. Whether it be the growth of grass in his pastures; the special development of desirable qualities in his animals; the increase of milk, by furnishing more or better food to make it from; it matters not which means of improvement the dairyman employs, the result depends upon what we call natural or vital forces. The man who gets the best yield of milk from his dairy is the one who best uses these forces; and the man who works best with the forces of nature is the one who is most thoroughly scientific in the line he is pursuing. The science of breeding says that useful qualities may be transmitted and increased. The science of feeding says that if you feed a cow well she can answer your demands quickly and profitably.

What does practice say on this point? Call to mind the poorest bred and fed herd in your neighborhood, and what is the owner's result from his season's work? It is low, is it not? And yet that man will say, perhaps, that he is practical, and does not believe in scientific dairying. What is the matter with him that he is practical and yet does not succeed? It is just this: although he is practical, his practice is very poor. The farm suffers more from poor practice than from any other cause. They tell us that if farming were made more generally scientific it would be more generally profitable. What does this mean? It means only this, that if a man can be led to understand his business better and improve his practice he will gain larger rewards. Does anyone doubt this? And yet we find men sometimes talking against science as though it were the enemy of practice, when in fact it is the elevator of practice, the very foundation upon which the best practice rests. Practice says a thing is done. Science tells how it is done. Science is the outgrowth from the best practice; the arrangement of it into formulas which are generally applicable. It draws general laws which are the teachings of a thousand experiences, and points the way in which experience may be repeated and employed to the advantage of a world of practical men.

It cannot be doubted that there exists in many minds an idea that natural science is something very different from this experimental and systematic observation of facts which we have indicated. They do not think that this method of investigation prevails in even the highest works of the scientific investigator. Let us see. Not long ago there was a transit of Venus, and expeditions were sent out by our own and foreign governments, to make observations upon it. Now how did these men operate? Did they go out to those far-off islands and sit on the rocks, and talk about the transit, and get up theories about it? No; they were waiting there in anxious expectancy, with their instruments all adjusted, and as soon as the little planet touched the disc of the sun, there were a hundred different records of it lest one should be not true. As the round shadow moved farther upon the face of the sun, again there were 100 records. And lest the observation of the human eye might not be accurate, there were 100 photographic images of it fastened upon the glasses, because an image upon a photographic plate cannot be moved, and can be measured afterward. Everything those astronomers did was in the line of gaining actual truth about the thing before them. This is natural science. It is believing because you know; it is believing because you see; it is believing because you can demonstrate what you believe.

This is the kind of science which can be employed for the advancement of agricultural practice. The science of agriculture is not a thing which only a few can understand. A scientific investigator needs freedom from prejudice; he needs patience to investigate; he needs judgment to draw correct inferences from what he discovers in his experience and experiments; he needs the ability to discern differences and memory to store them, and he must always watch. These qualifications are all in the possession of the intelligent farmer, and when he becomes persuaded that he can improve his processes greatly by the teachings of his patient

observation, and by the exchange of his observations for those of investigators in all the lines of research which are tributary to his industry, he has the spirit which has led to the greatest industrial scientific discoveries of the day.

There must be a wider understanding of the natural and commercial science of agriculture if the industry is to maintain itself abreast of the progress which the other industries are making. This can be gained by constant inquiry, in the light of science, into agricultural practice, to discover if it be the best possible. Thus science will be made practical; thus practice will become scientific.

#### American Pomological Society.

This most honorable organization of fruit growers will hold its session this year in Baltimore, commencing September 12th and continuing three days. The society is one in which California fruit growers take an interest, and in which they are represented in the officer list by B. S. Fox, of San Jose, and Dr. John Strentzel, of Martinez. We have received the official announcement of the society signed by the venerable and respected President, Hon. Marshall P. Wilder, of Mass., and the Secretary, W. C. Flagg, of Moro, Ill. Of Mr. Flagg's ability as a Secretary we are constantly reminded by the last report of the society to which we make frequent reference.

It will be decidedly to the advantage of California to be more fully represented in the American Pomological Society than it is. The members are men generally regarded as authority on fruit growing and the more fully we can enlist them in favor of California as a fruit producing State, the more widely our fame will spread. In making a personal acquaintance it is important to win as friends men of character and position, and the same rule holds in making friends for our fruits. If we can enlist the best fruit men in the whole country we shall gain the advantage of the authority which their words and writings command. Thus would we urge a fuller representation of California fruit and fruit growers at the coming Baltimore meeting than ever before, believing that by such representation we shall consult our State's best interests.

We are pleased to quote from the circular announcing the coming meeting so that all our readers may share in the invitation extended:

All horticultural, pomological, agricultural and other kindred associations in the United States and British Provinces, are invited to send delegations as large as they may deem expedient; and all persons interested in the cultivation of fruits are invited to be present, and take seats in the convention.

It is confidently anticipated that there will be a full attendance of delegates from all quarters of our country, thereby stimulating more extensive cultivation by the concentrated information and experience of cultivators, and aiding the society in perfecting its catalogue of fruits. This catalogue includes 50 States and Territories, most of which have their columns filled with a great amount of information as to the fruit adapted for culture in the respective locations. Many of these are yet incomplete; and it is the object of the society from year to year to fill the blanks and bring its catalogue nearer to perfection. To accomplish this object as fully as possible, the Chairman of the General Fruit Committee, P. Barry, Esq., Rochester, N. Y., will send out the usual circulars of inquiry; and it is desirable that these inquiries should be answered at an early day. The various State and local committees are urged to respond to the circulars as soon as practicable.

The coming session will derive a special interest from its location in the midst of the great fruit-growing region of the Atlantic coast, and also from the fact that it is the first meeting held since the expiration of the first century of our national history. It is desired, in this connection, that the Vice-Presidents of the several States, Territories and Provinces, should furnish or procure, as far as possible, short historical sketches of the rise and progress of fruit culture in their respective districts, from their settlement up to the year 1876, to the end that the forthcoming report may give a complete view of the pomological history of the various parts of the country. State and local horticultural societies are respectfully requested to co-operate and aid in this work.

Members, delegates and societies are requested to contribute collections of the fruits of their respective districts, and to communicate in regard to them whatever may aid in promoting the objects of the society and the science of American pomology. Each contributor is requested to prepare a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as early as practicable. By vote of the society, no money premiums will be offered; but a limited number of Wilder medals will be awarded to meritorious objects.

At the same time, from September 11th to 14th, inclusive, the Maryland Horticultural Society will hold a grand exhibition of fruits, plants, flowers, and other products of horticulture, by which an increased interest will be given to the occasion.

Packages of fruits, with the names of the contributors, may be addressed as follows: "American Pomological Society, care of William B. Sauds, Baltimore."

#### QUERIES AND REPLIES.

##### Pests on Fruit Trees.

EDITORS PRESS:—In visiting some of the orchards in this county I notice there are diseases at work on the apple, pear, plum, and cherry trees, of two entirely different kinds. That on the cherry looks as though venetian red had been dusted all over the limbs. In rubbing my hand over the affected parts, it looked as though I had drawn a paint brush across my hand painting it red. What is the name of the disease and what is the remedy? The trees grow thrifty and bear very little fruit.

The other kind is full of spots or small dots, or scales, and underneath the scale is the yellow insect, and they cover every limb on the trees, and when the tree begins to die dead spots in the bark will appear as large as the thumb nail. One man told me he knew nothing of the disease in his orchard until he saw the fruit on a certain pear tree was falling to mature its fruit, and then he examined it closely and found this terrible disease. Please give us the name and remedy, as I wish to know what to do forthwith if it ever comes into my orchard.—E. H. LENOX, San Jose.

The microscope discloses the causes of the ill effects which our querist describes. The red coating on the cherry trees is caused by a fungus growth upon the bark, and insects are also present. We have not had time to pursue the study far enough to define the fungus, but it is evident that the bark is seriously diseased and injured by the parasite. We cannot tell what would be the most practical way to meet the disease. It seems to cover the trees even to the remotest twigs, and the difficulty is to make the application over such diverse surfaces. We should, however, wash the trunks and larger limbs with soap suds in which a little sulphur was stirred, scratching well with a stiff brush during the operation. It would also be well to drench the branches with the same wash. We would expect good results from this treatment if faithfully applied.

The second trouble which our querist describes is easily recognized under the microscope to be the work of the apple tree bark louse (*Aspidiotus conchiformis*), of which we have made notes before. This year's insects have nearly all left the scale and the twigs are seen to be covered thickly with the broken shells. Now is just the time to attack the insect vigorously. Drenching the branches and twigs and scouring the trunks of the trees with strong soap suds will kill all insects which are now out of their cover, and will decrease next year's supply. Soft soap or whale oil soap will answer the purpose.

We would advise our querist, and others, to scan their orchards closely and begin defensive operations as soon as the first signs of disease or insects appear. There is safety in keeping the trees clean, the bark strong and healthy and the soil well furnished with the substances which the tree needs. When neglect is the rule, weakness enters, disease follows and an orchard reaches a condition from which recovery is slow and uncertain. Watch your trees and care for them. Their growth and fruitage will show their appreciation of your care.

##### The Moon in Vegetation.

EDITORS PRESS:—A short time ago I was not only pleased but interested in an argument between two gentlemen from the mountains, in regard to the influence of the moon on vegetation. One side of the argument was that if certain vegetables were planted or sown during the new or light of the moon, that they would go to seed, and that potatoes would never yield equal to those planted in the dark of the moon. I would not like to be called a moon-struck man, but I do know there are a great many who are entirely governed by the moon, as far as planting is concerned, and if there is anything in the garden line that is affected by the light of the moon, you would confer a favor on a number by classifying them and answering through the Press.—J. C. Red Bluff, Cal.

It is our opinion that the moon has had credit for far more intermeddling with mundane affairs than she deserves. We are willing to grant her full credit for the valuable work she does for us in aiding the movement of the tides, and thus keeping our large inland bodies of salt water from stagnation. We are willing to grant that she may have a force in our atmosphere and act as an influence upon meteorological disturbances, although we think even here her part is greatly exaggerated. But we do not give her any place in the growth of vegetation. Just as we had read our querist's letter, we found in the *New England Farmer* an article on the subject he broaches, which expresses our position on the moon in agriculture exactly. We quote: The moon's influence upon vegetation was formerly discussed periodically in many of the agricultural newspapers of the day, but as neither the moon nor the discussion of her powers ever had the slightest effect whatever upon vegetation, the discussion has gradually died away before the march of improvement and the growth of intelligence, which have almost entirely displaced the old superstitious notions of past years. We have never paid the slightest regard to those old sayings about the moon's influence upon vegetable and animal life. There is a proper time for cutting timber, varying according to the object desired. If to secure the best sprouts for a second growth, cut in the spring. If to kill the trees, root and branch, cut late in summer; but there are no one or two days which are practically better for these operations than other days during the same months. We have heard of a man who would consult the almanac to learn when to build a rail fence. The best time to kill a hog is when it is fat, the weather cool and the pork needed for home use or for market. The best time to plant or sow is when the ground is warm and in the best condition to receive the seed. The best time to kill weeds is as soon as they appear, and the best time to harvest a crop is when it is ripe for the harvest. Finally, the best time to study the influence of the moon upon vegetation is when all other subjects have been completely exhausted.



# Desert Lands—"Grass as an Agricultural Crop."

EDITORS PRESS:—In your issue of March 10th you have an article on the settling of "desert lands" under the new law. What I want to know is whether grass is an agricultural crop or whether the law means land that must be irrigated to grow wheat or barley. Also I want to know whether every man must be on his section himself before filing his intention, or whether his son may live there and build the ditch, and the man himself go on with the rest of his family as soon as the water is brought upon the land and a crop growing.—G. W. PROCTOR, San Luis Obispo Co., Cal.

As we said in the article to which our querist refers, we can find nothing in the law which would prevent his making the arrangement he proposes. There is nothing said about his actually living on the land. The point is to bring on the water and prepare the land for cultivation within the specified time.

The question as to whether grass comes within the meaning of the term "agricultural crop," as used in the law, is one which cannot be definitely settled until the issue is brought up in due form for the interpretation of the authorities at Washington. The law claims to be very scrupulous as to proof that the land shall be desert land and yet leaves the matter so indefinite that a hundred questions will doubtless arise under it. The matter of grass is the first of these to arise. It will be remembered that the decision of the quality of desert land is placed in the hands of the Receivers and Registers of the different land offices. These functionaries are already divided among themselves upon the point. We have interviewed the land office in this city and find that the Receiver, Mr. Chamberlain, decides that grass is an agricultural crop, and the Register, Mr. Wheaton, says that he probably will not agree with Mr. Chamberlain, for the purpose of bringing the matter before the higher authorities, if for no other reason. We read that the land officers in the southern districts are proceeding upon the assumption that grass is not an agricultural crop and regard all as desert land which will not produce a crop of grain, etc., without irrigation. Thus the matter stands, and thus it will stand until the term is made more definite by the Government at Washington.

We can but say in this connection that great distrust is expressed of this new law. It is denounced as a new and ingenious land-grabbing measure, inasmuch as the explicit statement that a man cannot claim more than a section does not at all interfere with greedy grabbers sending out an army of mercenary individuals who will assign the land to them for a nominal consideration after the settlement is made. Thus it is claimed that the fair faced law will be but the tool of land monopolists instead of the friend of enterprising and actual settlers. If this should be the case it would be but a poor gift to the States and Territories in which the lands lie. The lesson from a possibility of this kind should be to urge all those who desire this land for their own use to make haste with their filing of intentions before the best land shall be covered with the dummies of the land monopolists. The law is in full force, and, we suppose, must remain so until the next session of Congress.

That the new law is developing much unpopularity is evident from the fact that the interior papers have nothing good to say of it, and political organs are charging each other's officials with responsibility for its enactment. Under its provisions the claiming of grazing lands in our State is going rapidly forward, and it seems as though some excellent land, which one would not suppose would come under the provisions of the bill, will be wrested from the Government and the future settler by the loose interpretation which may be put upon the provisions of the law.

It seems that the dwellers in Washington Territory are having as much trouble with the application of the law as we are in this State. We read in the latest issue of the Walla Walla Union: "This law may be a very good thing in some parts of the country, though we admit it is a little crude and vague. There are large bodies of land lying between this city and Snake river that are remote from water, that would raise grain without irrigation, but their remoteness from water makes it impossible to live on or cultivate them. Would they be called desert lands? They ought to be included in the bill if they are not. Again, the law says the lands are to be reclaimed 'by conducting water upon the same.' Would the boring of artesian wells be 'conducting water' on the lands? Then, too, upon what amount of land must the water 'be conducted' to comply with the law? Upon a few acres or the greater portion of the tract?"

These questions will doubtless all be settled in due time by the authorities at Washington, but by that time the best parts of the available lands will doubtless be covered by claims. It may be well for all those who want land to go for it and file their intentions subject to subsequent decisions.

**BOTANICAL HONORS.**—We learn that the eminent botanist, Dr. Asa Gray, has conferred botanical knighthood upon our esteemed contributor, Prof. J. G. Lemmon, of Webber Lake, California. Prof. Lemmon discovered a new genus of plants during his recent collecting on the Mohave river, and Dr. Gray names it *Lemmonia Californica*. The honor is a merited one to one of our most enthusiastic and self-denying botanical workers. Success to the Lemmonias; the trouble is there is but one of them. We recommend the case to Dr. Gray.

## West Side Irrigation Project.

The dwellers in the counties embraced within the districts of the proposed West Side irrigation enterprise, are now earnestly discussing the plans and estimates which have been laid before them by the Commissioners appointed by the Governor, and are preparing for the election which will be held on Tuesday, May 1st. Public meetings are being held both for and against the project, and we trust an interest will be aroused which will elicit the true sentiment of the people. We have already outlined the scheme of the Commissioners, so far as it is of general interest to the whole State, and as the citizens of the interested counties have been freely furnished with copies of the report in full, we see no need to describe it farther at this time.

It will be remembered that the report of the

## Prickly Comfrey, the New Forage Plant.

[Written for the Press by J. W. A. WRIGHT, A. M.]

It is a problem of farming deemed well worthy of solution, to "make two blades of grass grow where one grew before." A question of similar utility is the introduction of new forage plants, which will increase our green feed or hay per acre. In this way, the increased cultivation of alfalfa, or lucern, has proved of incalculable value to California, so peculiarly is it suited to our soil and climate. It is stated on good authority that in England 50% has been added to its pasture crops this century by "improved rye-grasses, clovers, marigolds and turnips."

During the past year a new forage plant has been attracting, in England and France, much, and, from all accounts, we judge, deserved attention, and mention of it is now beginning to reach our people. It is praised alike for its rich



PRICKLY COMFREY—Symphytum Asperum.

Commissioners called for the building of a navigable canal which was estimated to cost \$4,305,786. We are advised that sentiment has turned somewhat against a scheme which demands such enormous outlay and which can hardly be expected to be constructed within the amount named, for such estimates are generally too low. As this impression is gaining ground, the engineer of the Commission promises through the Antioch Ledger another report, which shall make estimates for a canal for irrigating purposes only. It is unfortunate that these estimates were not issued with the original report, for they will now have something of the appearance of a special plea and will put the whole enterprise on the defensive instead of the aggressive. The Stockton Independent believes that "the amount saved in building an unnavigable canal would construct all the primary ditches required to place the water upon the land, reducing the total cost of placing the land in an irrigable condition at about \$10 per acre, a very moderate sum, and one which could be easier borne than double the amount as contemplated by the figures given in the report, especially as the work of building the primary ditches would be done by the farmers themselves and the cost would not be included in the bonds on which they have to pay interest. They would do this work at a time when their teams are idle, and the cost would be comparatively insignificant. Placing the cost of an unnavigable canal at \$2,500,000, the average cost per acre would be about \$5, while an extra bushel of wheat raised annually per acre would pay the interest on the bonds and the farmers would never feel it."

This is the latest phase which the project has assumed, and we write of it merely as a matter of news. We are too far from the scene to comment intelligently upon the local questions which will be involved in the election, but we trust no one within the region will fail to defend his own interests and convictions at the polls.

nutritive qualities and its large yield per acre. This plant is the prickly comfrey, or, botanically, *Symphytum asperum*. It belongs to the order of *Boraginaceae*, which is especially marked by the arrangement of its flowers in one-sided spikes, or racemes, and includes the



ROOTING OF THE COMFREY PLANT.

heliotropes, true forget-me-not, and groundwells. Among the last named plants is our notorious "fiddle-neck," one of the most troublesome weeds for grain-raisers on the loose, sandy lands of San Joaquin valley.

The color of the flower of the prickly comfrey is reddish-blue. It is known to be a native of Caucasus, and was first introduced in England in 1799, according to Loudon, but its reputation as a forage plant is quite recent. To show its comparative yield, hardiness and mode of culture, a recent article in the *Agricultural Economist*, of London, says:

"It is especially adapted for the feeding and

fattening of stock, and for increasing the milk of cows; grows more rapidly and luxuriantly than any other green soiling plant, producing in a given space a far greater quantity of forage than any crop and grain. Good grass land yields but eight tons of grass to the acre, cut green; lucern, 40; rye-grass, 50; vetches, 20; comfrey, 80 to 120 tons. Being a deeply-rooted plant, it is independent of weather and climate, for in the hottest seasons it will afford several heavy cuttings, when all other vegetation is either burned up or at a stand-still. It comes in earlier than other crops, and lasts longer, continuing to afford forage until it is cut down by severe frosts. Comfrey culture is simple and not costly. The ground is either forked or plowed six or eight inches deep, and well manured at the same time. The crowns, or root cuttings, are then planted like potato sets, three feet apart, say 1,200 to a quarter of an acre. This plant, when dried into hay, makes a good food for horses, cattle, sheep and pigs. The branches and leaves, made into bundles, keep well for forage in winter. When once the plant is established, no further expense is needed."

In this statement, lucern, which is unquestionably identical with our alfalfa, is rated at 40 tons green feed per acre; comfrey, 80 to 120 tons—two or three times as much. This is a marvelous yield, but practical English farmers have faith in its producing feed to that extent, as I learned while among them last spring. Mr. Owen Greening, manager of the *Economist*, just quoted from, and of the Agricultural Co-operative Association, London, first called my attention to it. I afterwards saw the plant growing luxuriantly in April, on the experimental farm of Sutton Sons, near Reading, England. I brought some roots on my return, and they were planted in Kentucky last July, for fear they would be dead before reaching California. The plants are growing well, and some of the roots will soon be brought to California for experiment. Mr. Robert Ashburner also has some near Baden station, San Mateo county, and we are glad to know they are growing well. It is likely to become a very valuable plant on our Pacific coast, especially on our river bottoms and irrigated lands.

In England it is propagated entirely by cuttings or roots. The reason given is that, though the plant blooms there, the seed are not fertile. Possibly, our genial climate may produce fertile seed, which can be used for its increase. Still, it can be produced rapidly from the roots. A French writer, in the *Journal of Progressive Agriculture*, says: "The price of the plant is high, but we must not forget that 1,000 plants will yield from 15,000 to 20,000 the year following, and that the planting of these sets, the original price deducted, does not cost more than setting out cabbages, and less than does planting potatoes."

The smaller engraving, prepared for your columns, shows how easily the roots can be divided. As is seen from the larger engraving, the plant is not unlike mullein or tobacco. Its specific name, *asperum*, refers to the very rough nature of its stems and leaves. It is found to be not only especially valuable for cows and sheep, but also for poultry. The latter are very fond of it. We need just such a plant in California for our poultry yards. Our model poultry grounds of the future will have prickly comfrey growing for part of the feed, and our pepper trees around the houses to keep off vermin.

Prof. Voelker, analytical chemist for the Royal Agricultural Society of England, says of the nutritive elements of this plant: "In its fresh state, comfrey contains still more water than white mustard; but, notwithstanding this large proportion of water, the amount of flesh-forming substances is considerable. The juice of this plant contains much gum and mucilage, and but little sugar."

Prof. Barral, Secretary of the Central Agricultural Society of France, says of this comfrey: "The quantity of water is 88%, and the proportion of azote (nitrogen) 0.4% in the green state, or about the richness of green maize. The total of azote substance is about one-third, a remarkable richness, and which justifies the opinion that cultivators, who have tried it, have formed of the plant."

Comfrey can be cut for green feed or hay at least once every two months, during the growing season; oftener, perhaps, in California, as is the case with alfalfa. The plant attains a height of four or five feet, when allowed to mature. As it is perennial, one planting will last many years.

While writing about this valuable forage plant, it may be well to mention the following facts, which can be utilized by any of our farmers who may so wish.

When I told Prof. Wittmack, Curator of the Imperial Agricultural Museum of Berlin, how well lucern or alfalfa produces on our lands, he told me of two other plants which he assured me are peculiarly adapted to sandy soils. Hence they may be even better adapted to our looser sandy lands than alfalfa. You know the latter botanically is *Medicago sativa*. Now, one of the plants recommended by Dr. Wittmack is *Medicago media*, or sand lucern; the other, *Ornithopus sativus*, or serradilla, a kind of pea or vetch. Of the latter Loudon says: "It is a most valuable agricultural plant. It was introduced for purposes of field culture about the year 1818, from Portugal. Sown upon the barren, light sandy downs of Thetford, in Norfolk, it produced an abundant crop of most excellent fodder, where nothing else would grow."

Will it not be worth while for some of our enterprising farmers to give these plants a fair trial?



### Don't Dwell on One Idea.

It is the full, steady, equable exercise of every mental faculty which is the only infallible guarantee of mental health.

Let every man and woman mature this idea well, and steadily guard against one thought, one pursuit, one exclusive employment, one hate, one love, one grief. Blessed is that providence which seldom sends a single trouble! It is fatherly beneficence which often orders another, to tear the heart away from dwelling on the one great calamity. It is single troubles which craze men. It is not the general student whose mind becomes unbalanced. It is not the man who has a great many irons in the fire at a time; it is not the worker who has more business than he can attend to; it is the man who has leisure to do nothing, it is the man who nurses the one thought wholly, who makes shipwreck of the immortal part. It is the one idea man who is without ballast, and we patronizingly excuse him by saying, "on every other subject he is a sensible person."

Asylum statistics force upon us the unexpected truth, that of all classes of inmates farmers make the largest, in spite of the fabulous health-giving influences of a farming life. Such a result can in no way be accounted for, except in the sameness of thought and pursuit. Another fact, quite unanticipated, is, that in an equal number of New England men and slaves on Southern plantations, the proportion of lunatics is five times greater among the whites; there are five lunatics to one among the negroes; it is because steady concentration in a limited sphere is essential to securing plenty from the stony soil of New England, so barren, indeed, that multitudes are driven from agricultural pursuits, and in patents and inventions eat out their minds.

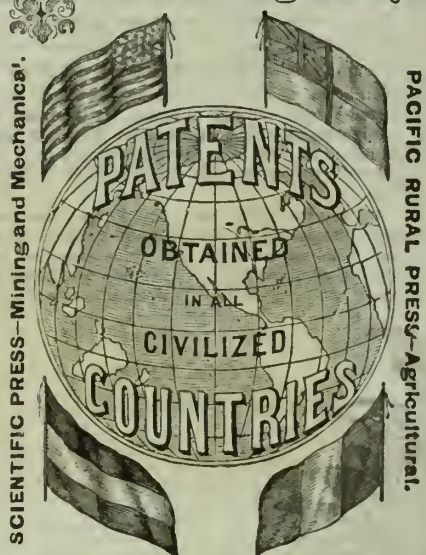
Our farmer readers will very naturally inquire what we would advise as the most perfect safeguard against so lamentable a close of life. Unhesitatingly we respond—scientific agriculture; for there is not a quality of the mind which, in its far reachings, it will not make up and energize; for to be properly and most profitably pursued, it makes almost every other science subservient to it. Thus followed it is the most ennobling of all human pursuits, because it perfects the body and refines and elevates the mind. What we have said, therefore, at the commencement of this article, we desire to repeat at its conclusion with most impressive emphasis—don't dwell on one idea.—*Hall's Journal.*

### Removing Gas from Drinking Water.

Mr. A. B. Bower, engineer, now working at Livermore, shows the Alameda County Independent what he is doing to purify the water for the supply of Livermore. It seems the water there, like that at Oakland, is offensive to taste and smell by the presence of sulphureted hydrogen. In order to remove this he has made little boxes full of small holes through which the water passes in entering the tank, and has a fall of several feet through the air. It thus absorbs the oxygen of the atmosphere, and gets rid of the mal-odorous compound just mentioned, which makes it so unpleasant. The experiment was first made with wooden boxes, but being found successful, sheet-iron boxes will be used and the holes made very small and numerous, so that the spray may come thoroughly in contact with the air and render the water perfectly pure before falling into the tank. That is one part of the plan, and one only, for it concerns merely the water as it enters the tank. But Mr. Bower has contrived additional means of purification for the water when it passes out of the tank also. The discharge pipes, which enter into the tank near its bottom, do not take the water from the bottom, where the weight of the pressure of the water and lack of motion in it tend to make it and keep it more or less impure, but extend upward to within an inch or two of the surface of the water, where the nearness of the air enables it to draw all the oxygen needed to purify it. From this high point the pipes are filled with water free from sulphureted hydrogen, and so send it down and out to wherever it is needed in a pure state. Thus, when going in as well as going out of the tank, this invention of Mr. Bower admirably answers the purpose of the inventor in putting the water into a good, healthy and pleasant condition fit for use. The same plan might with advantage be applied to the water drawn from the San Leandro reservoir, so as to keep Oakland supplied with good and pure water.

**MOROCCO MANUFACTURE.**—This branch of our industries is considered to-day as one of the most prosperous in the country. It forms a most important branch of one of the greatest industrial interests of our entire country, namely, the leather trade, the annual product of which is rated at \$225,000,000. The number of goat skins in the hair received at the port of New York during the year 1875 was 3,728,930; being, as compared with the receipts of 1874, a falling off of about 97,260. The average price of these skins for the entire year was a trifle higher than in 1874. These skins are imported from Curacao, Tampico, Matamoros, Vera Cruz, Buenos Ayres, Payta, Cape and Calcutta, the largest number being sent from Curacao, Matamoros, Vera Cruz, and Calcutta. Curacao furnishes the skins which are chiefly used in the "kid finish," the Tampico being used for "pebbles." The finest quality of skins are said to be those imported from Payta.

## DEWEY & CO'S SCIENTIFIC PRESS Patent Agency.



Publishers, Patent Agents and Engraver,  
224 SANSOME STREET, SAN FRANCISCO.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

Choose a good companion only—one of Dewey & Jordan's "New York watches."

### CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

#### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

### London Assurance Corporation, OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - \$14,993,466

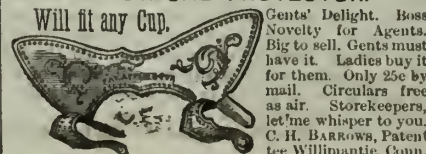
### Western Assurance Company, OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

#### MOUSTACHE PROTECTOR.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Williamette, Conn.

GREAT  
IMPROVEMENTS  
ARE NOW  
BEING INTRODUCED  
IN ENGRAVING  
BY THE  
Scientific Press  
ENGRAVING CO.,  
AT  
THIS OFFICE,  
WHEREBY  
Good Engraving  
Will be done at  
REDUCED RATES.  
E. SCHULTZ, Manager.

### Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

### The Nurseryman's Directory.

A REFERENCE BOOK

OF THE

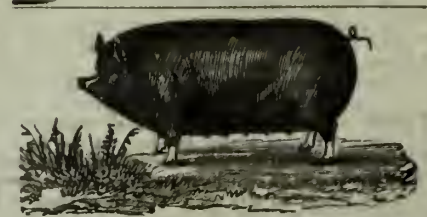
NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,

[Publishers, Galena, Illinois.]



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,

NAPA, CAL.

Dewey & Jordan have been at 433 Montgomery street, S. F., for 13 years. They are reliable—like the "New York watches" they sell.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

### Poultry.

RENO, I. P. LORD, NEVADA.

BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. H. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *See State where you saw this.*

#### WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

### Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few sittings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,

Placerville, El Dorado Co., Cal.

#### LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

### LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; In Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,

LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.



## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

### OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). JOHN LEWELLING, (TREASURER). W. L. OVERHISER.  
A. D. LOGAN, (VICE PRESIDENT). G. W. COLBY. A. T. HATCH.  
AMOS ADAMS, (SECRETARY). I. C. STEELE. O. HUBBELL.

W. W. GRAY.

THOS. FLINT

### SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size, by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

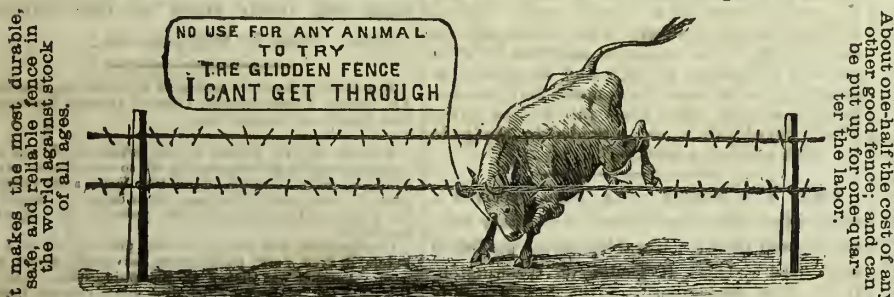
The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,  
SOLE AGENT FOR THE PACIFIC COAST.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNANIMOUSLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

FALKNER, BELL & CO.'S  
WOOL AND LIVE STOCK AGENCY.

Office—430 CALIFORNIA STREET.

Warehouse, Corner of 6th and Townsend Streets.

FIRE INSURANCE AT SPECIALLY REDUCED RATES.

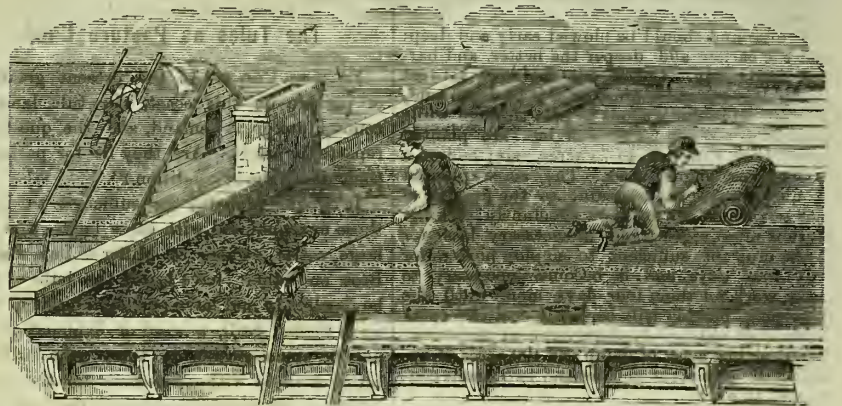
Stock Yards, Butchertown, Corner of 14th Avenue and Second St.

Live Stock of All Descriptions Received for Sale.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. \$55 & \$77 a Week to Agents. \$10 Outfit Free. CLINTON BROS., Clintonville, Ct. P. O. VICKERY, Augusta, Maine.

H. W. JOHNS' PATENT

ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street,

San Francisco.

OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00.

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

LEVI STRAUSS & CO.,

Patent Riveted

Clothing,

14 & 16 Battery St.,

San Francisco.



Patented May 12, 1873. USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

We can recommend the New York watch, of Springfield, Mass., as A 1.

Get the best. Take the RURAL.

H. H. H.

HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

TULE LANDS.

Pasture and Crops this Season.

TO LEASE.

Three thousand five hundred acres, well leaved and ready for immediate cultivation. Good crops can be raised this season if put in at once. Also

20,000 Acres of Excellent Pasture.

Also, TULE LAND, Leaved and Unleaved, for sale in quantities to suit. Apply to

M'AFEE BROTHERS,

426 Montgomery Street, San Francisco.



### Growing Castor Beans.

EDITORS PRESS:—Will you please to inform me through the columns of your paper the method pursued in raising castor beans, and oblige—A. U. STROGO, Capell, Cal.

This is a subject which has been fully elucidated in the *RURAL PRESS* in former years, but as our list has so largely increased of late, and there are many new readers who would be pleased to read the information which our querist desires, we reproduce the matter, quoting chiefly from the excellent writings of J. R. Totman, of Yuba City, and Geo. H. Peck, of Los Angeles county:

The ground should be plowed early and deep; and the earlier and deeper the better, and harrow thoroughly. Check out the rows six feet apart; leave avenues nine, or, if it be damp land, 10 feet wide, for wagons to pass through while gathering. When 25 acres or less are planted make four rows; 25 to 75 acres, six; and on a larger area, eight rows. The acres planted should always be according to the number of pickers which can be kept constantly picking. Here is often a great and unnecessary loss; for if the crop be sufficient to employ pickers for only four days, and it becomes necessary to make work for them four days more until the next pick, picking will certainly cost two cents when it should be only about one cent per pound. About eighty acres of damp and 100 acres of up-land will keep eight pickers and two teams constantly at work.

The ground should be quite warm to have the seed come up quickly, otherwise they will be in the ground a month or six weeks. To hasten their coming up I soak the seed 30 or 40 hours, then put them in a sack and bury them in fresh horse manure for as many hours longer, or until they begin to sprout. Then plant, and if the ground is moist on top, cover lightly with the foot; if dry, cover deeper, so the seed may have moisture as well as heat from the sun. Not over three pounds of seed are required to the acre. Two teams, one to strike furrows and one to cover, and one dropper, will plant 10 acres a day. The rows, especially on each side of the wagon spaces, should be perfectly straight. When two or three inches high, pull out all but the strongest plant, being careful not to disturb it. One hand should trim eight or 10 acres a day.

Now is the time to cultivate, which may be done in the same manner as corn. A turning plow may do in the northern part of the State, or on damp land. In Los Angeles and other southern counties, using the turning plow after the warm weather has set in dries out the up-lands; consequently underground stirring implements are required, such as the bull-tongue plow and cultivator with diamond points. The Texas sweep is a most desirable implement for accomplishing much work, destroying weeds, pulverizing and leaving the ground smooth, and with but little loss of moisture. Three men with hoes cannot do as much or as good work as this. A good crop is not obtainable except by early cultivation and keeping down the weeds.

Irrigating should be done when the spikes begin to form, and cultivation should follow. Some say that between the first and second pick is the best time, but as this is the picking season, there is but little time to cultivate. I prefer the former rule. Late irrigation retards the ripening of the subsequent picks much—a great item.

If the season be good picking will be over by the 15th October; but cold, foggy weather, or late irrigation, may prolong the growing and ripening of the spikes to December. A small-sized butcher knife is best adapted for picking. From the last of July to middle of August, according to the season and amount of moisture in the plants, the spikes show that they are fit to pick, by the bolls beginning to open and by changing from blue to green. The former is the safer sign, and shows that the bean is ripe and filled. Picking the bean before it is filled out is unprofitable. Two pickers and one team is enough for 25 acres; six pickers, two teams and a man at the popping ground, for 50 to 75 acres. The spikes are tossed into the wagon. If the supply of teams be short, baskets will supply the pickers while the teams are discharging. If beans, when ready, be not quickly removed, they will be lost.

The first three picks are about eight days apart; the intervals are more uncertain after this. The chief profit is in the long spikes of the first three picks. It will pay to pick as long as spikes form, which is until frost kills the plants.

Stalks should be cut as soon as possible after the pickings are over, as they are tough when dry. A heavy plantation hoe is a good cutter. One hand should cut at least four acres a day.

The popping ground should be at the center of the end of the field. Smooth off a piece of ground and harden it like a brick-yard. Its area should be at least one acre for each 50 planted. Spread the spikes over it about two inches deep, leaving a popping margin of about 20 feet; turn daily. The sun pops out the beans. In the long, hot days no turning is necessary. The best time to prepare the popping ground is the beginning of winter. Then the only summer work necessary will be to sweep off the dried grass.

Cleaning may be done by the pickers during the intervals of the picks. A No. 3 or 4 fanning mill, zinc screen, with holes for the beans to go through, a hand barrow, and scoop-shovel are necessary. Put down a platform about 15 feet long, of the width of the mill, and fasten the latter on it; also, put a platform at the side of the mill, to feed from. Put No. 3

screen at the top; next below the zinc, fasten to and above No. 1; then No. 4. The holes in the zinc sieves should just be large enough to let the beans through easily lengthwise. Four men should clean three tons a day. As soon as the beans are popped, and not before, remove the husks with a hay rake, follow with a fine iron rake, and finish by passing a broom over the surface of the bean. By observing the above particulars, only one fanning is necessary. Beans should be fanned and sacked as soon as possible. Exposure to the sun causes great loss in weight.

### The Tules as Pasture Land.

EDITORS PRESS:—In the present great lack of pasture on this coast, the tule lands are coming into great demand, and the question is repeatedly asked, "Are they fit for pasture in their unreclaimed condition?"

It would probably be sufficient to inform those unacquainted with these lands that such large cattle owners as Miller & Lux, Sargent Bros. and others, have leased the bulk of these lands already and have put large herds of cattle upon them. Still, a word of explanation may not be unacceptable to those who still have cattle or sheep without pasture for the coming summer. Of course, reclaimed, the tule lands are unquestionably good either for pasture or cultivation. Every available acre under good levees has been long before this applied to its proper use for crops or feed, and the splendid prospects of the grain and the satisfactory condition of the stock, both sheep and cattle, attest the good services of leveled tule land in a dry season. The unleveled land does not differ materially in its vegetation from that which has been leveled. The growth is ranker and heavier, but it is the same growth. The large ground tule, the tule or sword grass, clover, ferns, lilies and a variety of other fresh water plants abound. All these are good for feed when young and tender. The proper course to pursue is to put the stock on as early in the season as possible, and enough of it to keep the vegetation fed close to the ground. It will then be always sweet and fresh. As it grows up it becomes coarse and rank, and the stock tramp it down and it is lost. Properly managed the tules may be made to carry two or three head of cattle or ten head of sheep per acre. Hogs in great quantity can also be kept on them. The vegetation is somewhat advanced at this date, but it can be mowed in many places so as to give the stock opportunity to keep it down.

The chief objection to using the unreclaimed tules for pasture is the danger from overflow. The most of these lands are subject to the overflow of the tides at all seasons; but as only the high tides run over the ground and the low tides draw the water off again, only the lower portions of the land remain covered all the time. There is this season very little snow on the mountains so that the volume of water in the rivers will be at its minimum and the light of the tides will be proportionately affected.

There will not be any danger of a rise in the rivers before November or December. There is always a sufficient lapse of time from the rainfall till the waters reach these lands, for the removal of stock from them and the same rains that necessitate the removal will cause the grass to grow on the up-lands.

It is undoubtedly true that these lands are better pasture for cattle than for sheep; still sheep have done well on them. No sweeter and juicier meat is supplied in the State than mutton from the tules. More care must be taken of sheep to keep them from the ditches and from the water. There is also a wild parsnip, a plant poisonous to them, which they like and eat freely of when other vegetation is scarce, but after the growth is well advanced they do not seem to care for the parsnip. A piece of the highest of the land can be cheaply leveled in, so that a dry, safe corral can always be ready for the flock. Hence, with the proper management and care, sheep, as well as cattle, can certainly be successfully pastured on these lands.

L. C. McAFEE.

San Francisco, Cal., April 18th, 1877.

SHORT HORN BULLS.—We are pleased to receive a sale circular of some fine young Short Horn bulls which will be sold at Mr. Gibson's sale at London, Ontario, Canada, on the 6th of June next. They are the property of T. L. Harison, Esq., Secretary of the New York State Agricultural Society, and were bred at Morley farm, his country residence, in St. Lawrence county, New York. The bulls are coming one and two years old, and are sired by "Saladin," 10,938, (35,461); by 2d "Baron Morley," 13,427, and by 5th "Baron Morley," 18,952. The dams are highly bred cows of pedigrees rich in the favorites. We had the pleasure of seeing Mr. Harison's stock in 1875, and can bear witness to the excellence of his animals and the skill which he displays as a breeder of fine stock. He is a leading prize taker at the New York fairs.

COLORLED PLATES OF CALIFORNIA FRUITS.—We have received from D. M. Dewey, of Rochester, N. Y., some very handsome colored plates of our best California fruits. They are very true to nature, and will make excellent ornaments for the rural home when neatly framed.

## PATENTS AND INVENTIONS.

### A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

FOR WEEK ENDING APRIL 10TH, 1877.

189,354. TRACTION HORSE-POWER. D. T. Gillis, San Leandro, Cal.

189,472. FRUIT-DRIER.—J. M. Keeler, S. F.

189,477. PIPE COUPLING.—S. Lightburn, Jr., S. F.

TRADEMARK.

4,527. TEAS.—A. Mann & Co., S. F.

LABELS.

1,030. THE STOCK CONDITION POWDER.—Painter & Calvert, S. F.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

IMPROVEMENT IN CLOTHING.—Adolph Pack-scher, S. F. This invention consists in inserting in the waistbands of pants, drawers and vests, and in the lower part of the legs of men's drawers, one or more gores of elastic material, either permanent or temporary, so that the bands of said articles of clothing will be elastic and provide a better and easier fit than the ordinary strap fastenings and buckles. The elastic gores can either be sewed permanently in place or they can be inserted so that they can be removed in case it should be desired to do so before the article of clothing is washed. This arrangement does away with the usual straps and buckles used to tighten the waistband, and the strings and buttons used on the bottoms of drawer legs.

CIGAR HOLDER.—F. H. W. Von Tiedemann, S. F. This is a novel device for holding cigars while they are being smoked, and which may also be converted into a pipe if desired. The device consists of a tube with a mouthpiece and a perforated tube adapted to be thrust into the side of the cigar, together with a steadying arrangement to embrace the end of the cigar and steady it. A chamber is formed in the removable head so as to receive and retain any moisture which results from smoking. The device can easily be converted into a pipe.

IMPROVED SAW SET.—A. Boisset, S. F. This invention is a novel saw-setting device, which is especially adapted for setting hand saws, although it can be used for setting other kinds of saws if desired. The device will set narrow blades with great speed and regularity.

MOVEMENT OF LIVE STOCK.—We are informed that a circular, addressed to agents and reading as follows, has been issued from the S. P. R. R. office: "To enable our patrons to get suffering stock to a pasturage, we will, during the present dry season, ship sheep and cattle in large bands at a reduced rate. Agents will at once communicate with stock men in the vicinity of their stations, ascertain to what points it is desired to ship, and as nearly as possible give the date of shipment and number to be forwarded, when a low rate will be given. This reduced rate is not intended to apply to fat stock seeking a market."

FIELD AND FOREST.—We have received a copy of the "Field and Forest," a monthly journal devoted to the natural sciences, published and edited by Chas. R. Dodge, of Washington, D. C. It is the bulletin of the Potomac-Side Naturalists' Club, and has sources of original information on scientific subjects which entitle it to the attention of naturalists. It numbers among its contributors some of the best known investigators of the country. It is a handsome and praiseworthy publication. The price is one dollar per year.

We notice that in the face of this hard season the mowers and reapers of D. M. Osborne's different patterns are quietly going in every direction. While the managers of the Coast branch of the Osborne house speak well and kindly of all the opposing machines and men, yet they push their own and are quietly but surely establishing their widely known machines. Any communications for this house should be addressed to D. M. Osborne & Co., box 1818, San Francisco, Cal.

TO KEEP TOOLS CLEAN.—When tools are clean and bright, they may be kept so by wiping, before putting them away, with a cloth dipped in melted paraffine. If they are rusted they may be cleaned by soaking in kerosene oil, and then rubbing with an oily rag dipped in fine emery powder.

ABOUT 1,000 northern hostile Indians made a formal surrender of their arms, ponies, etc., to General Crook this week at Spotted Tail agency, Neb.

### General News Items.

THE Chico incendiaries are now on trial.

THE Grand Duke Alexis is in Washington.

THE confession of Boss Tweed has occasioned a great flurry among New York politicians.

FIRST LIEUTENANT E. G. GRENOUGH has been detailed as Professor of Military Science and Tactics at the University of California.

HON. JOHN F. KASSON, of Iowa, has been tendered and has accepted the position of United States Minister to Spain.

OCCIDENT beat Oakland Maid on the Bay District track, on Saturday, in a match to wagon for a purse of \$2,000. Time, 2:25, 2:27½, 2:27½, 2:29. The Maid won the third heat.

IN a day or two 200 employees of the Bureau of Engraving and Printing of the Treasury Department will be dismissed. This reduction will be followed at the end of the month by the additional dismissal of 200 more.

CHIEF JUSTICE WAITE has announced that, on account of the insufficient appropriation, the Supreme Court will be unable to sit after May 15th, and will, therefore, not hear cases later than May 7th.

THE West Point graduating class this year numbers 77, the largest ever graduated. There are only 40 vacancies in the army, consequently 37 will be appointed Brevet Second Lieutenants under the law, and promoted to the grade of Second Lieutenants as vacancies occur.

A DECISION has been rendered in favor of Myra Clark Gaines, in the famous Gaines suit, involving millions of dollars worth of property in New Orleans. The litigation has extended over 40 years, and this decision ends the struggle in favor of the claimant.

FOR sons of parents residing in this city, no charge is made for the maintenance of boys on the Jamestown training ship. For country boys, however, a charge of \$15 per month is made, payable six months in advance. The fit-out for each boy costs about \$30, and is furnished by the ship commander.

THE Tribune says: The recent mails brought instructions from Australia and Cape Colony to houses in England to make up consignments of hardware from American and not from British products. Merchants in those distant countries are captivated with the beauty and low prices of our hardware goods.

A SUPERIOR WATCH.—Americans may well be proud of our ingenious inventors and "artistic mechanics." They beat the world, as the present triumph of American watches testifies unerringly. The New York Watch Company, at Springfield, Mass., started but a few years since with the latest and best inventions, improved tools and select and skilled workmen. When we say now that their watches are not surpassed, and are seldom equaled for perfect finish and fine time-keeping qualities, we know that we are speaking of an article which will bear the scrutiny and closest tests of experts. Dewey & Jordan, agents, at 433 Montgomery street, S. F., have just prepared to meet purchasers on this coast with timely prices for these superior watches. Send for their price list.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

MESSERS. OLIVER DITSON & CO., whose fresh and frequently renewed advertisements are so conspicuous in our columns, have recently added two large and valuable stocks to their own, which now, from being the largest in the United States, advances to be, probably, the largest in the world.

One purchase was that of all the publications of J. L. Peters, of New York; publications universally known and used. Another was that of all the publications of G. D. Russell & Co., of Boston, including much elegant music, and very many books, and accompanied by the transfer of the Agency of Steinway's Pianos.

Previous purchases of the stocks of Hall, of New York, and of Lee & Walker, of Philadelphia, had already increased the size of catalogues, which will now have to describe nearly or quite 2,000 different Music Books, and many thousands of pieces of Sheet Music, which will be at once arranged and systematized so that an order of any known piece or book can be answered in a few moments. To keep up the supply, perhaps 500,000 pages (of Sheet Music) will be printed per month, and the incessant labor of a few steam-presses will be needed for books.

Although large and persistent advertisers, Ditson & Co. can announce in this way but a small proportion of their works. They keep on hand, however, descriptive circulars (for instance) all the Instruction Books, all the School Music Books, all the Church Music Books, etc., which are freely sent to all requiring information.

THANKS, ETC.—Messrs. Dewey & Co., Gentles: I write to acknowledge the receipt of letters patent on my fruit drier, which came to hand to-day. Accept my thanks for the very satisfactory and successful manner in which the case has been handled. Respectfully yours, HILAND G. HULBURD.

Placerville, July 20th, 1876.

### COUNTRY BOARD WANTED.

By a gentleman and wife, servant and infant, board for three months, commencing about May 15th, in a private family in one of the interior valleys or among the foothills. Good home accommodations required, for which the highest rates will be paid. Address with particulars, C. W., *RURAL PRESS* Office.

Take the paper that stands by your interests,



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, April 18th, 1877.

The markets have shown not a little activity during the week, the elevation of grain prices continues, and nearly all kinds have been affected. The emergency of war combined with renewed assurance of the English shortage and our own reduced surplus have pushed wheat to a point which it has not gained in this market since 1871. The price abroad has shown a notable advance, as may be seen in the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	11s	5d	11s	8d	11s	7d	11s	10d
Friday.....	11s	4d	11s	8d	11s	8d	11s	11d
Saturday.....	11s	4d	11s	9d	11s	9d	11s	—
Monday.....	11s	6d	11s	11d	11s	10d	11s	2d
Tuesday.....	11s	6d	11s	11d	11s	10d	11s	2d
Wednesday.....	11s	6d	11s	11d	11s	10d	11s	2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	9s	3d	9s	5d	9s	5d	9s	10d
1876.....	9s	4d	10s	1d	10s	3d	10s	8d
1877.....	11s	6d	11s	11d	11s	10d	11s	2d

## The Foreign Review.

LONDON, April 17.—The *Mark Lane Express* in its market review of the British grain trade says: Heavy rains have again flooded many low-lying districts, delaying the Spring tillage and injuring the growing crops. Winter-sown Wheat has withstood the action of the rain, and if late frosts do not injure the plant there appears no reasonable apprehensions about the ultimate prospects. Farmers continue to market their Wheat very sparingly. Unusual excitement has prevailed in Mark Lane the past week, and the increased strength which the trade derived from diminished imports and steady consumption of stocks, was increased by the war-like aspect of the Eastern question. Odessa and St. Petersburg are about the only sources from which we could effect large imports of Red Wheat, and should the war commence the door may be partially closed on supplies, as the Turkish fleet is thought to be sufficiently strong to harass the Black sea trade considerably. This contingency is especially momentous this year, because America seems able to spare so little Red Wheat. A large advance in prices has made operators cautious, but where millers have been obliged to buy to meet requirements, a rise of three to four shillings per quarter in the week has been realized. The cargo trade shows an advance of three shillings. There have been very few arrivals of Wheat at calling ports.

Maize, after a long depression, suddenly came into favor, and improved fully two shillings per quarter. Sales of English Wheat last week were 34,215 quarters, at 51s 5d per quarter, against 41,327 quarters, at 45s 2d per quarter for the same week last year. Imports into the Kingdom for the week ending April 7th were 910,312 cwt of Wheat and 145,292 cwt of Flour.

## Eastern Grain Markets.

NEW YORK, April 16th.—Wheat has advanced fully 10c per bushel; but as Liverpool has not fully responded, business has been quiet. No. 2 Milwaukee sold up to \$1.63 in store to-day, closing with none to be had below \$1.65. Prime white winter is held at \$1.80. Shipping Flour is up to \$7.00. There has been an active export trade in Corn, which advanced fully 10c per bushel, closing at 65c for prime mixed Western. Rye advanced 5c to 10c, with nearly a corresponding improvement in Oats, for which there is a demand in Europe. Barley alone, of all the cereals, remains unchanged.

## Growing Wheat Crop in the United States.

WASHINGTON, April 17th.—The Statistical Corps of the Department of Agriculture report upon the condition of wheat in 368 counties of the winter Wheat region. In 218 counties the returns are comparatively unfavorable; in 650 the condition is varying from average to superior. In the Atlantic States north of North Carolina and those of the Ohio valley there has been far less injury from frost than is usual. Of 320 counties only 45 report below an average, and six-sevenths of the reports from the Middle States are favorable. In Missouri, unfavorable returns are received from 15 of 86 counties reported; in Kansas, from 17 of 38 counties. Grasshopper ravages are reported in 22 counties of Eastern Kansas, from Nebraska to Indian Territory. The Sabine Wheat-growing district is also alive with grasshoppers, which threaten destruction of the crops in several counties. More than 20 counties report the hatching of spring broods. There is an increase of the area of Wheat in Texas, and prospects are favorable, with the exception of grasshopper ravages. In the other cotton States the dry autumn and variable winter have depressed the condition of Wheat below the average.

Chicago, April 15th.—The week's business has been of unusually large volume; the feeling unsettled, and prices running from panic to intense excitement, has closed at the highest point for Wheat reached for some years, at least since 1872. The agencies which have produced this result are chiefly the foreign war news, and added to that the shortage and very meager receipts of grain. Wheat closed to-day at \$1.41, or four cents higher than yesterday; Corn closed at 45¢; Oats, 35¢; Rye 76¢ to 77¢; Barley, 59¢. Week's receipts are: Wheat, 56,000 bushels; Corn, 606,000; Oats, 153,000. Shipments—Wheat, 161,000; Corn, 143,000; Oats, 194,000. Receipts for the same time last year—Wheat, 187,000; Corn, 254,000; Oats, 99,000. Shipments—Wheat, 211,000; Corn, 167,000; Oats, 98,000. Provisions have risen correspondingly, and to-day Pork closed at \$15 per barrel and Lard at \$95 per tierce.

BALTIMORE, April 14th.—Speculation in Corn was increased yesterday by war rumors from London and orders from Chicago to charter vessels for the shipment of grain. The sale of Corn amounted to 900,000 bushels—the largest ever sold in one day in this market. Charters to ship Corn to Cork were made at an advance of 9d per quarter.

## Eastern Wool Markets.

NEW YORK, April 15th.—Though the aggregate of business for the week in Wool has been fair, there is a lack of life to trade, and prices still rule in buyers' favor. The incoming spring clip of California seems to divert the attention of manufacturers and dealers from the home markets, and until the excitement subsides, there need be no improvement looked for. Several parcels of really fine spring Wool have been received during the week, and placed at about 24c; but Boston receipts are made up generally of lots of undesirable, and in consequence, they drag. Of new Texas only one sample bag has been shown so far, but shearing has not yet become general, and no receipts of importance are looked for until the last of this or middle of next month. There has been quite a large improvement in the coarser descriptions of Texas, but the prices realized have been low and unremunerative. Fall continues quiet, and to effect sales lower prices are generally accepted.

Sales for the week embrace 14,000 lbs Mexican, 14¢; 234 bales fair California, 13¢; 18c; 45,000 lbs spring do, and about 244,000 lbs Oregon, 24¢; 225 bales Western Texas, 15¢; 20c; 18 bags of super pulled, 32c; 10 do low do, 22c; 11,500 lbs State Fleeces, 35c; and 90,000 lbs Western Texas,

100 bags combed pulled, 65 do super, 10 do No. 1, 12 do X, 25 do Canada lambs, 43,000 lbs X and XX Ohio, 70,000 lbs Michigan and Pennsylvania and 7,500 lbs State, on private terms.

BOSTON, April 14th.—The demand is fair and prices steady. Fine Fleeces are in request. Sales Ohio and Pennsylvania, 1,975 lbs, including No. 1 at 40¢; X at 43¢; XX and above, 44¢. In Michigan and other Fleeces sales have been small, and include some choice lots of X and XX at 38¢. In combed and delaine very little has been done. The stock is small, and the odds and ends that are now available are taken at prices which indicate no change. Pulled is in moderate request, the demand being confined to better grades of super XX; low grades dull and neglected. Sales principally very good and choice super at 37¢; XX from 35¢ to 40¢. The demand for California is fair; sales 331,000 lbs fall, principally in the range of 16¢ to 18¢ for spring, and 14¢ to 16¢ for fall.

PHILADELPHIA, April 17th.—Wool is quiet and steady. The supply of old is nearly exhausted. Colorado washed is quoted at 20¢; unwashed, 17¢; extra and Merino pulled, 38¢; No. 1 and 2 super pulled, 30¢; Texas fine and medium, 15¢ to 25¢; coarse, 15¢ to 17¢; California fine and medium, 20¢ to 25¢; coarse, 18¢ to 22¢.

## S. F. Auction Sale of Wool.

The first auction sale of Wool in this city by Falkner, Bell & Co. came off, as previously announced, at their warehouse, corner of Sixth and Townsend streets. The offerings consisted of 1,115 bales California, mostly graded, and 32 do Australia. Following is a list of the lots sold in their regular order: Lot 1—444 bls, condition fair, staple good, little seed on skirts, and few cockle burrs, 16¢ per lb. Lot 2—20 bls, good condition and staple, and a few burrs on skirts, 16c. Lot 3—13 bls, condition heavy, staple short, and stray burrs, 14c. Lot 4—21 bls, condition good, staple fair, and a few cockle burrs and seeds, 15c. Lot 5—28 bls, condition light, staple fair, and scattering burrs, 18c. Lot 6—11 bls, condition and staple good, and burrs on skirts, 20c. Lot 7—33 bls, condition fair, staple good and slightly burry and seedy on skirts, 16c. Lot 8—37 bls, condition and staple fair, and burrs and seeds on skirts, 15c. Lot 9—26 bls, condition light, staple long, and burrs and seeds on skirts, 14c. Lot 10—55 bls, condition and staple fair, and burry with some seed, 12c. Lot 11—9 bls, condition heavy and a few burrs and seeds on skirts, 13c. Lot 12—8 bls, condition and staple good, and a few burrs, 18c. Lot 13—26 bls, condition fair, staple short, and burry on skirts and some seeds, 13c. Lot 14—9 bls, condition and staple fair, and few burrs and seeds on skirts, 15c. Lot 15—15 bls, condition and staple fair, slightly burry and a little seed on skirts, 12c. Lot 16—10 bls, condition good, staple fair, and scattering cockle burrs, 17c. Lot 17—17 bls, condition good, staple short, and a few cockle burrs, 16c. Lot 18—Condition and staple good, and scattering burrs and seed on skirts, 13c. Lot 19—21 bls, condition light, staple good, and a few cockle burrs, 14c. Lot 20—16 bls, condition light, staple short, and a little seed and cockle burrs on skirts, 14c. Lot 21—11 bls, do light, do, 12c. Lot 22—38 bls, condition and staple good, 16c. Lot 23—8 bls, condition light, staple long, and a little seed and cockle burrs on skirts, 15c. Lot 24—5 bls, condition heavy, staple good, burry and seedy on skirts, 9c. Lot 25—92 bls, condition fair, staple good, few cockle burrs and seeds on skirts, 15c. Lot 26—112 bls, do, do, cockle burrs, 15c. Lot 27—41 bls, do, do, few burrs and seeds on skirts, 18c. Lot 28—6 bls, do, do, 16c. Lot 29—15 bls, do, fair, do, 15c. Lot 30—16 bls, do, do, few cockle burrs, 14c. Lot 31—23 bls, condition and staple good, stray cockle burrs and a little seed, 16c. Lot 32—65 bls, do fair, staple good, burry and seedy on skirts, 16c. Lot 33—9 bls, condition good, staple short, 14c. Lot 34—9 bls, condition and staple fair, few burrs and seeds on skirts, before sale, private. Four lots of ungraded, comprising 27 bls, sold at 14¢ to 17c, and 9 bls on private terms. One lot of 9 bls Australian clothing sold at 36¢; 23 do combed, 39c, and a lot of locks at 6c. There was a large attendance and the bidding was lively. Several well known houses were represented among the buyers. The sale was entirely satisfactory to the projectors and was generally regarded as a complete success.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Mar. 28.	WEEK. April 4.	WEEK. April 11.	WEEK. April 18.
Flour, quarter sacks.....	44,121	34,933	15,373	31,805
Wheat, centals.....	106,653	93,437	47,677	96,465
Barley, centals.....	10,018	10,509	12,428	10,225
Beans, sacks.....	1,742	2,235	350	480
Corn, centals.....	967	5,208	1,683	757
Oats, centals.....	8,550	7,665	3,857	6,492
Potatoes, sacks.....	10,920	6,058	7,220	11,862
Onions, sacks.....	974	573	855	894
Wool, bales.....	3,796	5,297	7,095	8,957
Hops, bales.....	8	563	—	—
Hay, bales.....	1,322	744	—	881

Bags—Although there is no lack of talk in the Bag market about an advance in prices, we do not see any reason to recognize the advance, except in case of Standard Gunnies, which are quotably higher. The local supply is reported short and advices from Calcutta seem to foster the advance. A Calcutta circular of March 2d indicates a short Jute crop. It says: "Jute was firmer and all qualities are advancing. Jute Butts were about all sold, the small balance remaining being held for very high prices, say Rs 19-3, and difficult to obtain even at this rate. The mills are buying all the Loose Cuttings that were being produced, and shipments to America will be very small for the next six months."

Barley—Barley has advanced 10¢ to 15¢ per cwt during the week. We note sales since our last report as follows: 2,000 sks Coast Feed, \$1.80; 500 do good Bay, \$1.78; 2,500 do Bay Brewing, \$1.80; 280 do Coast Feed, \$1.85, silver; 3,000 do Bay Brewing, \$1.82; 2,600 do Coast Feed, \$1.70; 500 do do, \$1.70; 1,400 do choice Feed, \$1.75; 2,000 do choice Bay Brewing, \$1.80 per cwt.

Beans—There have been some fluctuations, as may be seen in our table below.

Buckwheat—The price remains \$1.75 per cwt.

Corn—Corn has kept pace with Barley, and advanced 10¢ to 15¢ per cwt. We note sales: 1,000 sks large Yellow, sold in lots, at \$1.85 to \$1.87; and 200 sks small round Yellow at \$2.05 to \$2.06; 250 sks choice Yellow at \$1.80; 200 do do, \$1.82; 300 do, part Yellow and part White, \$1.82; 300 sks small Yellow, \$2.10; 175 large Yellow, \$1.85; 200 do do, \$1.86; 70 do do, \$1.80; 400 sks large Yellow, \$1.85; 400 do do, \$1.86; cash, gold; 180 do small Yellow, \$2.05 per cwt, silver.

Dairy Produce—Butter prices are maintained, and it is reported that the fancy selections are reaching 32¢ in some cases. The supply is sufficient for present needs. California Cheese is reported doing a little better by some of our largest producers, but general prices are not yet changed.

Eggs—Hens' Eggs have advanced to 26¢ to 27¢ per doz. Feed—Ground Feeds and Hay sympathize with the advance in Grains. Bran advances to \$27.50 per ton, Middlings to \$37.50 per ton and Corn Meal to \$43 per ton. Hay is now quotable from \$15 to \$25 per ton, according to

quality. We note sales of Hay as follows: 30 tons fair Wheat and Oat, \$20; 61 tons choice Wheat, \$25; 12 do do, \$26; 30 do good Stable, \$20; 50 tons Wheat and Wild Oat, \$20.

Fruit—There have been several novelties during the week. C. W. Reed, of Yolo county, sent the first Cherries of the season to market on Friday. This is three weeks ahead of last year. The first of the new crop of Tahiti Oranges has arrived, two cargoes of which have been received, one of 250,000 by the Paloma on the 13th, and the other of 300,000 by the Humboldt on the 17th. The J. W. Seaver and Stagbound are now about due from the same port with similar cargoes, and seven other vessels are listed to follow, to arrive within the next 60 days. Prices of fruits may be found below.

Hops—Hops have made the turn upward. We note a sale of 60 bales at 18¢ per lb, and others are now held for 20¢, believing the price will be reached during the week. There are still lower grades which do not get above 14¢ to 15c. The New York market, for the week ending April 6th, is reported by Emmet Wells as follows:

We have to report a little better feeling in the trade, though the volume of business is still small. Our revised quotations show an improvement of two cents per lb on choice State Hops, 17c now being readily realized for choice shipping grades; the scarcity of this class of goods renders it extremely difficult for shippers to execute their orders, and some of our buyers have been compelled to seek a supply in the interior. The receipts continue liberal here, but the bulk of the arrivals are of inferior quality, such as are not wanted for export. Brewers are taking a few Hops right along—just enough to meet their present wants, but show no disposition to "stock up," as they did this time last year. Quotations—New Yorks, choice, 15 to 17c; New Yorks, common to prime, 10 to 13c; Eastern, 10 to 13c; Wisconsin, 8 to 12c; Yearlings, 6 to 10c; Olds, all growths, 4 to 6c; Californians (nominal), 12 to 17c; Oregon (nominal), 12 to 17c.

Oats—Oats have sold within last week's range. Receipts from Oregon have been ample. We note sales: 100 sks fair Feed, \$2.15; 1,000 sks good Black, \$2.10 per cwt.

Onions—Onions have fallen from the fancy price gained in a corner last week. We note sales: 50 sks Bay at \$1.62 per cwt, and 25 do, \$1.75; 60 sks Stockton, \$1.25; 84 sks Stockton, \$1.55 to \$1.50; 100 sks Union City, \$1.75 to \$2.

Potatoes—There is an improvement of 5c per cwt notable in choice lots, but the general degradation of the market may be seen in the following sales: 450 sks Sacramento River, 42¢ to 45¢ per sk; 500 sks Petaluma, 40¢ to 45¢ per cwt. Two carloads of California Potatoes went East on Saturday.

Provisions—There is discernible a slightly better feeling in the market for first quality, although prices do not improve as yet. Mutton is a trifle scarcer for the best and advances 1¢ per lb; poor Mutton is, however, very plenty, and restricts the sale of the better grades. Pork improves because of a better feeling among packers. Confidence is aroused because of the excitement in the Eastern markets. For the same reason the market for Cured Meats show light changes for the better.

Poultry—There is little of note in the Poultry market. Young Geese are now selling well, doubling the price which we quote below for their ancestors. Ducks have declined a point.

Vegetables—The first consignment of Summer Squash of the season came to hand from J. W. Smith, of Vacaville, and brought 25c per lb. The high prices of Asparagus are attributed to decreased supplies on account of shipments East.

Wheat—The sales of the week have disclosed a notable advance in Wheat, as our quotations will show. We note sales: Dr. Toland has sold his last crop, embracing 22,000 cts, at \$2.35, on the ranch, equivalent to about \$2.45 here. A lot of 2,000 sks choice White Australia, for milling, brought \$2.55; 3,000 for shipping, \$2.42; 1,000 do choice do, \$2.50; 700 do choice Milling, \$2.50 per cwt; 1,000 cts choice Milling, \$2.50 per cwt; and 3,000 do good Shipping, \$2.42; 800 sks choice Milling, \$2.50; 2,000 do good do, \$2.40; 800 sks fair Milling, \$2.37; 1,200 do choice White Australia, \$2.42; 500 do do, \$2.42; 11,000 cts choice Australia Milling, \$2.20.

Wool—We give in another column a report of the auction sale of Wool by Falkner, Bell & Co. The stock was mostly Southern Wool. We note sales during the week among the merchants as follows: 20,000 lbs choice Northern, 35c; 155,000 do spring, at 12¢ to 25¢; do Northern, 20¢ to 25¢; 80,000 do Southern, 14¢ to 18c; 240,000 do spring, 15¢ to 25¢; 90,000 do fall, 10¢ to 11c. The trade begins to show more spirit, and receipts are increasing.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., April 18, 1877.	
Apples, bx.....	50 @ 2 50
Cash, lb.....	2 @ 3
Bananas, bmch.....	2 @ 6 50
Cocoanuts, 100.....	5 @ 6 00
Limes, Mex.....	8 @ 12 50
Cal.....	8 @ 15 00
Lemons, Cal M. 100.....	20 @ 20 00
Sicily, bx.....	10 @ 11 00
Oranges, Mex.....	— @ —
Tahiti.....	20 @ 25 00
Pears, bx.....	10 @ 35 00
Pineapples, doz.....	6 @ 8 00
Strawberries, chst.....	5 @ 7 00
Artichokes, doz.....	2 @ 2 25
Beets, ct.....	60 @ —
Cabbage, 100 lbs.....	50 @ —
Carrots.....	35 @ 37 1/2
Cauliflower, doz.....	75 @ —
Celery.....	50 @ —
Cucumbers, doz.....	75 @ 1 00
Pears, Sweet.....	1 @ 2
Peas.....	3 @ 3 1/2
Lettuce, doz.....	10 @ —
New Potatoes.....	2 @ 3 1/2
Parsnips, lb.....	1 @ —
Rhubarb.....	1 @ 2
Squash, Marrow.....	4 @ 5
fat, lb.....	6 @ 8 00
Shrimmer, doz.....	10 @ 12 1/2
String Beans.....	35 @ —
Tomatoes, lb.....	20 @ 25
Turnips, ct.....	50 @ —
White.....	75 @ —

## RETAIL GROCERIES, ETC.

WEDNESDAY M. April 18, 1877.

Butter, California.....	35 @ 40
Choice, lb.....	15 @ 20
Cheese.....	25 @ 30
Eastern.....	18 @ 20
Lard, Cal.....	17 @ 20
Eastern.....	20 @ 25
Flour, ex fam, bbl.....	80 @ 60
Corn Meal, lb.....	21 @ 3
Sugar, wh. crshd.....	12 @ 13
Light Brown.....	8 @ 9
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10
Rice.....	8 @ 12 1/2
Yeast Pwdr. doz.....	1 50 @ 2 00
Can'd Oysters doz.....	2 @ 3 50
Syrup, S F Gold'n.....	75 @ 1 00
Dried Apples, lb.....	10 @ 12
Ger. Finest.....	12 @ 14
Figs, Cal.....	9 @ 10
Peaches.....	11 @ 15
Kiosene.....	50 @ 60
Wines, Old Port.....	50 @ 60
French Claret.....	1 00 @ 2 50
Cal, doz bot.....	3 00 @ 4 50
Whisky, O K, gal.....	3 00 @ 5 00
French Brandy.....	4 00 @ 6 00

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., April 18, 1877.

BEANS.			HOPS.		
Bayo, ct.....	3	25 @ —	California.....	15	@ 20
Butter.....	1	50 @ 1 75	NUTS—Jobbing.....		
Pea.....	2	40 @ 2 45	Cal. Almonds.....	8	@ 10
Red.....	3	00 @ 3 25	Almonds, hd shi lb.....	7	@ —
Pink.....	3	00 @ 3 25	Soft shi.....	15	@ 17
Sm'l White.....	2	25 @ 2 40	Brazil.....	14	@ 16
Lima.....	2	25 @ 2 37 1/2	Pecans.....	17	@ 18
			Peanuts.....	4	@ 6
			Filberts.....	15	@ 16
BROOM CORN.			ONIONS.		
Common, lb.....	2	@ 2 1/2	Union City, ct.....	1	50 @ 1 75
Choice.....	3	@ 4	Stockton.....	1	50 @ 1 75
CHICKORY.			POTATOES.		
California.....	4	@ 4 1/2	Petaluma, ct.....	40	@ 55
German.....	6 1/2	@ 7	Salt Lake.....	1	50 @ —
COTTON.			Brooklet.....	30	@ 50
Cotton, lb.....	15	@ 18	Cuffey Cove.....		
DAIRY PRODUCE, ETC.			Early Rose, now.....	85	@ 1 00
BUTTER.			Sweet.....	1	25 @ —
Cal. Fresh Roll, lb.....	25	@ 30	POULTRY & GAME.		
Point Reyes.....	30	@ 30	Hens, doz.....	6	50 @ 8 00
Pickle Roll.....	22 1/2	@ 27 1/2	Roosters.....	4	50 @ 7 00
Firkin.....	25	@ 28	Broilers.....	4	50 @ 7 00
Western Reserve.....	16	@ 20	Ducks, tame.....	8	00 @ 9 50
New York.....	—	@ —	Geese, pair.....	2	00 @ 2 50
CHEESE.			White.....	1	50 @ 2 00
Cheese, Cal, lb.....	12 1/2	@ 15	Wild.....	75	@ 1 00
Old.....	12 1/2	@ 15	Turkeys, Live, lb.....	20	@ 22
Eastern.....	12 1/2	@ 15	Snipe, Eng.....	2	50 @ —
N. Y. State.....	12 1/2	@ 15	Rabbits.....	1	00 @ 21 25
EGGS.			Hare.....	1	50 @ 2 25
Cal. fresh, doz.....	25	@ 27 1/2	PROVISIONS.		
Duck, doz.....	20	@ 22 1/2	Cal. Bacon, L't, lb.....	14	@ 14 1/2
Oregon.....	22 1/2	@ —	Medium.....	12	@ 14 1/2
Eastern.....	19	@ 20	Heavy.....	13	@ —
FEED.			Lard.....	12	@ 14
Bran, ton.....	27	50 @ —	Cal. Smoked Beef.....	9 1/2	@ 10
Corn Meal.....	43	00 @ —	Eastern.....	—	@ —
Hay.....	15	00 @ 25 00	Eastern Shoulders.....	13	@ 13
Middings.....	37	50 @ —	Hams, lb.....	13	@ 13
Oil Cake Meal.....	38	00 @ —	Lard.....	14	@ 15
Straw, hale.....	75	@ —	Monmouth.....	14	@ 15
FLOUR.			Dupe's.....	15	@ 15
Extra, hbl.....	7	25 @ 8 00	Davis Bros'.....	15	@ 15
Superfine.....	6	00 @ 7 00	Magnolia.....	15	@ —
Graham.....	6	50 @ 7 00	SEEDS.		
FRESH MEAT.			Alfalfa, Cal.....	25	@ 27
Beef, 1st quality, lb.....	7	@ —	Canary.....	10	@ 12
Second.....	6	@ 7 1/2	Clover, Red.....	22	@ 25
Third.....	4	@ 5 1/2	White.....	50	@ 55
Mutton.....	3	@ 8	Cotton.....	6	@ 10
Spring Lamb.....	8	@ 10	Flaxseed.....	3 1/2	@ —
Pork, undressed.....	4 1/2	@ 8	Hemp.....	5	@ —
Dressed.....	7 1/2	@ 8 1/2	Italian Ry. Grass.....	35	@ —
Veal.....	6	@ 8	Orchard.....	35	@ —
Milk Calves.....	1	@ 8	Millet.....	10	@ 12
GRAIN, ETC.			Mustard, White.....	10	@ 12
Barley, feed, ct.....	1	70 @ 1 75	Brown.....	3 1/2	@ 4
Brewing.....	1	75 @ 1 85	Rape.....	3	@ 4
Chevalier.....	1	75 @ 1 85	Ky. Blue Grass.....	29	@ —
Buckwheat.....	1	75 @ 1 85	Orchard.....	29	@ —
Corn, White.....	1	75 @ 1 85	Sweet V Grass.....	75	@ —
Yellow.....	1	75 @ 1 35	Orchard.....	30	@ 35
Small Round.....	2	00 @ 2 05	Red Top.....	25	@ —
Oats.....	1	70 @ 2 20	Hungarian.....	8	@ 12
Milting.....	2	25 @ 2 40	Lawn.....	20	@ 25
Rye.....	1	85 @ 2 05	Mezquite.....	10	@ 10
Wheat, shipping.....	1	85 @ 2 05	Timothy.....	10	@ 10
Milling.....	2	50 @ 2 60	TALLOW.		
HIDES.			Crude, lb.....	6	@ —
Hides, dry.....	16	@ 17	Refined.....	7 1/2	@ —
Wet salted.....	7 1/2	@ 9	WOOL, ETC.		
HONEY, ETC.			SPUNG.		
Beeswax.....	22	@ 27 1/2	Short Fren.....	13	@ 1
Honey in comb.....	10	@ 15	Good.....	15	@ 1
Strained.....	6	@ 8	Choice Northern.....	22	@ 2
			Burry.....	12	@ 2



## Seedsman.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and  
**Growers of Seeds,**  
 Keep constantly on hand a complete stock of  
**Vegetable, Field, Grass, Flower and Tree Seeds,**  
 Also Flowering Plants, Bulbs, Fruit and  
 Ornamental Trees, etc.

We call the attention of farmers and country merchants  
 to our unusually low prices. All Seeds warranted  
 fresh, pure and reliable. Trade price list  
 on application.

\* We have just issued the most complete guide to the  
 Vegetable and Flower Garden ever issued upon this coast.  
 It is Handsomely Illustrated, and contains full descriptions  
 of Vegetables, Flowers, Grasses, Trees, etc., with  
 full instructions as to their culture; mailed free on appli-  
 cation.

SEVIN VINCENT & CO.,  
 607 Sansome street, S. F.

P. O. Box 10231

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
 BLUE GRASS, RED TOP TIMOTHY, SWEET  
 VERNAL, MEZQUITE and other Grasses.  
 RED CLOVER, FRENCH WHITE  
 CLOVER, CHOICE CALIFOR-  
 NIA ALFALFA, Etc.  
 Also, a Complete Assortment of HOLLAND FLOW-  
 ERING BULBS, JAPAN LILIES, FRESH AUS-  
 TRALIAN BLUE GUM, or "FEVER TREE"  
 SEED, together with all kinds of FRUIT,  
 FOREST and ORNAMENTAL TREES,  
 and everything in the Seed line,  
 at the Old Stand.

B. F. WELLINGTON,  
 Importer and Dealer in Seeds,  
 425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND  
 ABRIDGED CATALOGUE 128 pages. Embraces a monthly  
 calendar of operations, and a price-list of all the leading  
 Garden, Field and Flower Seeds, profusely illustrated, with  
 brief directions for their culture. Mailed FREE to all ap-  
 plicants. B. K. BLISS & SONS, 34 Barclay Street, New  
 York. P. O. Box No. 5712.

## RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote, March 7th, 1877,  
 that RENNIE'S PRIZE SWEET TURNIP yielded more than  
 three times as much as the common seed. Price, per  
 pound, (in American currency, pre-paid,) thirty cents.  
 WM. RENNIE, Seedsman, TORONTO, CANADA.

Strong Plants delivered free of cost safely  
 per mail at your door. Satisfac-  
 tion guaranteed. Splendid  
 assortment of  
**ROSES**  
 6 for \$1;  
 13 for \$2. Send for  
 a Catalogue of Plants.  
 HOOPER, BRO. & THOMAS,  
 Cherry Hill Nurseries, West Chester, Pa.

Address  
**SPANISH CHUFA** L. L. BEQUETTE,  
**SEED FOR SALE.** Downey City, Los Angeles  
 County, Cal.

**Trees,** Plants. Spring Lists free. F. K. PHOENIX,  
 116, Bloomington Nursery, Illinois.

## Nurserymen.

**LOS GATOS NURSERIES,**  
 S. NEWHALL, Prop'r, - - - San Jose, Cal.

A large and general assortment of  
**Fruit and Ornamental Trees,**  
 Evergreens, Flowering Shrubs, Roses, Greenhouse  
 Plants, Grapevines, Small Fruits, etc. I offer for  
 sale a well assorted stock. Low-topped,  
 stately fruit trees a specialty. Address,  
 S. NEWHALL, - - - San Jose, Cal.

**SANTA BARBARA NURSERY,**  
 Located seven miles west of Santa Barbara, Cal.  
 Depot, Cor. Montecito and Castillo Streets.  
 JOSEPH SEXTON, - - - Proprietor.

CULTIVATOR OF  
**Fruit, Nut and Ornamental Trees. Also,**  
**Orange, Lemon, Lime and Palm Trees,**  
**Pot Plants, and Hardy Ever-**  
**green Shrubbery.**

**HENRY SHAW,**  
 VENTURA, VENTURA COUNTY, CAL.,  
 Wholesale Grower of  
**ORANGE, LEMON and LIME TREES.**

Geo. F. Silvester, Seedsman, 317 Washington Street,  
 San Francisco, has samples and will fill orders. Trees  
 sacked and boxed so as to be safely transplanted at any  
 season. Summer months the best for removal.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns,  
 Dahlias and Roses, sent safely by mail  
 at any time of the year. Send for new price list. Address,  
 W. A. T. STRATTON,  
 Petaluma, Cal.

**Trees, Plants,** Bulbs. Fall Price List and Bulb  
 Catalogue GRATIS. Address, F.  
 K. PHOENIX, Bloomington Nursery, Ill.

Don't waste your time in reading cheap  
 trash.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating. Farm  
 Pumping, Railroad  
 and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the  
 Pacific Coast in the towns  
 and farming districts for  
 over four years, and where-  
 ever they have been sold  
 (and there are thousands of  
 them out) they are doing  
 their work as well as when  
 put up. A careful perusal  
 of our Circulars gives a fair  
 representation of them and  
 shows their simplicity.

We are prepared to fill orders for all sizes, from a  
 PUMPING MILL to a 24-foot POWER MILL for running  
 Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has  
 been tested to entire satisfaction  
 of all, and meets the demand for  
 an article of that kind that has  
 not been supplied on the Pacific  
 Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars  
 and information to

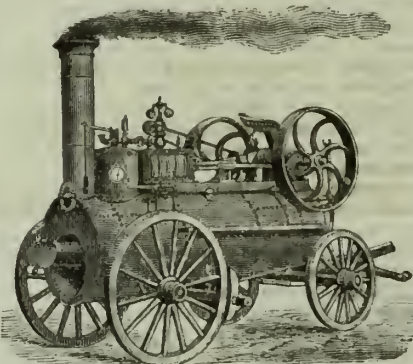
## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,  
 General office and Supplies,  
 LIVERMORE, ALAMEDA COUNTY, CAL.

## H. W. RICE,

Manufacturer of

The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Sawing  
 and all purposes. These engines burn less fuel than any  
 engines in use. Wood-Burning Engines changed to Straw-  
 Burners, Saw-mill and Flour-mill Engines. Second-hand  
 portable engines and boilers in good repair, cheaper than at  
 any other place in the State. New boilers made to order,  
 and repairs in the city or country done promptly. Repairs  
 made on wood-working and fine machinery. Threshers and  
 agricultural machinery made and repaired. ALL WORK  
 WARRANTED. Office and works, No. 56 Bluxome Street,  
 near Fifth, San Francisco, Cal.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match  
 in Stockton, in 1870.

This Plow is thoroughly made by practical men who  
 have been long in the business and know what is required  
 in the construction of Gang Plows. It is quickly adjusted.  
 Sufficient play is given so that the tongue will pass over  
 cradle knolls without changing the working position of the  
 shares. It is so constructed that the wheels themselves  
 govern the action of the Plow correctly. It has various  
 points of superiority, and can be relied upon as the best  
 and most desirable Gang Plow in the world. Send for  
 circular to

MATTESON & WILLIAMSON,  
 STOCKTON, CAL.

## Fraud! Fraud!!

COLLINS & CO'S  
**CAST, CAST STEEL PLOWS.**

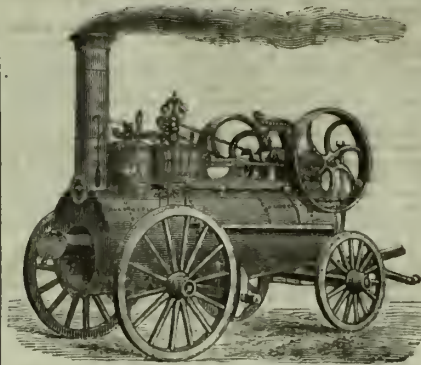
FARMERS are cautioned against inferior counter-  
 feit plows and points which are being sold as  
 genuine cast, cast steel. The Genuine Steels are  
 stamped with our trade mark:

**COLLINS & CO., HARTFORD.**

Look for this stamp before buying plows or  
 shares, and secure the genuine. Full particulars  
 of new and improved plows sent to any address.

**COLLINS & CO.,**  
 212 Water Street, New York.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured.  
 Parties are cautioned against buying any other make of  
 Engines, with Return Flue Boilers. The United States  
 Court has decided that Rice has a valid patent, and all in-  
 fringements are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's  
 Headers Gear, Scott & Co.'s Thresher Engines  
 and Separators, Rice's Straw-Burner En-  
 gines, Deere's Gang Plows, The "Regulator"  
 Windmills, Schuttler Wagons, "Perpetual"  
 Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St

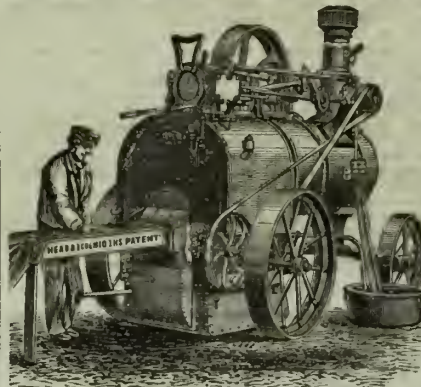
SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## HEAD &amp; SCHEMOITH'S

## STRAW-BURNING ENGINES

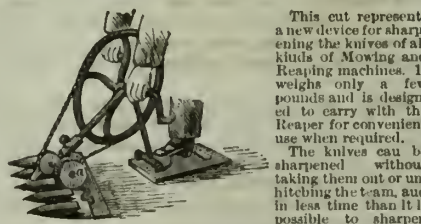


At the Vienna Exhibition of 1873, the Diploma of  
 Honor, the Highest Award, was given to Ransomes  
 Sims & Head, Orwell Works, Ipswich, England, Engi-  
 neers and Manufacturers of Agricultural Machinery, for  
 their Engine, and since that time more than four hun-  
 dred of these Engines have been manufactured and ex-  
 ported to Russia, Roumania, Italy, Hungary, Egypt,  
 India, Brazil, etc., and have in every instance worked  
 with the most perfect success. This is the ONLY Fire-  
 Box Straw-Burning Engine, and is without doubt the  
 BEST PORTABLE ENGINE ON THE COAST. Extra  
 Government Safety Valve; Boiler Felted; Extra Bars to  
 burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## NEW PATENT HARVEST SHARPENER.



This cut represents  
 a new device for sharp-  
 ening the knives of all  
 kinds of Mowing and  
 Reaping machines. It  
 weighs only a few  
 pounds and is design-  
 ed to carry with the  
 Reaper for convenient  
 use when required.  
 The knives can be  
 sharpened without  
 taking them out or un-  
 hitching the team, and  
 in less time than it is  
 possible to sharpen  
 them on the best grindstone. Only one person is required to  
 do the work. The Emery wheel, a, is regulated by a set screw  
 so that in grinding, the exact level can be given to each sec-  
 tion. When harvesting is over you will find it a very useful  
 machine, for grinding knives, axes, chisels, shears, etc.  
 Address,  
 WIESTER & CO.,  
 17 New Montgomery St., San Francisco.

**HEALD'S BUSINESS COLLEGE**  
 No. 24 Post Street,  
 SAN FRANCISCO, CAL.

The largest and best Business College in America. Its  
 teachers are competent and experienced. Its pupils are  
 from the best class of young men in the State. It makes  
 Business Education a specialty; yet its instruction is not  
 confined to Book-keeping and Arithmetic merely, but gives  
 such broad culture as the times demand. Thorough in-  
 struction is given in all the branches of an English educa-  
 tion, and Modern Languages are practically taught. The  
 discipline is excellent, and its system of Actual Business  
 Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for in-  
 struction in all the Departments of the College.

TRAVELING DEPARTMENT.—In this Department young  
 men and young ladies are practically and thoroughly in-  
 structed for operators, both by sound and paper.

For further particulars call at the College, 24 Post  
 Street, or address for circulars, E. P. HEALD,  
 President Business College, San Francisco, Cal.

## CALIFORNIA FARMERS' MUTUAL.

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
 ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.	\$6,202,435.00	\$136,622.18
Less Amount Canceled.....	435,419.00	9,568.88
Amount in force, Dec. 31, '76.	\$5,767,016.00	\$127,053.30
Losses paid.....		\$16,330.00

## CASH PLAN.

	AMOUNT.	PREMIUMS.
Risks written to Dec. 31, '76.	\$3,605,935.00	\$71,806.16
Less Canceled and Expired....	1,887,246.00	28,586.16
Amount in force, Dec. 31, '76.	\$2,018,689.00	\$43,220.00
Losses paid.....		\$12,718.71

## OFFICERS.

J. D. BLANCHARD.....PRESIDENT  
 I. G. GARDNER.....VICE-PRESIDENT  
 G. P. KELLOGG.....TREASURER  
 A. W. THOMPSON.....ATTORNEY  
 FERD. K. RULE.....SECRETARY

## TRUSTEES.

J. D. Blanchard.....San Francisco  
 G. P. Kellogg.....Salinas  
 I. G. Gardner.....San Francisco  
 Chas. Laird.....Salinas  
 Uriah Wood.....San Benito  
 A. B. Nally.....Santa Rosa  
 A. W. Thompson.....San Francisco  
 A. D. Logan.....Colusa  
 I. C. Steele.....San Mateo  
 G. W. Colby.....Butte County  
 A. Wolf.....Stockton  
 C. J. Cressey.....Oakland  
 J. C. Merryfield.....Dixon  
 E. W. Steele.....San Luis Obispo  
 C. S. Abbott.....Monterey  
 Dr. T. Flint.....Hollister

Farm property insured at actual cost on the Mutual  
 Plan. Other desirable property insured, and rated accord-  
 ing to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
 VICE-PRESIDENT.....JOHN LEWELLING.  
 TREASURER.....J. V. WEBSTER.  
 CASHIER.....ALBERT MONTPELLIER.  
 SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for  
 the transaction of a general banking business.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries.

**THE HIGH SCHOOL CHOIR**, (\$1. or \$9 per  
 doz.) is already a "proved and prized" book in a mul-  
 titude of schools, and has songs in 2, 3 and 4 parts, by  
 EMERSON & TILDEN.  
 Equally good are the older HOUR OF SINGING, (\$1.) by  
 EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female  
 voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75  
 cents) which has exercises in Italian style.  
**THE ENCORE**, (75 cents, or \$7.50 per doz.) so suc-  
 cessful as a Singing School book, is also a practically  
 good class book for High Schools.  
**THE WHIPPOORWILL**, (50 cents) by W. O. PER-  
 KINS, (author of the "Golden Rule"), is filled with  
 genial, pleasing songs for Common Schools.  
**AMERICAN SCHOOL MUSIC READERS**, Book I, (35  
 cents), Book II (50 cents), Book III (50 cents), are well-  
 made graded note readers, by EMERSON & TILDEN.  
 As collections of cheerful sacred songs, such as now  
 enter so gracefully into School Life, we commend three  
 books of uncommon beauty, our Sabbath School Song  
 Books, RIVER OF LIFE, (35 cents,) SHINING RIVER,  
 (35 cents,) GOOD NEWS, (35 cents.)  
 Either book mailed, post-free, for Retail Price.

**OLIVER DITSON & CO., Boston.**

C. H. DITSON & Co., J. E. DITSON & Co.,  
 711 Broadway, New York. Successors to Lee & Walker,  
 Philadelphia.

**ROWELL & CHESMAN**  
 Advertising Agents,  
 THIRD & CHESTNUT STS., ST. LOUIS, MO.

Publish a book on **ADVERTISING**, and  
**AND WHERE TO DO IT**, that every Advertiser  
 should have before making contracts either with the  
 papers or through Agents. It contains a list of papers,  
 prices, circulations, and much other matter of value  
 which will save time and money to those seeking in-  
 formation about, or making contracts for Newspaper  
 Advertising. Send address on postal card, and this  
 book will be forwarded free of charge.



# AVERILL MIXED PAINT,

MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

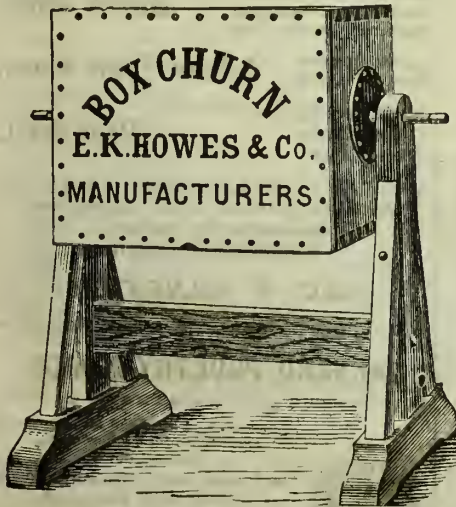
For Sample Cards and Circulars, Address

## CALIFORNIA PAINT COMPANY,

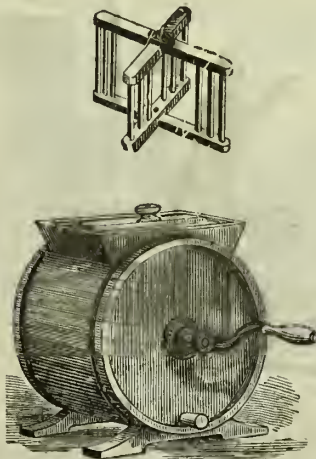
27 STEVENSON STREET, S. F.

## E. K. HOWES & CO.,

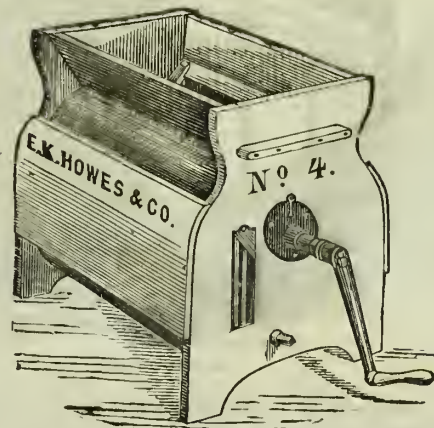
Nos. 118, 120 and 122 Front Street, - - - San Francisco.



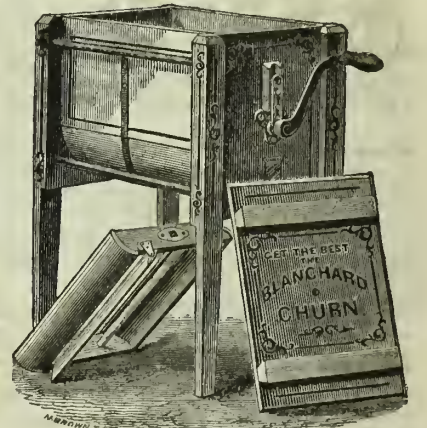
Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

## PACIFIC CORDAGE COMPANY,

MANUFACTURERS OF

### MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES & CO., Sole Agents for this Coast, - - - 118 and 120 Front Street, San Francisco.

**DAVIS & SUTTON,**  
75 Warren St., New York,  
Commission Merchants in Cal'a. Produce  
REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.  
Farmers, write for your paper.



**CALVERT'S CARBOLIC SHEEP WASH,**  
\$2 Per Gallon.  
After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

**LANDSCAPE GARDENING.**  
CHAS. A. REED,  
Experienced Landscape Gardener,  
SANTA BARBARA, CAL.  
Correspondence solicited.

**INTERNATIONAL HOTEL,**  
ALL NEWLY FURNISHED.  
824 & 826 Kearny Street, - San Francisco  
\$1.50 and \$2.00 per day. Free Coach to the House.  
H. C. PATRIDGE, Proprietor.  
YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



# Farmers, Attention! Farmers, Attention!!

We Have Bought the Entire TREADWELL & CO., BANKRUPT STOCK OF EXTRAS FOR

## Etna Reapers and Mowers, Kirby Reapers and Mowers, Russell's Threshers,

Hoosier Grain Drills, Peoria Plows, Buford Gangs and Jones's Plow Bottoms, and now offer them to farmers at

**GREATLY REDUCED PRICES.--Don't Fail to Give us a Call.**

**ETNA MOWERS. \$75.00 Cash, (REDUCED FROM \$150.00) EXCELSIOR MOWERS, \$75.00 Cash.**

ETNA COMBINED SELF RAKE REAPER AND MOWER, \$100.00 CASH, Reduced from \$240.00.

J. I. CASE & CO.'S SINGLE GEAR CALIFORNIA HEADERS, With Patent Adjustable Reel, Patent Iron Wheels with Wrought Iron Adjustable Spokes; Patent Frame Truss Brace and Steel Shafts.

Genuine Buffalo "Pitts"

### Threshers and Powers.

Buy only the Genuine. They are ahead of all others were awarded the Centennial Gold Medal.

### Champion Reapers & Mowers,

The Champions of the World

The "Old Reliable"

HOLLINGSWORTH SULKY RAKE.



CHAMPION MOWER.

Ames's Straw and Wood Burning

### Threshing Engines,

Best and Most Complete Engines on this Coast.

Baxter, Bookwalter & Bigelow  
ENGINES.

Wisner's "Tiger" Self-Dumping Sulky Rake.

Imperial Riding Cultivator.

"VANDIVER" CORN PLANTER.

A Full Stock of all the Standard Harvesting Machines and Implements, and Hardware of all Descriptions. Be sure to Give us a Call Before Purchasing Elsewhere.

**Address, BAKER & HAMILTON, - - - San Francisco or Sacramento, Cal.**

**R. J. TRUMBULL,**  
Grower, Importer, Wholesale and Retail  
Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

**R. J. TRUMBULL,**  
419 and 421 Sansome Street, S. F.

**35**

stamp.

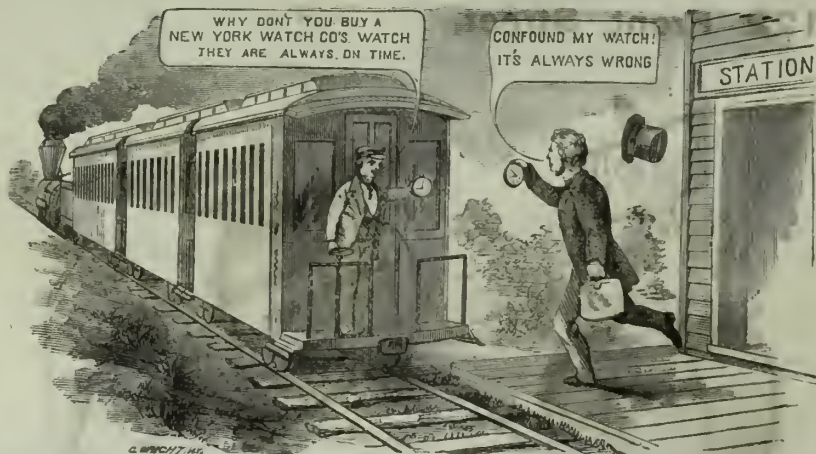
FASHIONABLE VISITING CARDS, 15 VARIETIES, in an elegant case, with your name handsomely printed in the latest style of type, for 25 cents. Agent's outfit, 20 cents. Samples for D. F. COOLEY, BROCKTON, MASS.

ORDERS for the GOLDEN PIANO will be received at this office, where further information can be had concerning their excellent qualities and favorable prices.

SUBSCRIPTIONS to the RURAL taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

### The Value of a Correct Time Piece.



[Scene on the S. F. & Oakland (C. P.) R. R.]

"Be sure you are right, then go ahead," Dary Crockett.

But with an ordinary watch how can you ever be sure you are right? Well then buy only reliable watches. It costs but a trifle more to get one of the true time keepers made at Springfield, Mass., by the N. Y. Watch Co. They never fail. Prices reasonable and every watch guaranteed, by the reliable firm of DEWEY & JORDAN, No. 433 Montgomery St., S. F. Send for price list.

### Buy N. Y. Watch Co's Superior Watches.

C. H. DEWEY. GEO. JORDAN.

DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware, Etc., Etc.,

No. 433 Montgomery St., near Sacramento, SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

### American Watches a Specialty.

**25** ELEGANT CARDS, all styles, with name, 10c. 30 Royal Bristol, "Beautiful" cards, with name, 20c., post-paid. J. B. HUSTED, Nassau, Remis Co., N. Y.

### THOROUGHbred FOWLS,

BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

EGGS, \$6.50 per doz

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New  
Early Canada  
Early Dutton  
Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar  
Sweet Corn.  
Yellow Flint Corn.  
Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

### OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings,

Pollish, Hamburgs, Plymouth Rocks, Game and Seabright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal



WE carry the N. Y. watch, and

you can refer to the publishers of

this paper as to the superiority of

the N. Y. Watch Company's

movements, manufactured at

Springfield, Mass. Also to any

one else who owns one.

Patronize papers that avoid humbug

advertisements.

### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. F. FIRMAN, Antioch. WM. HARKINS, Collinsville.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, APRIL 28, 1877.

[Number 17.]

## The Society Islands.

We gave a few months ago a view of Tahiti, the largest of the Society islands, with some notes concerning its soil and productions. We propose at this time to give little views of some of the other islands of the group. Such mention is just now timely from the fact that the first of the season's imports of Tahiti oranges arrived last week, and several cargoes are now due and daily arriving. These little islands, which do us the good service of sending fresh fruits to our markets at the time when our crop is nearly out of the way must possess much interest to all California readers.

The group of the Society islands lies in the South Pacific ocean (lat. 16° 18' S; lon. 148° 155' W), and is formed of two clusters of islands, one of which lies about 70 miles north-west of the other. They were formerly, and by

shrub, introduced from Norfolk, is now common and bears a profusion of fruit, upon which pigs and cattle feed with avidity. Garden produce is little cultivated and agriculture is very backward. A botanic garden, established by the French, offers seeds to colonists and natives; but there is but little demand for them and prizes offered to stimulate production were withdrawn in 1865 as useless. The spontaneous production of fruits seems sufficient for the natives.

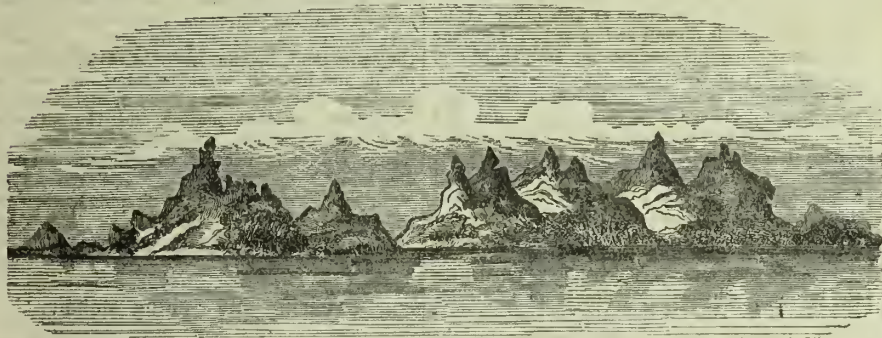
Our illustrations show views of four of the islands as the names beneath the engraving signify. There is of course much uniformity among them all because of their similarity of origin and the remarks above apply to all of the group. The largest of the islands, next to Tahiti or Otaheite, which we described upon a former occasion, is Emeo. Concerning this island we shall add a note, translated from the writings of a French traveler:

## The West Side Scheme.

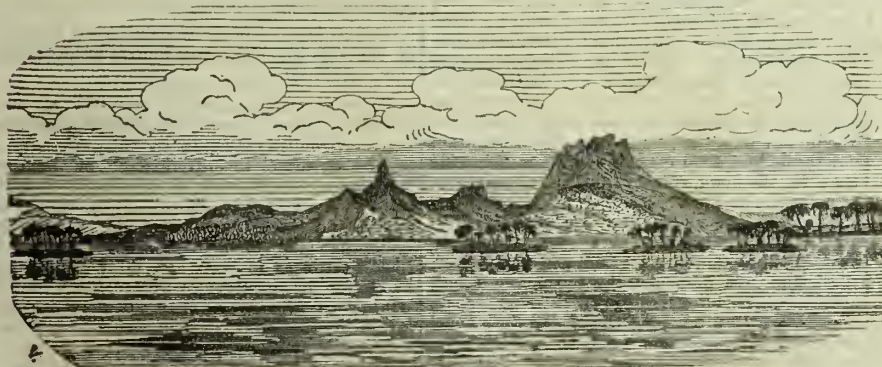
Before another RURAL PRESS is issued we shall probably know the result of the vote of the dwellers on the west side of the San Joaquin river on the project submitted at the election on Tuesday next. The fate of the measure in its present shape, is regarded as very uncertain. The opposition in Contra Costa county is unyielding. The fact that the estimates are for a navigable canal when the sentiment is for securing irrigation only, and that with the least amount of taxation, no doubt goes a great ways toward weakening the support of the measure. On the other hand the people are determined that some step shall be taken for rendering their lands productive irrespective of seasons, and are giving the project resolute support. The election next Tuesday will decide the present proposition, but will not, of course, prevent the

## Refrigerator Shipments.

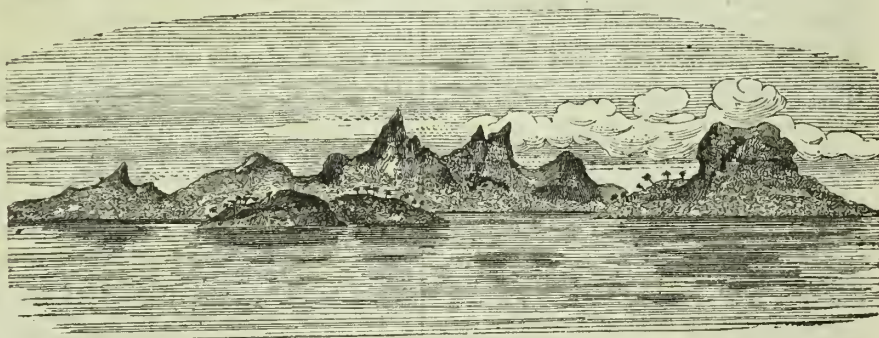
There bids fair to be no lack of designs in car building to accomplish the prolonged carriage of meat and fruits. There promises to be as many of them as there are of fruit driers or spotted steers. We are not prone to have them less. We would give to each as warm a welcome as its cold nature will admit of. Competition will make them move like warmed molasses and if they get up a contest for the possession of our fruits, meats and vegetables, which will increase the farmers' rewards for these lines of products, we bid them railroad speed. We have an item in another column of the organization of a new refrigerator car company in this city, and we now read in a Chicago paper of the successful movement of perishable produce from Colorado to Chicago in one of an-



Emeo.



Tahaa.



Ulan.



Borabora.

## VIEWS OF THE SOCIETY ISLANDS.

some geographers still are, distinguished by the separate designations of the Society islands proper, and the Tahiti or Georgian islands. The latter are under the French protectorate and the former are independent. The French islands have an area of 453 square miles and a population of about 14,000, of whom 1,000 are immigrants, 400 soldiers and 600 foreign residents. The independent islands have an area of 213 square miles and a population of about 4,000. The islands are all surrounded by belts of coral reefs of various widths and extending from a few yards to five miles from the shores. There are many openings for the passage of canoes, and some large enough to admit ships giving good anchorage inside the reefs. There are small lakes and lagoons in some of the islands and all are watered by numerous streams upon the banks of which, or along the shores, the inhabitants dwell. There is considerable variety of soil, the sides of the mountains being frequently covered with a thin layer of light earth. The summits of many of the hills have a thick stratum of red ochre or yellow marl, whilst the soil of the level tracts along the shores is a rich alluvial deposit, mixed with vegetable mold and is exceeding fertile. The climate is healthful and very mild, the range of the thermometer being inconsiderable throughout the year. Besides the breadfruit these islands produce almost every tropical vegetable and fruit, including some peculiar to the group. A few fruits and vegetables have been introduced from the temperate zone. The guava

The Island of Emeo is, if possible, more wonderful in natural beauties and adaptations than Tahiti. To the one who approaches the islands from afar there appear rugged mountains with broken sides, but as one comes nearer the enchantment of the scenery increases. The mountains, of various heights, are mantled with verdure even to the loftiest summits. The island, surrounded by a reef like Tahiti and others of the group, possesses many ports and good water in abundance. In the interior there is a lake which is navigable, which enables the traveler to explore the island easily. The land lies in slopes and contains many valleys which need only slight culture to be very productive. The mountains rise gently to the north of the island and the foothills are among the most fertile parts of the country. Below these are plains which are bordered by the productive regions. The general soil of the island is vegetable mold mingled with the alluvium washed down from the mountains and abounds in material for plant growth.

**PRESERVED GRAPES.**—We have received a very nice little sample of preserved grapes from Mr. George Geissendorfer, of New England mills, Placer county, Cal. They were packed in coarse saw dust and have kept their freshness exceedingly well. They are a very refreshing and interesting affirmation of what we have frequently said about the possibility of keeping fresh grapes for long periods and we doubt not would take well on the market.

matter coming up in improved form very soon, if more wisdom on the subject shall seem available. We notice that the matter has been made the subject of political action. A meeting held at Grayson put in nomination the following candidates for the offices provided for in the bill passed by the last Legislature: For Tax Collector of the district, D. J. Saddlemire, of San Joaquin county; for Treasurer, B. J. Crow, of Stanislaus county; for Assessor, S. A. Smith, of Merced county. Against these names there was a protest because there was a preponderance from one political party, but we have not heard whether opposing nominations were made or not. The Commissioners appointed by meetings in the several districts are as follows: In district No. 1, consisting of Contra Costa county, not heard from; district No. 2, Alameda and San Joaquin counties, C. D. Needham; district No. 3, Stanislaus county, J. R. McDonald; district No. 4, Merced county, J. L. Crittenden; district No. 5, Fresno county, Jacob Myer.

**DR. DIO LEWIS.**—We are pleased to announce that Dr. Dio Lewis has kindly consented to prepare some articles for the RURAL PRESS, as he may have opportunity, on subjects connected with the grand hygienic work which he is accomplishing. We have had pleasure in reproducing Dr. Lewis's writings from other sources, and it will be all the more pleasant to have something for the PRESS prepared specially for us.

other design. We shall quote some statements of results with this car, because they contain experiments with moving fresh meat nearly as great distances as are now contemplated in the shipments from this State and Nevada. A Chicago journal, of a recent date, says: "A few days ago quite a sensation was created at the Chicago and Alton depot by the arrival of a Tiffany 'summer and winter' refrigerator car from Pueblo, Colorado, with beef consigned to Thomas Armour & Co., of Chicago. Though eight days on the road, with the thermometer through the week ranging at 90° in Kansas, and receiving no more attention than ordinary freight, the beef was found to be, on examination, in perfect condition, and fit for immediate use. Last January a car-load of dressed beef was shipped from West Las Animas, Colorado, consigned to A. F. Anderson & Co., of Chicago, and though it remained on the car 14 days, and was subjected to a fluctuation of temperature varying from nine to 30° below zero, when unloaded was found to be perfectly fresh and sweet, and was rapidly disposed of in advance, while beef shipped at the same point, in an ordinary car, and arriving at Chicago at the same time, was so frozen that a crowbar was necessary to separate the quarters, resulting in such damage as to render it unsalable. Fruit and vegetables have been transported with equal success, strawberries having been kept eight weeks on the same principle. In a few days a car will be sent to San Francisco, to bring back a car-load of fruit."



## CORRESPONDENCE.

### The Foothill Beauties.

EDITORS PRESS:—Frequent showers, thrifty-growing crops and cheerful faces bless this favored region. The promise of prosperity is stamped in every quarter. The hills are well covered with grass and clover yet tender and green, giving ample pasturage to cattle, horses, swine, goats and sheep. The acorn crop will be large and hogsmen hereabout are elated over the prospect. Our dairymen are turning out the usual amount of fine butter. Poultry is in thriving condition. The sale of eggs has been good this spring, bringing 30 to 35 cents per dozen. I notice that all our prosperous hog and poultry raisers are awake to the improving of their breeds. Some of our dairymen can boast of as fine a lot of cows as you seldom see. This is a great country for goats, while there are a goodly number possessing flocks of superior breed, there are many with small flocks of inferior goats kept for their meat only. Sheep are seen here and there in small flocks, ranging on or near the farms where they belong.

### The Waving Fields of Grain

And luxuriant alfalfa, together with orchards, vineyards and shrubbery laden with young fruit, is beautiful to behold. Added to this our garden all green with corn, vegetables, etc., makes these Auburn hills attractive and desirable. Some of our best fields of grain adorn the highest rolling hills, from which we can look down upon the great Sacramento valley and view the Marysville buttes and winding Sacramento, and even the capital of the State without the aid of a glass. Mount Diablo, too, looms up in the distance, together with the Coast range. This, let it be understood, is the thermal belt and region of slate-rock, yellow pine, black, white and live oak, at an altitude of from 2,000 to 3,000 feet, which climate cannot be excelled for its health-giving and health-retaining qualities. Below us comes the granite rock and digger pine belt, and farther down the lower hills adjacent to the valley, with their scrubby white oaks.

The old miners can now realize in the new era of events something more precious and lasting. They see hundreds of contented husbandmen with wives and children and the comforts of life growing up around them. They see that true happiness and lasting prosperity flow from agriculture, and the miner's hope is an ever breaking bubble. Many old-time miners are now engaged in farming.

Stimulated by the building of an Alden evaporator in Auburn, more than usual energy is shown in planting sweet corn and vegetables, and the clearing of new land for planting orchards of choice fruits. We have an abundance of excellent fruit and grain land, but only a small portion has been cleared and plowed. Splendid opportunities are yet offered to those in search of cheap land, and I would advise all who are able and willing to farm it with equal attention as they do in the Eastern States, to come and examine this section. There are no land speculators here to hunt you up and show you over his high-priced acres. You will have to take time and look around. The Superintendents of the fruit driers at Auburn or Newcastle on the Central Pacific railroad, are good parties to give information.

I will, time permitting, give your readers another letter in a few weeks. Your correspondent is located four miles from Auburn upon a piece of unimproved land, and he finds it hard to give time to much writing. My high esteem for the PRESS is the only motive tempting me to write at all. H. W. HULBERT, Auburn, Cal., April 21st.

[Good!—EDS. PRESS.]

### Huggins' Nut and Fruit Ranch.

EDITORS PRESS:—J. W. & A. G. Huggins, formerly of Iowa, have purchased that beautiful and valuable tract of land known in the neighborhood as the Alden place, located in the foothills of the Santa Cruz range, which bounds the west side of Santa Clara valley. The tract consists of 800 acres, more than half of which is steep mountain land, valuable only for wood, wild pasture range and beauty. It lies about two miles south of Saratoga, and fronting on the public road between that place and Los Gatos.

Of the 300 acres of tillable land, the 250 acres now under cultivation comprises of itself a tract of much beauty and value as to its location, shape, quality of soil and surroundings. It consists of a large plateau of smooth-surfaced land, filling a fan-shaped recess of the mountains, which forms a grand background to the view, and bounds and shelters it on all sides, except to the east, which lies open, overlooking the great Santa Clara valley; the handle of the fan answering to the narrow, rocky canyon at the head of the cove in the mountain, and the gradual widening out of the tract towards the open valley, to that of an extended fan. This fine plateau is sufficiently elevated above the valley

to afford fine views of it from every point. From the public road which bounds it on the east, the surface of this tillable tract forms a gently inclined plain from the county road up to the base of the mountains, with the exception of some smooth little mound-like hills on the north and a little valley bordering a brook on the south. The soil of this slope, as far as I observed, seemed to be a rich, warm sand and gravelly loam.

I was informed by Mr. Huggins that his party, after examining many other localities, came to the conclusion that this place, as far as they were able to judge, combined more desirable conditions for the purposes desired than any they had seen.

It is the intention of the proprietors to permanently improve the place by planting about 200 acres to such nuts and fruits as may be best adapted to the soil and climate.

A large proportion of this area will be devoted to almond culture, as it is thought that the location and soil are peculiarly adapted to this business. English walnuts, prunes and other fruits will each have such allotted space as may be thought best adapted to the locality. It is also the intention of the proprietors to devote some acres of the most favored localities to the growing of oranges, lemons and other semi-tropical fruits. Perhaps the rich little valley, with its warm, sunny slopes, through which the brook flows, may be thought a good place for these.

Although the new firm did not get possession last winter, in time to make any very extensive plantations of trees, yet they made a good start in this direction, and what they have done looks business like and well.

Their first work was to build a temporary dwelling house, large enough to accommodate them till permanent improvements could be made. A large, neat looking cottage, in a fine natural grove, near the mouth of the canyon, now answers that purpose well. The site is a good one for health, beauty and convenience. From the front door, looking eastward, the view is simply splendid. From this elevation nearly the whole of the place down to the public road can be seen; beyond in the distance, the lovely Santa Clara valley, with its cities, towns, farmhouses, orchards and live-oak trees, lies like a picture. Then beyond and above all the view is bounded in the east by the picturesque Coast range of mountains, with the blue, rugged crest of Mount Hamilton towering over all.

A few rods above the house is an immense water tank, from which the house, yard and fountains are supplied with an abundance of pure mountain water. With Mr. H. I took a walk up to where the water is taken from the creek in a small wooden flume to the tank. A rough, narrow path led us down to the clear brook, which we crossed on flat stepping stones, then following an old wood road up the south side, the whole way up to the head of the flume, was through groves and shady dells, wild tangled vines and bright wild flowers, with the clear water of the mountain stream bubbling and foaming over the stones at the roadside, below our feet.

G. W. M.

Santa Clara, Cal., April 20th, 1877.

## HORTICULTURE.

### The Fruit Drier Discussion.

EDITORS PRESS:—As Mr. Blowers, in his comments on the communication from "C," devoted most of his article to the "much-trying" and much-abused Alden process, we beg leave to correct a few of his mis-statements.

The cost of the Alden factory at Riverside will not be \$10,000 to \$20,000, nor one-half the lesser sum stated, and the fact that he has allowed himself such a wide margin, shows that it was a wild guess. It is difficult to make these gentlemen, who own or represent rival machines, to see and understand the great difference between our old and new styles, and prices of evaporators. They insist that such increase of capacity, as we have represented, is impossible, without adding greatly to the cost, and they persistently shut their eyes to our improvements and seem determined to make us stick to the size and prices of the first evaporators erected in this State four years ago. We cannot gratify them, and shall go right along and do the best we can without criticising any of our rivals, and when a single one of the 200 machines, patented since Mr. Alden made his discovery, shall have demonstrated its superiority, by a full season of regular work, on an assortment of fruits and vegetables, it will be time to consider the propriety of abandoning the field.

Our large frames are not "clumsy," nor will it "require two men to handle them." They are handled, with ease, by one man with the aid of a simple device "of peculiar construction," and they can be taken into the vineyard, if desired, just as well as smaller frames. Our frames are strong and will last for years.

Mr. Blowers objects to "wire cloth" and leaves the impression that it is a necessity in the Alden process, which is not correct. We use "wire cloth" because of its lasting qualities and because cut fruit will not stick to it as it does to wood. We offer to our customers wool

or wire cloth, and the benefit of the difference in the cost, but through some strange infatuation (?) they all select "the necessarily expensive wire cloth."

So, too, we offer our machinery at low rates, and advise purchasers to be content with an individual right to use it, but most of them want the exclusive right of a township or county, and of course we make an extra charge for such exclusive privileges. If people will have exclusive rights and good, substantial and durable things, they must pay for them, and we fail to see how it can interfere with any other person's business. Mr. Alden values his invention very highly and we have to charge accordingly, but, while we are grateful for the very liberal patronage we have received, we know of no law compelling anybody to buy our wares. It is evident that people think that the Alden business pays, or they would hardly pay our prices, which seem to annoy our rivals so terribly.

Mr. Blowers says he knows stockholders of Alden companies who have not realized their expectations as regards the profits of the business. Quite likely. It would be an unusual thing if it were otherwise. But that is no good objection to the business, nor the process. Men and companies often fail to realize their expectations in other enterprises, and "there is no new thing under the sun," unless it be our present rival.

Statistics show that 95% of those who engage in merchandising—which is considered a legitimate pursuit—fail. The woolen factory at Marysville pays regular dividends, and the one at Sacramento is run on assessments. One fruit canning establishment at San Jose is reported to be making money, while the other one has gone to the wall. So it is the world over, and in the light of such facts it is hardly fair to call upon "C" to prove that the Alden business pays everywhere and under any kind of management, before he can be permitted to pass any "criticism" upon these new claimants for public favor.

If evaporated fruits, etc., like Alden goods, can be sold at list prices, then the business ought to pay very handsomely. If, on the contrary, there is no demand for them at remunerative prices, it would be unwise to erect any more factories of the Alden or any other style. But Alden goods do sell at list prices and the demand is constantly increasing, and, therefore, if any factory or enterprise does not pay, sensible stockholders of such factories, if there are any, will not charge it to the process nor the first cost of the apparatus, but will look for the causes in other directions. We shall take the liberty of sending one of our circulars, and respectfully invite Mr. Blowers to read the letter from the Jackson factory, where higher prices were paid for green fruits and vegetables than at any other factory in California, and yet the proprietors express themselves pleased with the business, which they "find more profitable than anything else for the capital required."

Mr. Blowers thinks raisin making by the Alden method "is, at best, problematical." Well, the factories have not as yet turned out many tons, but what have been produced have found sale at remunerative prices, which is more than can be said of some other California raisins. The truth is that "California raisins move very slowly," and many people are beginning to think that the business is receiving more attention than the demand for the article justifies. We do not wish to discourage raisin making, but think that good reasons exist for believing that, in the long run, there is more money in other fruits and in vegetables.

The criticisms of Mr. Blowers are not new. They have been repeated every year since the first Alden factory was started, and have advertised and not damaged the business. Every spring brings out a fresh crop of fruit driers, and they all pitch into the Alden for a short time and then subside, while the Alden goes straight forward, and it is seldom that any newspaper defense is thought necessary. Indeed, such controversies settle nothing. People look for results of actual works of the plans proposed.

In thus correcting some of the mis-statements referred to, we have avoided drawing any comparisons between, and unfair criticisms upon other fruit driers, and "with charity for all and malice toward none," we shall leave the field of controversy to Messrs. B. and "C," and the merits and demerits of the rival fruit driers to time, which tries all things, and will evaporate many, no doubt, which are now trying to beat the Alden process.

GEORGE W. DIETZLER.

S. F., April 19th, 1877.

Upon the above communication we must make two notes. First, although Gen. Dietzler was in no way responsible for the criticism of Mr. Blowers, it was made by a gentleman on his side of the fence; consequently, although the glove was not thrown down from the headquarters of the Alden company, it was thrown by an Alden man, and the policy of "doing the best we can without criticising any of our rivals" was not observed in this case. It is simple justice to Mr. Blowers to state that he wrote in answer to criticism and not to begin it. Second, we state for the benefit of the general reader that "some other California raisins" that do not sell at remunerative prices, do not include Mr. Blower's raisins, and we do not think that Gen. Dietzler means that such inference should be drawn from his words.

We have but one aim in allowing this contro-

versy to proceed, and that is that the people may learn the truth concerning the systems and appliances presented for their patronage. There is nothing like discussion to elicit truth and to expose strength and weakness.—EDS. PRESS.]

### Production of Oranges.

The Los Angeles Herald says: "Some statistics as to the planting of fruit trees in Los Angeles county are calculated to make the professional croaker gloat. Orange trees are coming on by the million, and in a few years we shall treble and quadruple the supply. In ten years we have no doubt that \$3,000,000 or \$4,000,000 worth of Los Angeles oranges will be sold per annum. But, by the time these myriad trees come into bearing order, the Southern Pacific will be completed to the Rio Grande, and the immense territory between the two oceans will be consumers of our fruit. By the completion of that road, and its connection with the Texas-Pacific, car-loads of Los Angeles oranges can be delivered in St. Louis in five days. Then will come the real Los Angeles orange market. We have not sent any of our oranges to the East, for the simple reason that we have not been able to supply half our home demand. The appetite for oranges grows with what it feeds on, and the market will constantly expand. Some time ago we published the opinion of Signor Gorgioni, the great orange man of San Francisco, which was to the effect that the orange market would not be glutted if every acre of the Los Angeles fruit belt were planted in them. We do not believe that our orange groves will continue to net \$1,000 and \$1,500 per acre, a figure which is attainable at the present price of oranges, but even if the pecuniary return should sink to \$100 an acre, what other crop would pay so well, and what other lands would be so remunerative, as ours? But the net profit will never sink to any such figure, and the market will always absorb, at satisfactory figures, all the oranges we can produce. Tell the man, who with great labor, and at the trouble and outlay of maintaining his stock through the long and severe winters of the East, nets \$10 an acre in wheat, that he can put his money into orange production and that, after a waiting which is compensated by the fact that he can raise grain and vegetables on the same land, he can make \$200 an acre clear profit, and he will want to come out here in a twinkling. There is large money in such a margin, or in \$100, for that matter, and the situation only requires to be thoroughly understood to insure that our utmost capabilities shall be developed."

## SHEEP AND WOOL.

### Shearing and Selling Mohair.

We have received several inquiries of late concerning the market for Angora fleece. The latest information on the subject is contained in a circular lately issued by Landrum & Rodgers, of Watsonville, Cal., well-known as breeders of the goats. We quote as follows:

Below is a communication from H. M. Farr, Holyoke, Mass., agent of the Farr Alpaca Company. Growers may ship to this party direct, or, if they prefer to ship through our firm, we have arrangements with E. Grisar & Co., to have all fleece taken charge of by them, advances made on freights, and the sorting and baling done under our own supervision, on as liberal terms as any firm can do it. We make no charge for our services this season. We are willing to give every man all his fleece will bring, in order to encourage the breeders and establish a permanent market at fair prices.

Please put a plain private mark on each sack; also mark sacks L. & R., care of E. Grisar & Co., Wool Exchange, San Francisco. Send them the shipping receipt and notify us of the same, stating the amount of fleece. We will sort, bale up and ship about once a month, or as often as the fleece accumulates. State whether to discount or sell on four months' time.

All lots that are large enough to bale separate will not be mixed. Very small lots will be graded and each grade weighed before mixing, and a strict account kept of each grade, so that all breeders will fare alike, and each get all his fleece is worth. Nothing deducted from the gross proceeds of the fleece but actual expenses on the same.

### Directions for Shearing and Handling.

Shear all goats that will pay for shearing. Anything will bring 20 cents per pound that can be shorn off. Avoid double cutting as much as possible. The short-cut fleece is almost worthless to the manufacturer. Tie up each fleece separately with twine. Fold the fleece up with the points out, just as it grows on the goat; it shows best and can be more easily sorted. Shear the goats whenever they show signs of shedding, no matter how early. The fleece becomes a dead, dull-lustered fiber, and loses in weight and strength if left on the goat to be shed off. It should be taken off just before the fleece stops growing. If the weather is bad, shed or house your goats at night, to prevent chilling after shearing. They are easily chilled for a few days after their fleece is taken off, but they soon get used to the weather. It is best to throw out all the short fleece—that which is less than three or four inches in length



—while shearing, and the tags also, into a refuse lot by itself. It saves trouble in sorting.

Mr. H. M. Farr's Letter.

Messrs. Lamborn & Rodgers, Watsonville, California:—Your favor of the 6th instant came duly to hand. You ask for samples of each grade or sort of mohair as we use it. I am sorry I cannot do this, as we have just worked up every pound we had sorted and have no more on hand to sort. The supply is so limited that we cannot get enough of it to make regular batches of such qualities as we could desire.

It is impossible to describe on paper how this stock should be graded, as there are so many points that have to be considered, such as length, luster, quality, (fineness of hair), amount of kemp, burrs, seeds, evenness of staple, etc.

We have had some lots of mohair that were full of burrs and seeds, which renders the stock, however good otherwise, of very little value, as every burr has to be clipped out by hand—a slow process.

I will describe as well as I can how the mohair should be graded:

No. 1.—Fleeces in which the staple in the body of the fleeces will pull out six inches long and over, of good quality (not too coarse in the hair), and not heavy in kemp.

No. 2.—Fleeces having staple under six inches and over three inches long, of good quality, and moderately kempy.

No. 3.—Fleeces having a long staple and very coarse and hairy.

No. 4.—Fleeces having staple under three inches long, and very kempy.

These directions are merely general and do not cover all the points, and you will come across many fleeces that will puzzle you which grade to put them into, but it is the plainest I can make. If I should go too minutely into particulars it would very likely be still more confusing.

It would probably be best to make two grades of No. 1 and make the extra grade of all the choicest fleeces, pure blood or high grade kids, etc., all long, fine and bright. When you speak of "sorting" the mohair, I suppose you mean sorting the fleeces. I do not suppose you intend breaking the fleeces—putting one part of the fleeces in one sort and another part into another sort. Such work as this can only be done by an experienced sorter, and on a proper table, and in the right light.

You speak of being able to ship us from 15,000 to 30,000 pounds this spring. We can take it all, and could probably use 10 times 30,000 pounds if we could get it.

There is no concern in this country that can use mohair in all qualities to better advantage than we can, and there is no one who could afford to pay more for it. We generally buy all our mohair from the brokers in New York and Boston on four months' time and give notes for it. The brokers sell these notes and return you the proceeds in cash. Our prices to you for the last shipment were on this basis, and in your future shipments we will put prices on same basis, and if any or all of your people want the money before the end of the four months we will send you the cash less the four months' interest at the rate of 10 per cent. per annum. To put it in figures: if the four months' price is 70 cents, the net cash price would be 67½ cents.

I am glad to see that you are endeavoring to stimulate the growth of mohair in good qualities. This is right and we will second your efforts in every possible way. The course you are taking is the best. Our interest lies strongly in this direction. The mohair that we paid you 90 cents for last fall, was more profitable to us than that we paid 20 cents for. The sooner your producers understand the great importance of "breeding up," the quicker and faster will they make money. "There's millions" in mohair for the Pacific coast if your producers will only go to work in the right way; but there is nothing but disappointment for the man who raises kemp.

When do you shear, and when may we expect the first shipment?

You had better get a special freight rate through to Boston via Chicago and New York Central railroad, if you see you can save anything by it. We are 100 miles west of Boston and the rate on wool from Boston to our place is 28 cents per 100 pounds, so that if there is a difference of more than 28 cents between the rates from your place to Boston and Holyoke, you had better ship to Boston (to our order) and we can then re-ship it back here. Of course if there is only a few cents difference, the loss of time would more than counterbalance the saving in money.

If the prices we allowed you last fall were satisfactory, you can depend upon the same satisfaction for all your future shipments.

We are anxious to obtain our supplies of mohair as direct from the growers as possible, hence we have a direct interest in giving you such prices as will encourage you to continue shipping to us. Some of your growers have no doubt tried the Eastern markets through brokers, and also the English market, and they will have an opportunity of finding out whether they can realize as much out of their mohair through us as through other sources.

We have the strongest interests in encouraging the growth of mohair in this country, and there is no better way to do this than to pay good prices to the growers for it.

It is said that Victor Hugo looks hale and strong, and attributes his health to his love of cold water and open windows.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Plymouth Rocks—Treatment for Lice and Mites.

EDITORS PRESS:—An article published in your last number upon Plymouth Rock fowls, by J. L. Skinner, has induced me to forward you a communication respecting my experience with poultry breeding, hoping it may be advantageous to the public, and that you may deem it worthy a place in your columns.

Having imported the Plymouths Rocks and bred them for the last four years, I can corroborate the statements of Mr. Skinner, agreeing with him in every particular. I know of no other person importing them until this spring. I find that they are just beginning to take in California and have supplied a number of persons with them lately. I will state that the Plymouth Rocks and Brown Leghorns are my favorites, and will be my specialty hereafter. The Plymouth Rocks are superior as mothers and sitters, the Brown Leghorns as non-sitters. I am sure the Plymouth Rock is the farmer's bird.

With regard to the article on carbolic powder by M. Eyre, Jr., I must give my experience with that and other disinfectants for the destruction of insects. I tried experiments with different nests; one with carbolic powder, another with carbonate of lime, and a third with flour of sulphur, and I found neither one of these thoroughly cleansed the hens and nests. I used an ointment compounded by Mr. A. M. Halstead, of Rye, N. Y., the recipe of which is found in the "Book of Poultry" by Lewis Wright, and once published by M. Eyre, Jr., in the Press. With this ointment I spotted my hens under the wings, over the back and head, so that it would not touch the eggs; then when my little chicks came off, I took a camel's hair brush and touched them lightly on the top of the head and round the throat. I never found a lousy bird or a sick one; and it is the only thing which proved to be a certain antidote for chicken lice. By using this ointment any man can be his own druggist. As I do not remember the number of the paper in which it was published, I will give the recipe:

Mercurial ointment.....1 ounce  
Pure lard.....1 "  
Flour of sulphur.....1 "  
Crude petroleum.....1 "

As to the mites, I find that no ointment or compound will thoroughly eradicate them. I have proved that boiling water is the best remedy. In the spring of the year I take a watering pot and scald all the sides and floors of my sitting-houses, nests and straw. Every time eggs are hatched I thoroughly scald and cleanse the nests before sitting the hens again, and I find by so doing that I have not been troubled with them for years. When sitting hens are found to be annoyed with mites I take them off, sit them out where they will dust themselves; then take the eggs, put them into a pan of lukewarm water, using boiling water to scald the nests all over thoroughly as they stand; then wipe off the eggs and lay them back in their nests; the hens will go back on them.

Every week I watch the nests and if I find any more mites, I go through the same process till the eggs are hatched; by following this up, I entirely rid the nests of them. I find by taking the eggs out and putting them into warm water, or even sprinkling them in warm water, they hatch much better than otherwise.

MRS. L. E. McMAHAN.

Dixon, Solano county, Cal.

### Poultry and its Value.

Mr. I. K. Felch, regarded as one of the best informed of poultry breeders in the United States, in a paper read before the Farmers' Institute, at Worcester, Mass., computed the value of poultry and eggs in the country at over \$400,000,000, on the basis that the 9,000,000 families of the Union consume two dozen eggs per week, at 25 cents per dozen, and \$20 worth of poultry per year. To this he adds \$100,000,000 annually for hotels, restaurants, confection establishments, medicinal, chemical and exportation demand. The figures are certainly wild, since more than half of the eggs produced are consumed at or near the farms when produced, and at an average price not to exceed ten cents per dozen. From his data he claims, indeed, that \$500,000,000 is under, rather than over the mark.

In relation to the product of eggs and the industry, he says: "Like in comparison as the giant oak to the acorn origin, so this large product is made up from the small collections, from the small flocks of fowls seen about the doors of the hamlet and the farm house, in numbers of 12, 20, 30 and 50, and where a large number are seen so rare is it that they become the exception. These flocks pay a large profit on their cost of production, as may be seen by consulting the different societies' reports. In 1858 we see that 38 fowls kept in small yards under unfavorable circumstances, with a market at 83 cents for corn, 16½ cents for eggs and 15 cents per pound for poultry, yielding a net profit of \$1.38 per head. In 1861, Mr. Mansfield's ex-

periment with 100 hens, having a free range of the farm, consuming but 93 bushels of corn, or its equivalent, produced 147 eggs each (no chickens being raised that year), and yielding a net profit on eggs alone of \$1.35 per head, to which had the value of guano been added, would have made the figures \$1.60. These and other statements to be found in the Middlesex South Society's reports of \$2, \$2.25 and \$2.50 per head profit per annum. And last, but not least, the banner statement of Mr. Whitman, in 1873, with 51 Leghorns, which laid 207 eggs each, which he sold for 31 cents per dozen; the cost of keeping the fowls being \$1.13 each, showing a profit of 4.04 cents per head, proves conclusively that these small flocks pay much better with care than do other farm stock."

### Common Fowls as Layers.

EDITORS PRESS:—I noticed in your last issue an account of four Pekin ducks laying 193 eggs in 66 days, three of the ducks, however, not laying for 17 days. That was good. Perhaps you would like to hear about some hens laying well. Exactly eight weeks ago I bought six hens and a rooster. They have laid during the 56 days, 230 eggs; an average each day of four and one-ninth eggs for the six hens, and nearly 39 eggs for each hen in 56 days. They are common barn-yard fowls. The six hens and rooster cost me four dollars, and one dollar for wheat to feed them with—five dollars in all. At 25 cents per dozen the receipts would be within a small fraction of four dollars and 80 cents, so that another dozen eggs will pay for my fowls. Is this good? W.  
Monticello, Cal.

## THE STOCK YARD.

### Testimony against Bermuda Grass.

At the last meeting of the Academy of Sciences, J. R. Scupham, Assistant Engineer of the Central Pacific Railroad Company, read the following paper on certain grasses which have been recently introduced into California:

The zeal for the introduction of new plants into a country, when not tempered by judgment, often results in much mischief and trouble to the agriculturist.

Many plants that are introduced at first by accident, are encouraged and cultivated a while, for their novelty, when a just appreciation of their character would lead us to fight and destroy them before they had secured a foothold on the soil.

Perhaps no class of plants is more insidious in this respect than the *gramineae*. To the Californian, thirsting for green lawns or forage plants, anything in the shape of grass seems acceptable. But I desire here to utter a word of warning specially against some members of this family.

I would first call attention to the *Cyperus-hydra* or "nut grass," though this plant is not a grass proper. This species of sedge has been introduced in some manner into the country about Los Angeles. It is a native of the West Indies, where it is reported to have overrun sugar plantations, and to have rendered them barren. This troublesome weed, if let alone, will spread rapidly, as its tuberous roots, in alluvial soil, strike very deep, and enable it to withstand the dryness of our climate.

I have noticed lately that some newspapers have received samples of Bermuda grass, *Cynodon dactylon*, and are advocating its culture. In my opinion this grass is already far too widely disseminated in California. The *Cynodon dactylon* is the "doub" grass of India, and is regarded as sacred by the Hindoos on account of its Phoenix-like or indestructible qualities.

It was first received in California by the State Agricultural Society in exchange with an agricultural society in the East Indies, in about the year 1856 or 1857. The Secretary of the State Agricultural Society gave some samples of the seed to his friends in Sacramento for the purpose of testing it. It grew readily from the seed and in the flood of 1861 and 1862 spread it over the bottom lands below Sacramento, and it is now a great nuisance in the gardens of that city, where it is known as "witch grass." Its habit of growth is low and creeping, making joints every half or three-quarters of an inch, sending up from these joints small leaves, and from these joints also sending roots down so that in favorable soil a small portion taking root will spread in every direction. It sends up a single stem or culm without leaves to the height of four or five inches, from which three small branches are sent out; these three small branches are the spikelets that bear the seeds.

It grows readily from the seed or from any part of the plant containing a joint, or from any particle of the root. When a space of ground is completely covered with it (and it soon makes a thick mat) it then sends its shoots out into the air, they fall down on the other shoots attached to the ground and make a tangled mass. When it once takes possession of a piece of ground it is almost impossible to eradicate it. It will grow under trees in an orchard and make a thick mat about their roots. It appears to live under almost any tree except the willow and eucalyptus; they being surface feeders exhaust the soil of the substances that appear to be a necessity for this plant. Should any of the seeds fall into the crevices of a brick sidewalk, even one that is constantly traveled upon, it will send its shoots under the bricks and lift

them from their places. It even defies quantities of salt, which will kill almost all other plants.

This grass is so short, and grows so low to the ground that it would make a beautiful lawn if it was not that the slightest frost, coming after it had started in the spring, turns it to a dirty brown, and it remains in that condition the remainder of the season. Horses are especially fond of it; cattle eat it readily, and hence will leave almost any other plant to feed upon it. Still it is of little value as a forage grass, for the reason that it never grows sufficiently tall to be cut for hay. It has been thoroughly tried in the Southern States, and has there been used successfully to keep firm embankments and levees, but it has been found a great nuisance in the adjoining plantations, of which it soon obtains partial possession, and the owners of which are compelled to wage constant war against its encroachments.

A gentleman in Kern county a few days since called my attention to it in his garden, informing me that he had received a present of a new and beautiful variety of grass that would make a lawn upon the dry plains of that county. It certainly looked very pretty in the small patch over which it was spreading. I notified him that in a short time it would take possession of his garden and get into the rich bottom and irrigated lands of that county, and be as great an injury as it was in the Southern States. The plant has no good qualities for the farmer; it is not even beautiful, except for a few months during summer. It furnishes a very small amount of food for animals, as it cannot be profitably cut and cured for hay, and, once getting a foothold, it never yields. Our farmers should be warned not to introduce it into their gardens or fields.

CURE FOR BOTS.—To extract grubs from the backs of cattle the following plan is recommended by an eminent Eastern stock breeder: "Take a small oil can, such as is used for a sewing machine; put in soft, limpid oil; insert the tip in the hole made by the grub and press a little on the bottom of the can, forcing some oil around the grub; then press hard upon each side of the grub and it will come out with a pop. A dozen may be taken out this way in less time than one without the oil. These grubs should all be taken out of cattle's backs, as they injure the cattle, are painful, and each female grub taken out prevents several hundred being produced next year, and this is the time to do it."

## THE VINEYARD.

### The Latest French Treatment for Phylloxera.

It was recently announced in the French Academy of Sciences that the decorticating or removing of bark from grape vines is a valuable preventive of phylloxera ravages, and that the vines thus treated also soon showed very perceptible signs of improvement in vegetation. M. Sabate now gives, in *La Nature*, some positive facts regarding the efficacy of this process, based on actual trials in his own vineyards. He states that a plot of about 20 acres had its vines (white grape, aged 60 years) nearly destroyed in 1875. During the winter of 1875-6, the vines were barked during the coldest weather. They have since become in a flourishing condition, and last autumn yielded an amount of grapes double that of the preceding year; and 48 acres of other vines (red grape, aged from 15 to 20 years) were similarly treated in February, March and April. Since then they have not been attacked, and the old phylloxera points of lodgment have not enlarged, while a far larger yield was obtained. In general, the vegetation in both of these vineyards offered a striking contrast to that in adjoining ones where decorticating had not been practiced. Although the vines in the latter were planted in fully as rich soil, and were identical in variety and in age, they are now as badly attacked as at any time during the past two or three years. Indeed, their production is lessened, and is scarcely 60% of that of last year. These facts have attracted official notice, and a committee from different French vine growers' associations have lately undertaken and completed an extended course of experiments based upon them. These substantiate the conclusions drawn from the foregoing, and also show the further benefit that, by removing the bark, a large number of harmful insects, which take refuge therein in winter, are at the same time destroyed.

In decorticating the vines, the workman wears a glove, made of mail or rings of galvanized iron. It weighs about 20 ounces, and with it a man can easily bark 500 large three-branched trunks per day. The bark is removed by rubbing the branch longitudinally. In order to reach crochets and sharp angles, a bow is used, the cord being a twisted line of galvanized iron wire.

ANTIDOTE FOR OIDIUM ON GRAPE VINES.—M. Chatot, a Frenchman, recommends common table salt as an antidote for oidium, or grape vine disease. He says that his vines and grapes were covered for some years with a fungus-like substance, and that last spring he sprinkled a handful of salt about the roots of each vine. The effect was marvellous, the vines grew luxuriantly and bore an abundance of grapes, entirely free from the fungus of oidium.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WRESTER; Secretary, Amos ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### International Co-Operation.

We have received from Brother J. W. A. Wright a neat pamphlet, published by the National Grange, presenting in connected form the valuable papers on the subject of "International Co-operation," which were laid before the late Chicago meeting of the Order. We trust the pamphlet will be widely distributed, for a careful study of it will be productive of much good. We propose at this time to reproduce a few paragraphs from the pamphlet, which will serve as useful definitions of the idea of co-operation as it is now before the Grange mind. First, Worthy Master Jones gives the following definition: "Co-operation, in its broad sense, implies helping each other. The tendency of this is to add to our physical comfort, and to develop, educate and elevate us morally, socially and intellectually. Competition involves more of self-interest. And this has exactly the opposite tendency to that of co-operation, to wit: Physical unrest, the development of intense and morbid selfishness, which leads to misrepresentation, trickery, deception and fraud, frequent bankruptcy, ruin and general demoralization. Or, to give a definition of an experienced English co-operator, Mr. Holyoake: 'Co-operation is an industrial scheme for delivering the public from the conspiracy of capitalists, traders, and manufacturers to make the laborer work for the least and the consumer pay the utmost for whatever he needs of money, machines or merchandise. Co-operation effects this deliverance by taking the workmen and the public into partnership in every form of business it devises.' Or, as he defines it in another place, to wit: 'Co-operation is a scheme of industry in which the results are obtained by concert, the profits divided by consent, and the public made a partner with capital and labor, instead of the victim of the needs of both, as occurs under competition.'

"The world has never before seen an organization fraught with such grand possibilities of carrying out a scheme so laudable and noble in itself—as is involved in this principle of co-operation—as we find in the Grange. Indeed, this principle is the very foundation, the chief corner-stone of the whole structure."

From the above to the subject of international co-operation the course is logical and easy. The Worthy Master, in answer to the question "What is international trade and what does it propose to do," says: "It rests on certain facts which need but to be stated to all thinking farmers throughout our land to have their full assent. A large part of the surplus wheat, corn, cotton, wool, bacon, cheese, tobacco, etc., the product of our fields, annually find their way through some channel or other to European consumers, chiefly to those in England. Numbers of people are steadily amassing wealth by the various transactions concerned in the mere transfer from us, the producers, to these distant consumers of this vast surplus. See how it is turned for them into huge store-houses, palatial homes and luxurious living, while the farmer who receives these gifts from Mother Earth, as the reward of his labor—labor without which the world would not be clothed and fed—receives for his share a sum which rarely exceeds, and too often falls short of his yearly expenses."

Another point which we shall quote from the pamphlet is with reference to the readiness of the Englishmen to begin the proposed exchange of commodities: "Our Commissioner learned accurately, by personal inquiry in some of their co-operative mills, the following facts: That if we but choose to make satisfactory arrangements for such trade to furnish even half the cotton and grain for their mills which are owned by co-operative societies, or connected and in full sympathy with them, our Grange associations would have to ship to them directly every year at least 25 cargoes of cotton and 25 of wheat and corn from the Mississippi valley, from the Atlantic coast 25 ship-loads of cotton, and from the Pacific coast 25 of wheat, to say nothing of other localities and products. As he truly suggests, 'half of such a business as could be thus established between us would be quite large for the first few years' growth.'

"Think of the trade that may, with small and cautious beginnings, ultimately flow in the interests of millions of farmers of our Western Continent to the ports of England through the Mississippi and its tributaries, through the 'Great Lakes' and the St. Lawrence, from our seaports of the Atlantic, the Gulf and the Pacific. Can we not see in this an object for the farmers of America and their children to unite for, to plan, to work and to live for? Nor would we expect all our business to be managed through these channels, but enough at least to form a valuable corrective of many evils.

"We firmly believe that such trade can be best conducted on purely co-operative principles, as we are now beginning to understand and apply them, and as set forth in our preliminary report.

"We may differ somewhat in opinion, as do our co-operative friends in England, on the surest method of applying these principles to international trade, such international trade as is carried on and will ever be carried on, whether our Grange associations and English co-operative societies take any part in it or not.

"Now, such a plan, as we know, has been carefully matured, after due consideration, in good faith, equally in the interests of co-operators on both sides of the Atlantic.

"If we have the will to do so, as soon as we make some necessary preparations, we can assuredly use this plan with safety to begin this work of direct shipments. In this, as in everything else, to begin is half the work."

### Stanislaus County Pomona Grange.

Brother V. E. Bangs prepares for the PRESS the following interesting account of the meeting of the above Grange on April 16th: The meeting was called to order by Worthy Master H. W. Brouse. After a lengthy discussion on the manner of opening and closing the County Grange; also on the manner of admitting delegates, the newly elected members presented their credentials.

The following is a list of delegates present, old and new; also of Masters, Past Masters and Matrons:

Turlock Grange—Charles Broadhurst, A. L. Fulkerth, M. J. Hall, A. S. Fulkerth.

Salida Grange—J. G. Elmore, A. H. Elmore, J. F. Kerr, W. H. Chance, J. P. Vincent.

Waterford Grange—Thomas Johnson, J. Search, Samuel Gallup, R. R. Warder.

Oakdale Grange—S. P. Bailey, F. G. Whitby, Mrs. M. E. Bailey, C. R. Callender, J. R. Horsley.

Ceres Grange—H. W. Brouse, Mrs. H. W. Brouse, John Service.

Stanislaus Grange—P. P. Stiles, Mrs. E. J. Turner, J. D. Spencer, J. D. Harp, V. E. Bangs, Mrs. M. G. Bangs.

In the afternoon session, Master Brouse stated that he had written to find out about the rights of ex-delegates, and that he was assured that all who at any time had been elected delegates to a County Grange was entitled to the fifth degree word.

On motion of Brother A. S. Fulkerth, all ex-delegates, and all fourth degree members, were accorded all privileges during the session except that of voting.

In answer to various questions, Worthy Master Brouse ruled as follows:

1. That delegates are not voting members of the Pomona Grange until they receive the fifth degree.

2. That delegates retain all their rights (including that of voting), till their successors receive the fifth degree.

3. That a quorum in the County Grange may consist of members who are not delegates, such as Masters, Past Masters and their wives, who are Matrons.

Brother Gallup made an eloquent speech and graphically portrayed the situation of the tax-ridden farmer. He submitted various measures of reform which, according to his expressed wish, were referred to a committee of five.

On the evening of the first day the fifth degree was conferred on a class of nine. The ceremonies were impressive, and the music, rendered by Brother Vincent, excellent. At the conclusion the feast of Pomona was spread, which was duly appreciated by all present.

On the second day, Brother Warder presented the following preamble and resolutions, which, on motion, was referred:

WHEREAS, The tightness of money, the high rates of interest, the unwillingness of capital to loan on country securities, result in injury to the farming community; and

WHEREAS, Farmers should place themselves in a condition to command their own capital, be it

Resolved, That a committee be appointed to take into consideration the practicability of organizing a mortgage bank, and to report a plan for the same at our next regular meeting.

The officers for the ensuing term are as follows:

V. E. Bangs, M.; S. P. Bailey, O.; C. R. Callender, L.; M. J. Hall, S.; W. H. Chance, A. S.; John Service, C.; H. W. Brouse, T. K.; Mrs. E. J. Turner, S.; R. R. Warder, G. K.; Mrs. M. G. Bangs, Ceres; Mrs. L. J. Brouse, Pomona; Mrs. M. E. Bailey, Flora; Mrs. J. D. Reyburn, L. A. S.

A large amount of other business was transacted. The Grange adjourned to meet again on the third Wednesday in July next at 11 o'clock.

**COLUSA PICNIC.**—The Sun says: "The Grangers have secured the services of J. W. A. Wright, the Past State Lecturer of the Order, to deliver the oration at Sycamore on the 1st of May. The exercises of the day will be in the grove close to the hall at Sycamore, which is one of the best dancing halls in the county, and those who desire it can form a dancing party. There will be a large concourse of people there, and there will be room enough for all."

**FRIEDLANDER.**—"Omega" writes from Napa county as follows: "The failure of Friedlander has created some excitement, and will, probably work favorably for the Grangers. If a man so well trained to business can make such a failure while they are succeeding, it certainly ought to encourage the Patrons of Husbandry."

### Denunciation of Fair Abuses.

The Subordinate Granges are speaking in no uncertain voice against the policies which prevail in the management of our agricultural fairs. The following resolutions were adopted at a late meeting of Alhambra Grange:

WHEREAS, The county agricultural fairs as heretofore conducted have failed to fulfill their mission of fostering agriculture and mechanical arts, and of promoting research and improvements by social interchange and lectures upon topics congenial to those callings, because of having applied their resources mainly to foster professional horse racing and its accompaniments, betting and gambling, thus perverting said fairs to a resort of gamblers and bad characters, demoralizing in the extreme to all coming in contact with them, therefore be it

Resolved, That we heartily endorse and concur in the sentiments expressed by our neighbors, the Grange at Walnut Creek, and, as farmers, will use all proper means to promote the cause of reform in agricultural fairs in our county and State.

Resolved, That the most effective means to encourage the normal interest in our agricultural fair is to make it a nucleus of social re-union for all citizens of the county, establishing a time for the sale and exchange of stock and products of all kind, the holding of debating clubs for exhibition of farming experiences, and the delivery of instructive lectures.

Resolved, That all encouragement and conveniences should be provided families for camping out within the inclosure of said association, thus in time establishing the custom of annual sale fairs, by which means the interest in agricultural and mechanical fairs would be steadily increased to the manifest advantage of the community.

Resolved, That the sale of intoxicating liquors, gift and lottery tickets, and any other fraudulent or immoral devices, should not be permitted or be allowed to take place on the grounds of the Society.

Resolved, That trials of speed and of proper training of horses and farm animals are desirable, if conducted in a legitimate way, and not for pool selling and gambling.

Resolved, That at the next annual election of officers this reform in conducting our county fairs should be brought forward and supported by a full attendance of the members of the association and all interested in its welfare.

### Stockton Grange and the Primaries.

The following preamble and resolutions were adopted by Stockton Grange, No. 70, P. of H., April 14th, 1877, viz:

WHEREAS, We believe the present an opportune time for the people of this county to secure good, efficient and faithful officials to represent them in the management of the State and county affairs; and

WHEREAS, The people in general, and Patrons in particular, are very negligent in attending primaries of their respective parties, thereby allowing a few irresponsible and designing persons to control our conventions; therefore,

Resolved, That we, members of Stockton Grange, No. 70, P. of H., hereby pledge ourselves to attend the primaries held by the respective parties to which we belong, and with which we affiliate, and we agree to send to the convention none but tax-payers and representative men of our respective parties.

Resolved, That the motive which actuates us is a desire to have both political parties to nominate the best men in their party, feeling satisfied that the people will vote for and sustain the party which places the best men before them for official honors.

Resolved, That our Secretary is hereby authorized to notify the different Granges in this county, and ask their co-operation.

**EDUCATIONAL MEETING.**—At the last disension of the educational question by Golden Gate Grange, there was a committee appointed to make a report upon the subjects involved at a subsequent meeting, which was called for May 8th at the headquarters, corner of California and Davis streets. This committee consisted of A. W. Thompson, Professor Hilgard, J. W. A. Wright, Rev. O. P. Fitzgerald, Gen. A. M. Winn, I. C. Steele, Mrs. E. S. Carr, J. Earle, and possibly one or two more, whose names we do not at this moment recollect. We are advised that this committee has had the educational questions under advisement, and there will be much interest to hear their report, which will be due by appointment at the meeting on May 8th.

**NEW GRANGE IN SAN DIEGO COUNTY.**—C. Tucker, Deputy for San Diego county, writes to the Patron as follows: On the 27th ult. I had the pleasure of organizing a new Grange at San Pasqual in this county, with 19 charter members. The following officers were elected: James P. Joes, M.; W. J. Whitney, O.; Wm. M. Brown, L.; N. R. Roberts, S.; C. Washburn, A. S.; John Judson, C.; Wm. McCain, T.; Alexander Smith, Sec'y; John Noble, G. K.; Mrs. W. M. Brown, Ceres; Miss Sarah Judson, Pomona; Mrs. H. A. Roberts, Flora; Mrs. Rebecca Stewart, L. A. S.; John Judson, N. R. Roberts and W. McCain, Trustees.

Co-OPERATION will be discussed at the regular meeting of Golden Gate Grange on Tuesday, the 15th of May. The meeting will take place at Grange Hall, No. 40 California street, at 7:30 p. m., and will be open to all who desire to attend.

### Finance at Golden Gate Grange.

A meeting of Golden Gate Grange, open to the public, was held Tuesday evening, at 40 California street, to discuss the question, "Finance as Relating to Political Economy." Worthy Master J. D. Blanchard presided. About 50 persons were present. The Call gives the following outline of the discussion:

Mr. J. M. Horner, of Temescal, opened the discussion with a resolution, "Inasmuch as our national currency, greenbacks and silver coin, is at a large discount compared with gold, whereby our currency is disgraced and sneered at by our enemies, and our products curtailed and commerce restricted in consequence, it is the imperative duty of Congress to immediately restore our national currency to one measure of value only." He advocated the establishment of a national banking bureau; the adoption of some plan which will equally distribute greenbacks; and also the introduction of intro-convertible bonds.

G. W. Hancock, of Sacramento, favored the retirement of national bank notes, the issuance of the silver dollar, payment of which shall have equal value with bonds and a paper currency loaned directly to the people on good security, at an interest not exceeding 4% per annum, thereby preventing usury. Greenbacks should be retired because they are not a full legal tender; bank notes, also, because they are an expensive kind of money to the people; and as paper money is necessary, it should be issued by the Government and have one unflinching standard.

Colonel Fitch said that \$18 per caput had been deemed sufficient circulation for this country, but Congress had given us \$40 per head, and even that was not sufficient, for it was not money. We have never had within the United States 10 cents on the dollar of absolute money required for the use of the people. There have been substitutes, but not money. The Government, in issuing greenbacks, promised to pay, and that is where the mistake lies; payment is due in coin. If the paper had been made receivable instead of payable, the trouble would have been averted, for there never would have been a call for redemption. Silver, as money, must be equal to gold, according to the quantitative relation which the Government shall fix upon it. Its standard of relation to gold must be determined and made reliable. The coinage of gold must be made to fill the measure of value represented by the other, and each must be held the absolute equivalent of the other in monetary use. Any discrimination between the two kinds of coinage destroys the unity and infracts the law of their creation as money. As a legal tender money must be unbridled in its use. The limitation put upon the greenback was the very cause of creating an exigency of demand for gold.

Mr. A. M. Comstock assumed that it is a national necessity for every nation to have some system of paper currency in order to supplement the quantity of coin money in use. That system of paper currency based upon a redemption in gold or silver, or payable upon the commercial faith of a nation, tends always to depreciation in proportion to the quantity issued by legitimate demand; while the paper currency, which is issued irredeemable, and is only issued according to legitimate demand, as in the other case, has a tendency always to appreciation. This paradox he illustrated by reference to France, where the notes of the Bank of France at one time were at 30% premium over gold, and the State limited the premium to 20%. Money is power. The issuance of an irredeemable paper currency is the issuance of so much additional power, because it has never to be redeemed; but the issuance of a currency which is to be paid, is issuing a currency coupled with conditions that cannot be fulfilled. The true basis of currency is not gold, silver, nor national credit in the commercial sense, but national faith, of course. The true basis is demand. A bureau of finance should be established by the Government, which should issue currency to the people on their securities. Every dollar that goes out leaves behind it a demand equal to the volume issued, for the Government has to be paid, and the result is that demand is created. Were such a currency issued, the tendency would be constantly to appreciation, but by limiting the interest to three per cent., this appreciation would be regulated so as to make the value no more than gold. He would couple with this the intro-convertible bond. Our bonds would soon be exchanged for this irredeemable currency, and also our greenbacks.

Mr. Mason thought national currency dangerous and unsettling to experiment with, but currency handled by banks operated by statute law, always has been stable. Money should not appreciate; it ought to be as constant in value as possible.

Colonel Redstone offered a few remarks and the debate was adjourned until Wednesday evening at half past seven.

### Election of Officers.

**MUSSEL SLOUGH GRANGE No. 234, TULARE COUNTY.**—T. W. Standart, M.; John Wilson, O.; T. Startin, L.; F. F. Wilson, S.; E. Vaughn, A. S.; S. R. Wilson, C.; John Battefeld, T.; W. Underwood, Sec'y; P. Mills, G. K.; Sister S. A. Duncan, Ceres; Mary Duncan, Pomona; Sister E. Hayes, Flora; Sister M. E. Underwood, L. A. S.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**OUR GRAIN CROP.**—*Independent*, April 21: We have kept up hope to the last moment that our farmers would, after all, have a fair crop of grain, but are now compelled to give it up. Two weeks ago there was still some ground for hope, but now there is little or none. The stiff northerners have turned fields that might have done well with a little more rain into places where not even a first-class hay crop can be gathered. Gentlemen whose business has necessitated extensive travel in Washington, Eden, and Murray townships say that there will not be hardly one-fourth of a crop. Thus we are now forced to consider the advantages of irrigation to secure the certainty of regular crops. It is true that this has been altogether an exceptional year, as compared with past years; but there is no telling how many of these exceptional years may come in the future, nor how often. So a water-ditch or an artesian water supply seems to be the only steady and adequate remedy; and if so, the sooner they are provided, the better. Early this week, and again in the middle of the week, showers have fallen, which will do some good to the grass and hay in places, but will not alter the character of the grain crops to any appreciable extent.

## COLUSA.

**WINTER FLOODING.**—*Sun*, April 21: Deep plowing and a great deal of plowing will do wonders in this State; but after all there is nothing like winter flooding to make land produce. To take one of them, however, we would take the plowing, but when both is had the result is astonishing. We were out at L. F. Moulton's place, last Sunday, and observed the immense growth of vegetation where he had flooded the land. The land was deeply cultivated before the flooding, and then, after it was put in splendid condition. Winter sown wheat will make 30 bushels to the acre; along side of that, sown at the same time, and not flooded, that will make nothing. The growth of vegetables, and his orchard, is remarkable. Mr. Moulton has a hobby on the subject of winter flooding, and intends to prepare several thousand acres of land for it.

**VERY SPOTTED.**—It rained in several parts of the county last Sunday, but it was very spotted. We went up the river a short distance in the afternoon, and happened to get into as hard a rain for a few minutes as we ever saw fall; but, when we had driven half a mile further on, the road was dusty and no signs of the shower appeared. As we came back we could see that the hard part of the shower was less than half a mile in width. It fell on some thrifty winter-sown wheat on Mrs. Burns' farm, however, and did good. There was a hard shower in town, but it extended just a few hundred yards across the river, and cut square off at the end of Cooper's lane, a mile from town. At Occident they had a very hard shower, which did some fields in that neighborhood some good.

**SOME GESE.**—L. F. Moulton hired Paddy Lord, a noted fowl hunter, and some five other men to herd geese off his place, and the six of them have killed, during the winter, 7,000 geese. Moulton paid them \$30 a month and furnished ammunition. They have picked the feathers from the geese and tried the bodies out for oil, and they think now that they will get \$75 a month for their work.

## CONTRA COSTA.

**THRIFTY GRAIN.**—*Gazette*, April 21: Mr. Alex. Boss left at our office on Tuesday some remarkably fine samples of his growing crops of wheat, barley and oats. The sample of wheat is a single cluster having the remarkable number of 240 stalks, started as closely together as if from a single seed. This wheat though considerably mildewed upon the lower leaf sheaths, has a vigorous, thrifty appearance, and is already well headed out, standing about four feet high. The sample of barley is a single stool of 130 stalks, well headed, standing about the same height as the wheat and looking as thrifty as could be desired, though it has been slightly touched with mildew. The oats, though not yet headed, stand above four feet in height, on heavy stalks, and give promise of a large yield notwithstanding some rust flecks on the leaves, as is usual with this grain. All the samples, we believe, are from summer fallowed land which was last plowed and sowed after the first rains.

**RAIN.**—Our showers within the past week have fallen very unequally about the county, and some localities have had quite a liberal watering while others had little or none. Here, the showers of Saturday night and Monday afternoon gave us a measure of 29-100 of an inch, and, with the cool weather, they have improved the appearance of the grain and pasture fields hereabouts. It is hardly to be expected now that much of the wheat sown after the January rains will mature anything of a grain crop, but a few more showers and cool weather will help it to make hay where it has not already dried out or been too much sapped with the mildew, the power of which blight appears to have been arrested by the breezy, cool weather of the past month.

## FRESNO.

**WOOL GROWERS' ASSOCIATION.**—*Republican*, April 21: We have once before called the attention of our readers to the necessity of some kind of an association among the sheep owners in

this county. There should be some mutual protection of interests, and under some circumstances assistance to those deserving it. Men owning land on the plains, and have yearly occupied the same ranges in the mountains for many successive seasons, now find themselves eaten out on the plains by migratory bands, and when they attempt to reach the mountains, find companies of men already in possession and fencing up their ranges. It is sometimes difficult for a single individual to avail himself of the protection of the law, on account of the expense that would be incurred, and sometimes protection depends upon common custom regardless of definite laws. It is so in the mountains, ordinarily, but this season might rules, and men owning land and sheep in our county are obliged to sacrifice their flocks or be driven away from what in justice belongs to them, by those whose taxes are paid in and whose interests are wholly in other parts of the State. There should be, and if the matter could be agitated by a few leading wool growers, there would be an association in this county that would be of mutual benefit to all interested in sheep.

**THE WEATHER.**—As if to taunt people with their present misfortunes, cold blighting north winds sweep over the plains for a day or two, filling the air with dust and withering what little vegetation there yet remains. These winds are followed by little showers which freshen the grass, but not sufficient for it to mature, and are followed again by the dreadful winds. Such is the present season, and it would be difficult to conceive a more discouraging one, nor are such seasons the rule, but, fortunately, the rare exception. We can only wait and hope that the present misfortunes may be followed by blessings—and they surely will, to all who hold on with real grit, even a little faith in the wisdom of Providence and an honest reliance upon themselves.

## KERN.

**RAIN AND GROWTH.**—*Courier-Californian*, April 21: Mr. J. Clark has leased 70 acres of alfalfa for \$20 per acre for the season. At ten tons of hay to the acre it is but two dollars per ton for the hay. We hear of other parties who have leased at \$35 per acre. We learn from stock men that the chances for feed in the mountains were never better. The bunch grass is luxuriant and this last protracted storm assures a full summer's crop. The alfalfa is starting on the plains, and the dry foothills beginning to show the color of spring. Rain commenced falling on Sunday, and continued at intervals till Tuesday. A great part of the time it poured down in torrents, drenching the streets and leaving ponds of water all over the island. Probably double the quantity of water fell the last storm two weeks ago. Kern river raised 14 inches, sending a large volume of water toward the lakes. The stock business takes an entirely new phase. Corn planting is engaging the attention of every farmer.

## LAKE.

**EDITORS PRESS:**—We have had very cold weather up here this week, with high winds, rain, and in some places hail. The morning I left Lakeport, Friday, 20th, the mercury stood at 36° at 6 o'clock—just three degrees above freezing; and at Bassett's, in Cobb valley, they had heavy ice and were fearful damage had been done to some of their fruit trees. The high mountains on the opposite side of the lake from Lakeport had a thick coating of snow, and there was a little on the summit of Cobb mountain. It is still cold and blustery and we are likely to have more rain. We look to it that we have a good, big back-log these evenings. Crops around Lakeport look first-rate—no thought of drouth there. Some of the people are talking of going down into San Joaquin valley, buying sheep there at low prices, and bringing them up here where range is easily to be had. If there was more money in the county I guess there would be a great many make the speculation.—H.

**THE CROPS.**—*Democrat*, April 21: So far as we have heard no complaints of mildew, rust or of the strange animal which infests wheat stocks in the counties adjoining Lake. Up to date all our fields promise an abundant harvest, though there is yet time for some unwelcome visitation.

## LOS ANGELES.

**EDITORS PRESS:**—A good rain has freshened up the orange orchards of this cold-water colony within the last 24 hours.—H. J. S., Pasadena, April 16.

## MARIN.

**MR. HOWARD'S IMPROVEMENTS.**—*Journal*, April 19: At the home ranch of Chas. Webb Howard, near Olema, a large ditch, averaging 13 feet on top and five feet at the bottom, with a length of 2,600 feet, has been dug for the purpose of draining the land and straightening the bed of Olema creek. Something more than 100 acres of land upon the hillsides, where three years since were growing large trees and tangled underbrush, is now a field of waving grain. Other 100 acres of low and swamp land are being cleared and drained and made into luxuriant fields. We noticed a complete immunity from rust or blight at these places, while where the land was more exposed to drying winds and had been cropped a long time, the blight will seriously shorten the yield.

## MONTEREY.

**CROPS.**—*Democrat*, April 21: At the beginning of the week our hopes for feed for stock and of partial crops were raised by light showers, which seemingly fell generally through the county. The mountain lands received the

larger share, of course, it being said that they were quite abundant in the Tulare and Carmelo country, and along the sea coasts towards the Sur rancho. As we hear, indeed, the districts in question make a good showing of feed, and the seeded crops are certain of maturity. In the Carmelo valley, ranch owners have sown root crops and alfalfa quite extensively, and, counting upon them in addition to the outside feed, they feel at ease about their stock. There are half a dozen or more small dairy farms over there which are very skillfully managed, and have considerable note for the quality of their products, conspicuous among which being the establishments of Gregg, Berwick & Bralee.

## NAPA.

**ST. HELENA.**—*Register*, April 21: All our crops are looking fine. The vines are crowded. Our almond crop, which was somewhat a failure last year, is safe now and promises a good yield. Strawberries are very plentiful and cheap. Mr. Hamell brings in 100 pounds a day now, and expects to double that quantity shortly.

**CORN PLANTING, ETC.**—*Star*, April 20: We have had a new programme here this week—corn-planting is the order of the day. Messrs. Falkenstein & Musgrove are putting in ten acres, Rollo Wheeler ten, W. A. Field eleven, and N. Sawyer about eight acres. The ground is in excellent condition, as the soil is moist. You can take loose earth and press it into a ball, as the ground has been cultivated twice, and it thus holds its moisture. W. A. Field has 30 acres of barley that has fully matured, some of the heads beginning to turn a golden color and the kernels being full and plump. He also has a hay field, a part of which is ready to harvest. We had a nice little shower on the night of the 14th. Everything is looking refreshed. Our late wheat was beginning to suffer somewhat and the rain is coming in good time. Our early grain is very healthy and has no appearance of any disease, although the late sown grain has something in the way of mildew. A little bug has also made its appearance in some fields, but not extensively. It does not appear to affect the main stalk, but works on the blade or leaf. This goes to show that farmers cannot put in their grain too early. I have noticed for the last five years that early sown grain has been the best crop, and yet our old settled farmers put off their seeding till late in the winter, when nine times out of ten the early grain will produce the best crop. The ground works better and easier, and the seeding can be done with more speed and less expense.

**BERRYESSA.**—**EDITORS PRESS:**—In Berryessa valley the acreage sown is equal, perhaps, if not superior to any former year. What summer-fallow there is in the valley bids fair to make a heavy yield of straw, but it is doubtful whether it will produce an average yield of grain. The early winter-sown promises a favorable yield, but the late-sown will make little or nothing. Taking the prospect upon the whole, I do not think we can count on an average crop of grain. The yield of hay will probably be a better average than the grain. There is an unusually large amount of corn planted in the valley. It is found to be a fine expedient for keeping summer-fallow clean, while it usually pays well in the amount of feed it produces for the labor performed, but it is doubtful about the yield this year. The past winter was favorable to stock, and stock generally has come through well and is in fine condition. Sheep never did better and the crop of lambs is unusually large.—OMEGA, Monticello, April 18.

## SACRAMENTO.

**DEEP BORING.**—*Record-Union*: The artesian well on the Norris grant, work upon which has been in progress for so long a time, has now attained a depth of 1,100 feet, the last 236 of which have been through continuous soapstone. The different strata through which the boring apparatus has passed would doubtless present interesting facts to a scientist, and at the present time Mr. Patton, the Superintendent of the ranch, would feel very kindly disposed toward any one who would give him information as to what is to follow this immense depth of soapstone, and how much further he will have to sink before passing through it. His theory is that it lies upon the bottom rock, and that he will strike the desired flow of water after passing through it. The work has been very tedious and worrying, but he still holds to his determination to keep on boring until he finds water or China.

## SAN BENITO.

**RAIN.**—*Advance*, April 21: Showers have fallen at intervals during the week. On Monday the rain poured down, accompanied with hail and the rattle of thunder, and the streets of Hollister became quite muddy. If showers continue, the feed will be kept alive, and the grain fields in some parts of the county furnish at least a fair quantum of hay.

## SAN DIEGO.

**CHERIMYA.**—*World*: We were shown by Dr. Winder, a fully developed Cherimya apple, grown on Mrs. Cout's ranch the Guajome. The tree on which this fruit is grown is said to be the only bearing tree of the kind in the State. The fruit is very delicious, resembling a custard very much. Our fruit raisers should make a note of this, and plant a supply of them.

## SAN JOAQUIN.

**THOROUGH CULTIVATION.**—*Independent*, April 18: Mr. Peter Baker, a farmer residing near Linden, yesterday exhibited samples of growing grain from a farm of his located seven miles

northwest of that place and near Grant school-house. The first was a sample of white Chile, four feet high, from a field of 320 acres summer-fallowed land, finely headed out, which he considers good for more than an average crop. The other is a sample of winter sown Proper wheat, from a field of 120 acres, the heads of which measure from five to seven inches, and which also promises well at present. Mr. Baker has great faith in summer-fallowing and believes it the only true way of farming. He dry plows most of the time, and about every third year plows as deep as he can with single plows. He believes that by this method he gets the best yield possible out of the ground, and that it is much more likely to give a good and uniform crop than by the more common mode of fall plowing and winter sowing. His almost uniform success, in wet as well as dry seasons, would seem certainly to be an example that might profitably be followed by others.

A FARMER on the black lands, near Stockton; remarked yesterday that he will lose this year at least \$10,000 by not having had the forethought and good judgment to summer-fallow his land.

## SAN LUIS OBISPO.

**A GOOD CROP.**—*Tribune*, April 21: We are informed by Mr. James Tracy, that his crops are in excellent condition. His barley, especially, is very good. He has a small patch of about 15 acres, which he assures us will yield three tons to the acre. He has the ground already prepared for 30 acres of potatoes, 10 of which he has already planted. This speaks well for the industry of Mr. Tracy, and did everyone cultivate as thoroughly as he, a dry year would not be looked upon as so terrible a calamity. His land is of a fine sandy loam, very susceptible of cultivation, and very retentive of moisture. But still he works his land right, and always prepares for the worst. Many farmers could improve by taking lessons from him.

## SANTA CLARA.

**FRUIT CROP.**—*Mercury*, April 21: It is a pleasing contemplation that the prospects for an abundant fruit harvest in this State were never brighter than at present. This is especially the case in Santa Clara valley, where the loss upon the grain crop would be severely felt were it not for the partial compensation which will be derived in the yield of fruit. With the additional product this year from the vines and orchards, and the greater facilities enjoyed by our canning establishments for the disposition of the crop, the increase will prove a double benefit to San Jose, and to the farmers of the valley. The fruit elsewhere in the State promises equally well, the grape crop being especially heavy, which nothing has yet appeared to raise any doubts as to the destruction of the vines.

## SANTA CRUZ.

**NOTES.**—*Courier*, April 20: The cloudy weather of last week was very favorable to crops. Light showers last Saturday night and Sunday and Monday mornings. A slight frost fell here last Monday night, but it was not severe enough to do any damage. Farmers are busy planting corn, potatoes and sugar beets in all sections of the county.

## SONOMA.

**A GOOD PROSPECT.**—*Democrat*, April 21: Unless some unusual calamity should happen to the crops before harvest time, a prosperous season is in store for the people of Sonoma county. At present, notwithstanding some complaints of mildew and rust, the probabilities are that a full average crop of grain will be raised. If no damage should result from the rust and mildew there will be an unusually large yield, from the fact that the acreage sown was greater than usual. The fruit crop generally bids fair to be a good one, and the vineyards promise a fair yield. There is now scarcely a doubt that the price of grain will be very remunerative. We believe farmers generally estimate that wheat will pay the producer at any figure above \$1.60. It is now selling at \$2.40 to \$2.50, and the probabilities are good that it will not fall much below that price. The bill passed by Congress authorizing the bonding of grape brandy without the prepayment of the tax will enable grape-growers to utilize the product of their vineyards, and the many fruit-driers established and being established in the county will enable fruit growers to dispose of their fruits at paying prices. As the farmer and vinticulturist and fruit grower prosper, so will all other vocations, callings and trades prosper; so, taking all things into consideration, we think the people of Sonoma county may congratulate themselves on their prospects for a year of general prosperity.

**ON RUSSIAN RIVER.**—*Flag*, April 19: It is a settled conclusion amongst the most of the farmers that the recent blight to the late sown grain was caused by the hot sun coming upon it just after a heavy rain early in March last. It is now recovering, however, and will come out all right.

## TULARE.

**MUSSEL SLOUGH.**—**EDITORS PRESS:**—The crop prospects are not very flattering in this part although some good crops will be made here. The weather is stormy and some light showers, and very cold. The water ditches are carrying some water from the river to the grain fields and every little helps. There have been a great many potatoes planted here this spring, and they are looking fine. The best thing for this part of the country is alfalfa, as it takes but little water to keep it a growing and the yield of hay or grass for stock is beyond all calculation.—W. UNDERWOOD, Lemoore, Cal.





### My Kingdom.

I am a king, whose kingdom  
Mayhap you have not seen,  
But it is the happiest country  
The north and south between.

My loving subjects greet me  
Each morning with a kiss,  
And in this happy kingdom  
No strife or discord is.

Home is this peaceful kingdom,  
And love the crown I wear.  
The kings of earth may envy,  
But none my throne may share.

With wife and children paying  
Their tribute kiss of love,  
I wonder how much better  
Is God's great home above.

Yes, home's the little kingdom  
Where I reign lovingly,  
And earth's mightiest kings and princes  
Are poor, compared with me.  
—Eben F. Rexford.

### Notes on Weddings.

What is of more interest in the "Home Circle" than the wedding? What can do better than give a few notes on weddings, which are reported to be in accordance with the best usage:

The invitations are issued by the bride's family, and usually take the form of printed notes wherein the guests' names only are written. The wording is, "Mr. and Mrs. White request the honor of Mr. and Mrs. Brown's company on Tuesday, April 2d, at half-past 11, to be present at the marriage of their daughter and Mr. Geo. Smith." These invitations are sent out a week or ten days before the wedding, and should always be answered at once.

If the bride have sisters, the eldest of them is the chief bridesmaid, and it is her duty to take the bride's bouquet and gloves when the service commences. If the bridegroom has a sister she forms the pair to the chief bridesmaid. The others follow in order, according to preconcerted arrangement. The mother of the bride follows the bridesmaids, and there should be a member of the family to escort her; generally it is her eldest son.

Immediately the ceremony is over the bridesmaids should distribute the favors, those for the ladies are small bows of white satin ribbon, tying a small spray of jessamine; those for the gentlemen a spray of oak leaves and acorns without ribbon. Those for the bridesmaids have usually some distinctive mark, frequently a spray of forget-me-not. Their bouquets are the gift of the bridegroom and are sent to them in the morning, as are also the lockets or other souvenir with which he presents them. He also presents the bride with her bouquet.

Wedding breakfasts are now very frequently arranged on the plan of a ball supper, with several round tables and a long buffet, where the majority of the company take their luncheon standing, the tables being appropriated to the relatives of the bridegroom and the principal guests. Often, however, the old custom of a sitting-down breakfast is adhered to, and if it is the wedding cake is placed in the center of the table and the bride and bridegroom take their places opposite to it. In the former plan, the cake is placed in the center of the buffet. When breakfast is announced the bride and bridegroom lead the way to the dining room, the bride's father follows with the bridegroom's mother, and seats himself next to his daughter, either in the center of the long table or at one of the small round ones. The bridegroom's father follows with the bride's mother and places her next to the bridegroom. Very frequently the bridesmaids all sit opposite to the bride, accompanied by the different gentlemen who have been desired by the hostess to take them down—the best man invariably taking the chief bridesmaid. The hostess, before breakfast is announced, tells the different gentlemen who they are to take, and they follow the principal couples in due order.

The bride cuts the cake (or rather puts the knife into it, as the real cutting is done by a servant), and it is incumbent on every one to eat a small piece for "good luck." When this ceremony is over she retires to change her dress. It should be arranged, if possible, that the departure of the happy couple should not be too long delayed, as it is considered a breach of good manners to leave before they do, and yet the guests become woefully tired of long waiting. The bride comes into the drawing room in her traveling dress to say "good-bye," and on the departure, white satin slippers and rice are generally thrown; the former by the best man and bridesmaids, the latter exclusively by the matrons. Cake and cards are not now sent to anyone. For three months after her re-appearance after the honeymoon the newly-married lady is considered a bride. She generally wears her wedding dress for these dinners, but the use of orange blossoms is confined to the wedding day. When the wedding is that of a widow, it differs

in several points. There are neither bridesmaids nor favors, and the lady cannot wear white, a bridal veil or orange flowers—violet, mauve or gray are the most usual colors, and she must wear a bouquet. When, however, a girl marries a widower there is no difference between the arrangements for her wedding and those which we have described at length.

### Physical Culture.

We had the pleasure, a short time ago, of listening to a lecture before the University students by Dr. Dio Lewis. It was a splendid effort, vigorous and vivacious and full of homethrusts of truth. It was a lecture which we wish every young man and woman in the State could hear. The reporter of the Oakland *Transcript* notes a few points made by the speaker as follows: On the subject of physical culture he said that he would make a book, a book of two leaves, that would be a complete and exhaustive treatise on the subject of walking. On the first page only "chin," the second, "clothes," the third to the fourth, "neck." He illustrated the force of the expression by assuming various attitudes, both ludicrous and sublime, and showing that which is the only way one can walk gracefully. He said he had never heard the word "queerly" applied to a woman's eyes, nose or mouth, but if a woman walked in a certain way, the word "queerly" rushes immediately to our minds—if not to our lips. "If," said he, "a young lady friend of mine was to leave me forever, and wanted one rule to guide her in after life, I would only say, 'sit erect'—don't, even in bed, pile three or four pillows under your head, and watch your toes all night. For young men the best gymnastic exercise that I know of, the best way to develop all the muscles of the body, is to take in your room a heavy weight, and when you have risen in the morning wear this weight upon your head for half an hour. This strengthens the muscles of the neck, which are nearly always weak, for if these are weak, it weakens the voice and the circulation of the brain. This exercise strengthens every muscle in the body—and teaches you the most graceful gait you can imagine. Increase your load as you get accustomed to the exercise. It will increase the roundness and compass of your chest.

Nothing so rounds the shoulders and narrows the chest as carrying muffs, and next is the habit of carrying the hands crossed in front of the body. The habit of carrying a shawl prevents the use of the arms in walking, and none can walk without using the arms. He said he wanted to diverge from the subject and say something about the pernicious habit of using tobacco. In Harvard for 41 years, although three out of four smoke, no smoker ever graduated at the head of his class. You cannot take any narcotic poison, particularly tobacco, without affecting the tone of the brain and nervous system. The greatest mistake a student can make is to use tobacco. The lecturer gave some good hits on the modern way of walking and general conduct of ladies, and showed the proper way of correcting such defects. The discourse was enthusiastically received and long applause followed its close.

CONSCIENCE.—Daniel Webster, in his speech at the trial of the murderers of Joseph White, of Salem, Mass., used the following words, not more distinguished for their eloquence than their truth: "The guilty soul cannot keep its own secret. It is false to itself; or, rather, it feels an irresistible impulse to be true to itself. It labors under its guilty possession and knows not what to do with it. The human heart was not made for the residence of such an inhabitant. It finds itself preyed upon by a torment which it dares not acknowledge to God or man. A vulture is devouring it, and it can ask no sympathy or assistance either from heaven or earth. The secret which the murderer possesses soon comes to possess him; and, like the evil spirits of which we read, it overcomes him and leads him whithersoever it will. He feels it beating at his heart, rising to his throat, and demanding disclosure. He thinks the whole world sees it in his face, reads it in his eyes, and almost hears its workings in the very silence of his thoughts. It has become his master. It betrays his discretion, it breaks down his courage, it conquers his prudence. When suspicious from without begin to embarrass him and the net of circumstances to entangle him the fatal secret struggles with greater violence to break forth."

FRIENDSHIP.—Friendship is the solder of hearts, the bond of spirits, the jewel of life, the charm of social intercourse, the mystic chain of sympathy, whose links, like the sweet influence which binds the stars, unites us at once to things the meanest and most remote. How exquisite is the pleasure springing from virtuous friendship with kindred souls, from the delights bestowed by an interchange of sentiment, by the flash of wit, the flow of reason and the flights of imagination. At these delightful moments it is—when mind, communicating with kindred mind, unfolds its hidden treasures of intellect, unlocks the sealed fountain of passion, breathes out at case its warmest aspirations, expands its noblest sympathy, and spreads around with lavish hand, the hoard of mental wealth and sensibility, which it reveals to no other earthly being—that man may truly be said to enjoy the most refined and elevated pleasure which his nature is at present susceptible of.

### "The Lawyer and the Farmer."

A sharp old Quaker who had read the story of the lawyer and the farmer and the gored ox, called upon a neighboring lawyer and said:

"Friend Foxcraft, I very much desire to ask thy opinion."

"I am all attention," replied the lawyer, putting down his pen.

"Supposing, friend Foxcraft, that my dog hath gone into the pantry and stolen a leg of thy mutton, worth one dollar; what ought I to do?"

"Pay for the mutton; nothing can be clearer."

"Exactly, friend Foxcraft; and now know thee, that thy dog, 'Pinchem,' whom I well know by sight, hath stolen a leg of mutton from my pantry, worth exactly one dollar, and now what art thou going to do?"

"Pay for the mutton, of course; here is the change."

The good Quaker took his dollar, and was about to depart, when he was stopped by the lawyer with:

"Hold on a moment, my friend; I have a little bill against you, which I hope you are ready to pay."

"Bill against me, friend Foxcraft? Thou art certainly laboring under a mistake. I am sure I owe no man a shilling."

"No mistake at all. I charge you my regular fee of five dollars, for professional advice in this case."

"Then verily I must pay thee; but allow me to give it as my opinion, friend Foxcraft, that I have touched pitch and been sadly defiled."

A PROVIDENT LOBSTER.—A striking instance of sagacity in a lobster is recorded by Mr. Barker, of the Rotherham aquarium. Three lobsters were placed in a tank previously occupied by flat fish, and in which, inadvertently, a flounder had been left buried in the shingle, where it died. One of the lobsters, "a veteran of unusual size," soon discovered the dead body of the flounder, and, dragging it from its resting-place, retired with it to a corner of the tank. Shortly afterward it was noticed that the flounder was missing. It was impossible that the lobster could have eaten it in the time, and the handle of a net revealed the fact that, upon the approach of the two lesser lobsters, he had buried the flounder beneath a heap of shingle, on which he now mounted guard. Five times within two hours was the flounder unearthed, and as often did the wily old lobster re-bury it with his huge claws, each time ascending the pile, and turning a bold front to his companions. This story shows conclusively what a vast amount of quenched intelligence may sometimes lie concealed in a salad.

DRESS REFORM.—Mrs. Hayes, before she left home in Columbus, promised a number of ladies, who expressed their dislike to the "full dress," or rather, "scant dress," worn by society leaders at the Capitol, that she would use her influence steadily in an opposite direction; and so we read of her costume at the first dinner tendered to the new President, as consisting of a plain silk, fastened at the throat with a knot of rare lace—with the suggestive, additional note that, in compliment to Mrs. Hayes, a prominent society queen wore a high-bodied dress. Some undefined undertone in the letters just received from Washington, reminds us of that letter of the first President, written to Mrs. Macaulay, in which he says: "Mrs. Washington's ideas coincide with my own as to simplicity of dress, and everything which can tend to support propriety of character without partaking of the follies of luxury and ostentation."

ERADICATING CONCEIT.—Humility has this consolation: it finds that the greatest minds have had the least conceit; that Shakespeare bent down from the imperial light of his intellect to be taught by a clown, to be informed by a milkmaid; that Socrates, in his celebrated voyage in search of knowledge, with his perpetual questions concerning the cause of things, found that knowledge in a workman's shop, which he could not find amongst the schools of the professors or philosophers; that Newton compared himself to a child, who, playing on the seashore, had picked up a shell hero and a stone there, and thought them pretty but knew of them no more. The bullet of steel is worn smooth and polished when it has passed through the gizzard of an ostrich. The most conceited young prig that ever lived will find his level when brought to the rude experience of the world.

MONEY VALUE IN HOME MAKING.—Professor Garfield, of the Michigan Agricultural College, says: "There is a money value in the making of a beautiful home that will pay a large interest upon the outlay, if the labor be reckoned at its highest value. You may not want to sell; but if you are a thrifty farmer and a business farmer you wish to know at the end of each year what are the profits of your business, and if you find there is not a very large bank account as the result of the year's work, there is a great satisfaction in knowing that your place has been improved in selling value a considerable percentage through the exhibition of tact and taste in making the premises attractive. The merchant in his invoice takes account of his samples and the contents of his show-window. Likewise the farmer should count in the embellishments of his home as a part of his capital stock."

### The Duty of a Woman to be a Lady.

Wildness is a thing which girls cannot afford. Delicacy is a thing which cannot be lost and found. No art can restore to the grape its bloom. Familiarity without love, without confidence, without regard, is destructive to all that makes woman exalting and ennobling.

"The world is wide, these things are small, They may be nothing, but they are all."

Nothing! It is the first duty of a woman to be a lady. Good breeding is good sense. Bad manners in woman is immorality. Awkwardness may be ineradicable. Bashfulness is constitutional. Ignorance of etiquette is the result of circumstances. All can be condoned, and do not banish man or woman from the amenities of their kind. But self-possessed, unshrinking and aggressive coarseness of demeanor may be reckoned as a State prison offence, and certainly merits that mild form of restraint called imprisonment for life. It is a shame for women to be lectured on their manners. It is a bitter shame that they need it. Women are the nannies of society. It is they to whom all mooted points should be referred. To be a lady is more than to be a prince. A lady is always in her right inalienably worthy of respect; to a lady prince and peasant alike bow. Do not be restrained; do not have impulses that need restraint; do not wish to dance with the prince unsought. Feel differently. Be such that you confer honor. Carry yourselves so loftily that men shall look up to you for reward, not at you in rebuke. The natural sentiment of man toward woman is reverence. He loses a large measure of grace when he is obliged to account her a being to be trained into propriety. A man's ideal is not wounded when a woman fails in worldly wisdom; but if in grace, in tact, in sentiment, in delicacy, in kindness, she should be found wanting, he receives an inward hurt. —Gail Hamilton.

WHAT THE BIRDS ACCOMPLISH.—The swallow, swift and night-hawk are the guardians of the atmosphere. They check the increase of insects that would otherwise overload it. Woodpeckers, creepers and chickadees are the guardians of the trunks of trees, warblers and fly-catchers protect the foliage, blackbirds, crows, thrushes, and larks, protect the surface of the soil, snipe and woodcocks protect the soil under the surface. Each tribe has its respective duties in the economy of nature, and it is an undoubted fact that if the birds were all swept off the face of the earth man could not live upon it; vegetation would wither and die; insects would become so numerous that no living thing could withstand their attacks. The wholesale destruction occasioned by grasshoppers, which have lately devastated the West, is undoubtedly caused by the thinning out of the birds, such as grouse, prairie-hens, etc., which feed upon them. The great and inestimable service done to the farmer, gardener, and florist by the birds is only becoming known by sad experience. Spare the birds and save your fruit; the little corn and fruit taken by them is more than compensated by the quantity of noxious insects they destroy. The long persecuted crow has been found by actual experience to do more good by the vast quantities of grubs and insects he devours, than in the few grains of corn he pulls up. He is one of the farmer's best friends.

NO COURTING IN THAT SCHOOL.—The drudgery of the school-room may drive the school-mistresses of England and Wisconsin into insanity and suicide, but the Canadian teachers thrive and grow fat on it. One of the big school-boys of the Dominion asked his teacher one night if he could escort her home from singing-school, but she politely declined the offer. He neglected his studies, ran away from school and put pins into his schoolmates. She finally lost patience and gave him a flogging. The boy told his father that the fair one whom he had courted had turned and whipped him. The indignant father sued the teacher and obtained a judgment for \$3.50, which she paid. The next morning she remarked to her scholars: "I have whipped a booby soundly, which pleasure cost only \$3.50. Now, if any others of my scholars are inclined to imitate him, they will have the kindness to step forward, receive the money and the flogging and then we will go on with our studies. I am here to instruct you, not to be courted." Nervousness will never kill off so plucky a school-mistress.

A HOME OF YOUR OWN.—An aged pastor was wont to say that he considered it an insult for a man to take his young wife to live in his father's house. He had known, he said, a dozen cases in as many years in a community of farmers, all of which ended unhappily. Aside from the wretched tempers bequeathed many of the children born in these unnatural surroundings, there were desertions, divorces and insanity. "You might have been saved all this had you gone to housekeeping when you married her," said a plain-spoken neighbor to the husband of an insane woman. When she began to improve she went to housekeeping; and now the happy, well wife prescribes "a home of her own" for a crazy woman who was circumstanced as she had been. Young husband, no matter how good or honored your parents are, heed Joshua Billings' homely advice: "Never go to live with the old folks; but if wust comes to wust, take the old folks home to live with you."



**TIGHT, TIGHTER, TIGHTEST.**—A Paris letter describes the height of folly, if not worse, to which fashionable costuming has attained. The "eel-skin" dress is now the great rage both in London and Paris. In the wildest days of the tie-back or pin-back mania, there never was seen such a tightness in the matter of skirt as now prevails. Whatever the paucity of folds in the pin-back in its frontier part, in the enormous exuberance of the pannier or bustle the balance was struck. But now, not only is the bustle a thing of horror, but even necessary underclothing is considered *de trop*. To lengthen the waist far beyond its natural proportions, a stiff webbing of elastic is fastened to the stays to the depth of half a foot; and to this, at first narrow skirts were buttoned. But even this is now abandoned for another scheme to acquire slenderness. Mrs. Swisshelm's much ridiculed chemiloon is in demand, and garments made in this way are sold at the furnishing shops, and patterns of it pass eagerly from hand to hand among lady friends. Some ladies have had regular stage tights made in thick webbing, and over these they wear nothing but the outer dress, underskirts being stimulated by plaited ruffles of white muslin, sewn to the edge of the dress, which is then tied back till the woman within is shackled almost like a convict in a chain-gang. No more uncomfortable fashion ever was devised; for not only are the limbs confined by the binding dress, but the wearer must constantly concern herself about the condition of the bodice, that portion being in incessant danger of turning itself up behind, wrong side out, like an umbrella in a wind-storm. The desired effect of youthful slenderness is generally obtained by the "eel-skin," but at a good deal of sacrifice of personal ease.

**ERRORS IN MARRIAGE.**—Many people think they have made a mistake in marriage, when the mistake is only in their own behavior since they were married. Good husbands make good wives, and good wives make good husbands; and the scolding, or intemperate, or slatternly partner often has but himself or herself to blame for the misery that clouds the life and desolates the home. Multitudes who feel that their marriage was a mistake and who make their existence a life-long misery, might, by a little self-denial, and patience, and forbearance, and gentleness, and old-time courtesy, make their home brighten like the gates of Eden, and bring back again the old love that blessed the happy golden days gone by. Suppose the wife does not know quite as much as you do; well, you showed your great judgment when you thought her chief among ten thousand! Or, if your husband is not the most wonderful man in the world, it simply illustrates the wit and wisdom of the young woman who once thought he was, and could not be convinced of the contrary! So, perhaps, you are not so unevenly mated after all; and if one has had better opportunities since marriage, then of course that one should teach, and cultivate and encourage the other, and so both journey on together.—*Hall's Health.*

**THE SORORIS ON DRESS.**—Among the resolutions on dress adopted by the Sororis at a recent meeting, were the following:

*Resolved,* That with but rare exceptions the dress of woman has been left too long in the hands of persons either ignorant or careless of the laws of health, and who have manufactured waists of torture and skirts of burden, and created of stuffs and silk female figures with but very slight resemblance to the free, graceful, natural woman, and have thereby corrupted the taste and impaired the good sense of far too many of the women of our own country.

*Resolved,* That women of science and art should instruct the milliner, the dressmaker, the hairmaker, the hairdresser, and the shoemaker how to design hats, dresses, and other articles of woman's dress so as not to endanger health, ease and grace.

**NO ACCOUNTING FOR TASTE.**—Mule steak and horse flesh are popular in Paris. The natives of Tonquin give their friends arrack in which snakes and scorpions have been infused. The Calmuc Tartars also feed on snakes, and the Syrians eat crocodiles. The inhabitants of Cochinchina prefer spoiled eggs to fresh ones, and locusts, raw and pickled, are a favorite Oriental dish. Caterpillars are a luxury in Africa, and Mungo Park says he became very fond of raw ants. The humbler classes of China are glad to get roasted rats with their rice, and the inhabitants of the South Pacific islands are still on the look-out for human toes and fingers.

**CHILDREN A SOURCE OF HEALTH.**—Some one has written, "Blessed is the hand that prepares a pleasure for a child, for there is no saying when and where it may bloom forth." This is very true. Great as are the cares a child imposes, if healthy and well born and bred, it pays its way from the very first. Wherever there are healthy children in a house, they shed a brightness, a cheer, a health-giving power that nothing else can. Heaven bless the children.

THERE is a healthy moralist living in Chicago who made his money in the milk business. He retired some years ago, and has since occupied his time giving struggling young men good advice. They seem to pick right up under it. "Don't be discouraged, boys," it is his fashion to remark, "you can't expect to get rich all at once. When things don't look cheerful like, think of me. Industry and honesty was all the capital I had, except a milk can and a water pail."



Our Reporter "On the Spot."

## Young Folks' Column.

### No Mamma.

"Jessie, Jessie, where are you?"  
No answer. But do you think Jessie didn't hear? O yes, she did, for she was in the spare room all the time mamma was calling. But she kept very quiet there in the middle of the big bed.

"I'll make believe I'm lost," she said to herself. "My mamma wouldn't let me go to the party because I had a cold and sneezed a little, and she always says she knows best; so I'll just show her I can take care of myself all alone, and I'll live here to-day and to-morrow, and do as I want to in every single thing." While mamma said: "My baby must be down in the kitchen, I guess," and she went on with her sewing.

Jessie had her two favorite dolls with her, a pussy cat, and all the playthings she thought necessary to bring to make up for having no mamma.

Well, things went on quite comfortably for a little while. The dollies had a ride in the cart twice around the room, and then Jessie put them all to sleep under the table. Now, this table had a lot of corners to it, and when Jessie tried to get up, bang went her head, and the first thing she said was, "mamma," while her little nose began to tingle just as yours does when you want to cry.

No mamma to kiss the place and make it well. No mamma to say, "I'm so sorry puss." O dear, O dear, no mamma at all to say anything.

"I wonder how soon it will to-morrow," she said to her pussy cat. But pussy was sound asleep in the sunlight and didn't answer. Then she made believe she was her own mamma, and said:

"Jessie, you mustn't sit on the bed, dear, because you'll rumple the nice bedclothes," and then she would say in a little different tone you know, "yes, I will, too," and go and jump right on the smooth pillows.

But somehow it wasn't very good fun this doing just as she wanted to and having no mamma, and Jessie went to the window to see if the sun was anywhere near Mr. Jackson's barn. When the sun went over Mr. Jackson's barn, Jessie always came up-stairs with mamma and went to bed. No, the sun was way up straight in the sky.

"It must be time for supper, anyway," said Jessie, and so she ate the piece of cracker she found in her pocket and looked around for something else to do.

She woke up her dolls and took them riding again, and played with pussy, and tried to think she was having a splendid time.

"I wonder if I could go down-stairs and just take a little peep at my mamma," she said. "I'll look through the crack of the door, and then come right back again." So she crept softly down-stairs to the sitting-room and walked on tiptoe to the door. There sat mamma, rocking away at the window, mending one of Jessie's aprons, which she had torn that very morning going through the hedge after buttercups. Just then mamma looked up at the clock:

"I wonder where my baby can be?" And what do you think! Jessie gave one spring and a jump, and was right in mamma's arms! She couldn't get along without mamma after all, you see, not even for one little hour, and she never wanted to try again, even if mamma did say "no" sometimes.—*New York Tribune, Jr.*

A PRECOCIOUS boy of eight summers attributes the death of a pet gold fish—his sister's idol—to the fact that he couldn't take a joke. By way of a joke he used to catch it with a bent pin.

A ST. LOUIS Sunday school boy gave his teacher this illustrative definition of "responsibility": "Boys has two s'penders so's to keep their pants up. When one button comes off, why, there's a good deal of responsibility on the other button."

LITTLE girl, (looking at old lady's jewelry).—"Please grannie, give me those earrings?" Grannie—"No, dear, I can't spare them now, but when I die all my rings and money will be yours." Little girl—"Well, grannie, but how soon will you die?"—*London Fun.*

## GOOD HEALTH.

### Sprains.

**EDITORS PRESS:**—An extract from *Hall's Journal of Health*, which appears in your paper on the subject of sprains and how to treat this ailment, brings out this correspondence from one who is not a graduated M. D., but has from his youth given considerable attention to the medical and healing art.

The method of treating sprains, as published, is some respects is well; but I would not advise the application of a stream of cold water to the affected parts, because cold applications often prove very injudicious and injurious to the wounded limb.

In bad cases of sprain about the ankle joints, where dead blood immediately settles, and, of course, swellings inevitable, the part becomes heated and this useless blood must somehow be removed. Hence we advise the patient to keep quiet, remove this collection, guard against fever in the parts, and then the patient is soon out of danger. An application of cold water may reduce a swelling, or relieve pain momentarily, but a reaction usually happens where the cold stimulants are thus applied. Soon after treatment blood centers in those parts which become overheated and dry, the tendons are stretched to their utmost capacity, while fevers and excruciating pains follow.

The patient does not recover until the swellings and pains are removed. Our practice of bathing the parts in water heated to 112° is highly beneficial, and as soon as removed from the bath wipe over, manipulate and dry quick. Then cover with flannel or other bandages, and repeat the process at least three times each day. The cold shower produces heat, while the warm bath and manipulation tends to remove the fever and pains.

Take leaves from the green bark or "striped maple" bush, or liberal slices of salt, fat pork, and bind on over the region of pain and swelling. Either application is highly recommended to sweat out the secretions and fever; it removes hard swellings and gathering or pustulation, if applied in season.

After the part has been immersed or showered, either with cold or hot water, it is more beneficial to dry off by the hand movement, passing down or outward. This will restore severe cases to strength and health.

S. W. JEWETT.

Bakersfield, Cal., April 17th, 1877.

**DRINK AND DISEASE.**—A recent number of the *Lancet* gives some curious calculations which have been made of the proportional amount devoted by the workmen of Birmingham to the support respectively of their liquor saloons and of their hospitals. The figures bear something like the ratio of 30 to one. Fifteen thousand dollars is contributed annually by them to the medical institutions of the town, and \$450,000 is spent in drink. The *Lancet* further asks: "What proportion does the contribution of the workmen bear to the total expenses of the hospitals? and what proportion of the work of these medical institutions is occasioned by the drink on which they spend so much?" Commenting on the state of the case, the writer says: "We remove every obstacle to as free a consumption of liquor as is consistent with the maintenance of equilibrium, and then, with a benevolent appropriateness, we provide hospitals in which the consequences of drink may be recovered from, or ameliorated." The corrective suggested for this state of affairs is, that the drink sold within a certain area should be so taxed as to defray the expenses of skilled treatment for those whom drink has incapacitated for their work.

**DOES MILK CURDLE IN THE STOMACH?**—The moment milk enters the human stomach the digestive fluids change it into curd. The cheesy part is separated from the whey, or watery part. We often hear mothers say when their infant vomits up curd, that their milk does not agree with it, that its stomach is sour and curdles the milk, and the curd is very hard. The truth is that the milk in the stomach always curdles before it digests. If it did not curdle it would prove that the stomach was weak. Those infants who are fed at regular intervals are less apt to overfeed than those who are fed at irregular periods. We have found that infants nursed at intervals of two hours are much more apt to suffer from indigestion. Some mothers may ask, why is human milk more digestible than cow's? The principal reasons are two: first, the amount of curd is greater in cow's milk; and second, the curd is harder, i. e., the casein from human milk is more porous, and is on this account more easily dissolved and digested.—*Herald of Health.*

**FRUIT FOR A SUMMER DIET.**—The *Herald of Health* makes the following timely remarks: "Now that the warm season of the year is at hand, it may be worth while to call the attention of our readers to the fact that, if they wish to keep well, they should add as much fruit to their daily food as possible. It will save doctors' bills, and, what is more important, much illness. Of course there are many who cannot, or think they cannot, eat fruit. The cause often is a spoiled stomach. In such cases it takes time and care to habituate this organ to the change, and sometimes it cannot be done at all. Leaving out such cases, we advise the liberal use of fruit from this time on, wherever it can be obtained."

## DOMESTIC ECONOMY.

### Milk-Made Desserts.

An entertaining writer in the *Colorado Farmer* has the following good words for milk as a factor in dessert making:

Among the many dishes of which milk is the standard material, none require it more than desserts. We are so fond of something, as the children would say, to leave a pleasant taste in the mouth, that our dinners do not seem complete without a concluding delicacy. Desserts add but a trifle to housekeeping expenses, especially those simply made of milk and eggs. With a little ingenuity one recipe may serve with variations for so many dishes.

Make a soft boiled custard, by using a pint of milk, the yolk of two eggs, two tablespoonfuls of sugar, and a teaspoonful of corn starch; slice three oranges and line the bottom of your pudding dish; flavor the custard with the juice and grated peel of one orange, (be careful to grate only the yellow part; the white skin is very bitter), turn the custard over the orange and bake 10 or 15 minutes. Beat the white of the two eggs with a tablespoonful of sugar, and spread on the top when the pudding is baked and let it brown slightly.

For another pudding slice four apples, and let them simmer in the oven with a little water till tender. Make a custard in the same way as before, pour over them, but flavor with lemon. Again put half a can of strawberries, peaches, or pine-apple in your pudding and you vary your pudding according to your fruit.

The remaining fruit in the can may be used another day, by making a corn starch pudding, according to the recipe on the package, adding the fruit while it is boiling, to be served either hot or cold, with cream and sugar, or a sauce. With berries it is nice to make a sauce of a cup of sugar, half a cup of butter rubbed to a cream, flavored with a teaspoonful of lemon and vanilla, two teaspoonfuls of vinegar. Then pour upon the mixture a tea cup full of berry-juice boiling hot. This same recipe with a cup full of juice from stewed prunes, makes a delicious sauce for a boiled pudding or roly-poly. Half a can of fruit is sufficient for a roly-poly. By using fruit in this way one can well make two desserts.

I will give one other standard recipe to be varied according to taste. Put half a package of gelatine in a cup of cold water and let it stand ten minutes, then pour on a cup of boiling water, stirring until thoroughly dissolved. Add a cup of cream or milk, two tablespoonfuls of sugar, and a cup of cold boiled coffee, and mold, to be eaten cold with cream and sugar. This is called coffee cream. For chocolate cream, make in the same way, but add instead of coffee a cup of grated chocolate boiled in a cup of milk. For orange cream add the juice and grated peel of one orange and the yolks of two eggs. For pine-apple cream, a few slices of pine-apple, a cup of juice and the yolks of two eggs.

Other fruits may be used in the same way.

### Coffee-Drinking.

How strong should coffee be taken? is an inquiry of much practical importance. How much should be taken at a meal? is scarcely of less moment. Coffee, like any other beverage, may wholly ruin the health; the very use of it tends to this ruin, as certainly as does the use of wine, cider, beer or any other unnatural, stimulating drink. There is only one safe plan of using coffee, and that is never, under any circumstances, except of an extraordinary character, exceed in quantity, frequency or strength; take only one cup at the regular meal, and of a given, unvarying strength. In this way it may be used every day for a lifetime, not only without injury but with greater advantage than an equal amount of cold water, and for the simple reason that nothing cold should be drank at a regular meal, except by persons in vigorous health.

One pound of the bean should make 60 cups of the very best coffee. If a man takes coffee for breakfast only, one pound should last him two months, or six pounds a year.

One pound of coffee should be made to last a family of 10 persons, young and old, one week. Put about two ounces of ground coffee in a quart of water, or rather divide the pound into seven portions, one for each breakfast in the week, and make a quart of coffee out of it, which will be 64 tablespoonfuls. Give the youngest two tablespoonfuls and the oldest a dozen; the remainder of the one cup being filled up with boiled milk. This will give a cup of coffee sufficiently strong for all healthful purposes, for the respective ages; and for various reasons, pecuniary as well as physical, some such systematic plan as this should be adopted in every family in the land. How to make the cup of good coffee? is a third question. It is perhaps as good and as easy a plan as any to buy the coffee in the grain, pick out those that are imperfect, wash it, parch as much as will last a day or two, with your eye upon it all the time until it is of a rich brown, with no approach of black about it. Grind only enough for the day's use; grind it fine, for the greater the surface exposed to the hot water the more of the essence you will have; pour the boiling water on the coffee, close it up, boil it 10 minutes, let it stand to clear 10 minutes, then use.—*Hall's Journal of Health.*





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4;  
six months, \$2.25; three months, \$1.25. Remittances by  
registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 5.00 14.00 40.00  
Four weeks are rated a month.

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. ROOSE

SAN FRANCISCO:

Saturday, April 28, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—The Society Islands; Refrigerator Shipments, 257. The Week; Notes on the Cereals; Opium Production, 264. What the University Can Do for the Agriculturist; Grass for Dry Sandy Soils; An Illinois Hay Barn; State Board of Agriculture, 265. No Answer; Patents and Inventions; Notices of Recent Patents, 268.

**ILLUSTRATIONS.**—Views of the Society Islands, 257. An Illinois Hay Barn with Hay Carrier, 265.

**CORRESPONDENCE.**—The Foothill Beauties; Huggins' Nut and Fruit Ranch, 258.

**HORTICULTURE.**—The Fruit Drier Discussion; Production of Oranges, 258.

**SHEEP AND WOOL.**—Shearing and Selling Mohair, 258-59.

**POULTRY YARD.**—Plymouth Rocks—Treatment for Lice and Mites; Poultry and its Value; Common Fowls as Layers, 259.

**THE STOCK YARD.**—Testimony against Bermuda Grass; Cure for Rot, 259.

**THE VINEYARD.**—The Latest French Treatment for Phylloxera; Antidote for Oidium on Grapevines, 259.

**PATRONS OF HUSBANDRY.**—International Co-Operation; Stanislaus County Pomona Grange; Friedlander; Denunciation of Fair Abuses; New Grange in San Diego County; Stockton Grange and the Primaries; Finance at Golden Gate Grange; Election of Officers, 260.

**AGRICULTURAL NOTES** from the various counties in California, 261.

**HOME CIRCLE.**—My Kingdom (Poetry); Notes on Weddings; Physical Culture; Conscience; Friendship; "The Lawyer and the Farmer;" A Provident Lobster; Dress Reform; Eradicating Concedit; Money Value in Home Making; The Duty of a Woman to be a Lady; What the Birds Accomplish; No Courting in the School; A Home of Your Own, 262. Tight, Tighter, Tightest; Errors in Marriage; The Sorosis of Dress; No Accounting for Taste; Children a Source of Health, 263.

**YOUNG FOLKS' COLUMN.**—No Mamma, 263.

**GOOD HEALTH.**—Sprains; Drink and Disease; Does Milk Curdle in the Stomach? Fruit for a Summer Diet, 263.

**DOMESTIC ECONOMY.**—Milk-Made Desserts; Coffee-Drinking, 263.

**THE DAIRY.**—Butter Making; A New Agent in Dairying, 266.

**QUERIES AND REPLIES.**—Our Books on Insects, 264.

**GENERAL NEWS ITEMS** on page 268 and other pages.

**MISCELLANEOUS.**—Agricultural Survey—Soil Analysis; Effect of Sunlight on Flour; Making Wood Stronger, 266. New Laws for Homestead Entries, 268.

## NEW ADVERTISEMENTS.

American Fruit Drier, J. M. Keeler, S. F.; The Sluthour Pump, J. M. Keeler, S. F.; Superior Pianos for the People at Popular Prices.

## The Week.

Their is full of stirring notes. Russia has made her formal declaration of war against the Turks and her armies are moving rapidly. Already certain districts are declared in a state of siege, and all the dread machinery of grim visaged war is being called into requisition. Our Eastern gun and powder-makers are turning out their deadliest materials by the ton, under contract from the contending Powers. The United States are neutral, but it is our right to sell the most dangerous materials to either side which will assume the risk of transporting them. While we shall thus contribute to the bloodshed of the struggle it is consoling to think that we shall also do a merciful work by furnishing food to the thousands of poor Europeans who will find their homes and lands devastated by the encroachments of hostile armies. This will be greatly to our profit. And as the occasion is one which we have no share in inducing, the profit will be simply an honorable advantage to our producers. The effect of the war declaration is all that has been expected from it. As we go to press the declaration is but 12 hours old, and yet the price of breadstuffs has advanced 12% in all the markets of the world from which we have telegraphic advices, and the end is not yet.

As the sounds of war come, we can but think again of our own peace and sunshine. As we have walked in the full light of our golden days and silvery nights, during the past week, we have thought and thought again of the darkness of the English spring-time of the year. Thus we read in an English exchange: "The sun was above the horizon in London 55.2 hours last week, and the number of hours of sunshine registered at the Royal Observatory was 26.7. The longest duration of sunshine was on Friday (6.5 hours) and on Sunday (6.3 hours). On two days (Tuesday and Wednesday) there was none." Blessed, indeed, is California—the land of sunlight.

## Notes on the Cereals.

The days are bringing to light many interesting notes on the grains relating both to the production and the marketing. Although it is as yet too early to fix with any certainty an estimate of what will be the aggregate of any of our crops which are now approaching the harvesting, there are other matters which are worthy of mention.

Wheat has sold in this city during the week as high as \$2.70 per cental for the choicest milling. To show the relations of this price to those which have prevailed at this time in former years we review our record of the San Francisco market for the last 13 years. The highest prices during these years have been as follows:

1864.....\$2 50	1869.....\$1 77	1874.....\$2 00
1865.....5 25	1870.....1 95	1875.....1 65
1866.....2 25	1871.....2 85	1876.....1 90
1867.....2 24	1872.....2 05	1877.....2 70
1868.....2 70	1873.....1 90	

It is quite evident that this is going to be one of the exceptional years, so far as price is concerned. The war in the East has now practically commenced, for the armies of Russia and Turkey are in motion, and if peace gains a victory now it will have to show exceeding power. Just at this time, too, the English short supply is becoming more and more apparent, and the cutting off all shipments from Southern Russia will aggravate her condition severely. Upon the head of this hardship for English consumers there comes a most unfavorable season for putting in the home crop of spring sown cereals. The outlook for the English purchaser is black both with clouds of war and weather. Such is the outlook for price, and high rates seem the plain deduction from the facts. America will be the granary of Europe for the coming harvest, at least. Our neighbors across the mountains are now rejoicing in their harvest's promise. The combatants are setting at work the Eastern manufacturing establishments by their immense orders for war material, and the blackening of the European horizon bids fair to turn the sunshine of prosperity upon our Eastern States. They deserve the dispensation, for their times have been hard for the last few years.

The outlook for crops in this State have materially improved during the last few weeks. The spring showers have induced a large planting of corn in several counties, and the root crops and corn fodder will supplement the hay and green feed which has been itself augmented by the late rains. The outlook for wheat yield has also improved on the whole. It is true that in some parts where the moisture for full heads was expected it has not come, but strength and health in the grain fields which were diseased has been notably increased. The infliction of mildew has proved itself a very mild evil as we promised from our first study of it. The observation of the last few days has shown clearly that the wheat plant, when it has a fair show for growth and strength can throw off such an affliction and triumph over other deprivations. It is appearing more clearly than ever before that the safe way to grow grain is to give it thorough culture and a good long growing season. The universal verdict from the grain counties is, that the summer-fallow and early-sown grain is doing nobly while the slighted and late-sown is drying and parching under the sun and winds. We hope the lesson will be well remembered and enter into this fall's practice. Many fields will have had a forced rest and will have had the benefit of the working which a lack of other work enables the owners to give them. They will be in splendid condition for early treatment as soon as the season opens in the coming autumn, and, where local peculiarity of soil formation does not prevent, there will be money in working deep and thoroughly. It is but reasonable to expect two things of advantage to our farmers during the next growing season. First, that we shall have abundant water to work with, and second, that the chances for profitable sale of cereals abroad will be exceeding good. The war which is commencing promises to be no boys' play. It is quite as likely to spoil two Russian harvests as one and to call for two years' food for those who are producing nothing. The waste of war is not rapidly filled.

While we are writing of European production we are reminded of some very interesting facts which have come to us in our foreign mails during the week. It may be remembered that in pursuance of a resolution passed by the International Congress of the Hague in 1869, and confirmed in 1872 at the St. Petersburg Congress, France was charged with drawing up a return of the total production of cereals of Europe. The work was confided to the Statistical Department of the Ministry of Agriculture and Commerce, and the results of its long and arduous labors are now made public. We gain information of them through the columns of the *English Agricultural Economist*. It appears that the total cereal production of Europe amounts at present to 2,686,750,000 quarters per annum. Of this, Russia furnishes about one-third of the whole; Germany, 92,812,000 qrs.; France, 83,937,500 qrs.; and Austria, 68,750,000 qrs. The cereal produce of America is put down at 192,156,250 quarters. To understand the importance of these figures it is necessary to make a few comparisons. Thus, while America, with 40,000,000 population, produces 192,156,250 quarters of cereals, or about 38 bushels per head,

Europe with a population of 297,000,000 produces only 161 bushels per head. The following table gives the amount of cereals per inhabitant, produced by the various States of Europe:

	Bushels.		Bushels.
Roumania.....	30.06	Ireland.....	12.65
Denmark.....	32.45	Turkey.....	12.66
Russia.....	22.27	Finland.....	12.01
Prussia.....	22	Great Britain.....	11.55
France.....	18.00	Saxony.....	10.45
Hungary.....	18.07	Servia.....	10.45
Bavaria.....	17.87	Holland.....	8.98
Sweden.....	15.12	Norway.....	8.52
German Duchies.....	14.02	Greece.....	8.52
Belgium.....	13.47	Italy.....	7.07
Spain.....	13.47	Portugal.....	7.07
Austria.....	12.92	Switzerland.....	5.77
Wurtemberg.....	12.92		

Now, as according to the most moderate estimates the average quantity of cereals necessary for the consumption of each inhabitant is 15.12 bushels per annum, it results from the above returns that all those States which come after the German Duchies are obliged to have recourse to foreign importation. From this it may be seen how marked upon our markets must be the effect of any movement in Europe which closes the already very inadequate sources of cereal supplies.

## Opium Production.

We had a conversation recently with Dr. A. Meads Edwards, who has lately come to this State from New York city. We have known Dr. Edwards for a long time through his scientific literary work. He is one of the foremost microscopic investigators and writers on microscopic subjects in the country. One of his objects in coming to this State was to investigate the ventures which had been made in the production of opium, and to engage in it himself. To the study of poppies, the resulting opium and its products Dr. Edwards has given much time and travel. He brought with him considerable quantities of the seeds of the varieties he found best in his investigations, and was engaged to associate himself with parties in one of the southern counties to begin the work at once. The lack of water in the proposed location made these arrangements impossible, and the last time we saw the Doctor he had not made arrangements with other parties, although he was ready to join with anyone who had land in a favorable location and would undertake to cultivate the crop. Dr. Edwards is possessed of the highest skill in handling the opium, as to getting out the morphia and other points, and we hope he may be able to give his enterprise a thorough trial in this State.

We notice by our exchanges that there is renewed interest and experiment in this crop springing up at the East. We read in the *Reading, Pa., Eagle* as follows: "Dr. John Stephen will commence this spring, at his residence on Calvindale farm, in Tulpehocken township, the cultivation of the poppy (*Papaver somniferum*), which is the species cultivated in Turkey, India, and some portions of this country, for medicinal purposes. If found as profitable as in the New England States he will go into its cultivation quite extensively. Opium comes principally from Turkey, and is becoming an important industry in Vermont and some of the other New England States. Latterly agriculturists have begun growing it in New York State and California. The average crop is about 20 to 30 pounds to the acre in the United States, and it is at present worth from \$7 to \$8 a pound. The specimens of opium raised in this country yield as large a percentage of morphia as the average of opium from India. The growers who have cultivated the poppy in this country say they can get more money from one acre of land planted with poppy than from three acres with any of our usual field crops."

We have, upon former occasions, noted the experiments made in this State. Last year there was opium produced in Merced and Mendocino counties, but we are not informed what disposition was made of the product in the market. We believe that whatever failures there have been heretofore have been owing to lack of skill in preparing the product so that manufacturing druggists would use it. We trust the question will be soon solved by establishing the fact that the California grown opium has the proper percentage of morphia, and an enterprise built up which will present the product in marketable form.

The field which is now open for the production of opium in new localities is broadened by the fact that the Persians find they must restrict their poppy area so as to make themselves independent by producing more of the necessities of life. It appears from a statement made in the *Journal of the Society of Arts*, that a few years ago, the profits of the opium trade having attracted the attention of the Persians, almost all available or suitable ground in Yezd, Ispahan and elsewhere, was utilized for the cultivation of opium, to the exclusion of all cereals and other produce. It was then supposed by some that the opium cultivation would be indefinitely extended in Persia. But circumstances eventually showed that such could not be the case. The attempt of the natives to enrich themselves by cultivation and growth of a profitable article of trade, and their neglect to provide for the necessities of life, combined with drouth and other circumstances, resulted in the famine of 1871-72. The costly experience then gained has made the Persians more careful and provident, and they are now using only a limited space for the cultivation of opium.

## QUERIES AND REPLIES.

### Our Books on Insects.

Several of our correspondents, expressing an interest in the notes which we have made, during the last few months, on the insects which have been sent us for identification, have asked what books we would recommend to those who desire to study entomology, with a view to the identification of the insects which they find upon their trees, flowers, and plants generally. We comply with the request cheerfully, because we believe that the result of the contest with injurious insects, which is now fairly beginning in this State, will depend upon whether our agriculturists and horticulturists arm themselves with a knowledge of the pests which threaten their industry, and the means for their destruction, or whether they quietly submit to their encroachments. The study of insects is one in which we take a deep interest, both for the wonderful forms and transformations which we see with and without the microscope, and for the practical importance and value which pertains to the study for the reason we have named.

The study of entomology will amount to little unless it partake both of book work and field work. The writings of the skilled entomologist must be consulted in connection with collection of insects and study of them. To attain anything like a satisfactory understanding of the science, this study must be systematic. The classification of insects is made upon certain observable forms and organs, and the study must be of these parts and their sometimes minute differences. The insect must be analyzed as a careful botanist analyzes a flower. We would advise all our younger readers, who have any taste for observation of natural phenomena, to take up entomology, believing that thereby they may interest and improve themselves, and contribute much to the general good by their observations.

To our older readers, or to those who have neither the time nor the inclination to pursue the subject systematically, there is much to be gained from the study of the special works which have been written concerning insects which prey upon trees, plants, etc. We shall select, from the books which we use for reference, two or three which we can recommend to our readers according to their needs.

As an aid to those who desire to make a thorough and careful study of insect life there is no better book than "Packard's Guide to the Study of Insects." It is a large 8 vo. volume of 715 pages, illustrated with 15 plates and 670 wood cuts, which increase the value of the work a hundred fold, because of the service they render in the illustration of the text. Prof. Packard, the author, is one of our best entomologists and is a member of the Commission lately appointed by the Government for the investigation of the grasshopper visitations in the prairie States. Prof. Packard's design in his "Guide" is to teach the beginner the elements of entomology, and to serve as a guide to the more elaborate treatise and memoirs which the advanced student may wish to consult. To this end the author pursues the subject systematically, describing the insect in all its parts, and then taking up the classification with definition of the characteristics of the genera and species. To make the work of especial value to agricultural students the author has made special note of the injurious insects. The publishers of the book are Henry Holt & Co., of New York city, and it is sent post free for \$5.

To those who desire special information concerning insects which prey upon crops, trees, etc., we recommend "Harris's Insects Injurious to Vegetation." This is a standard work in its branch of science and we find it of constant value. It has an introduction which deals with the classification of insects and explanation of terms, etc. Dr. Harris was State Entomologist of Massachusetts and his labors were of incalculable value to the State, and are now reproducing their value throughout the whole country. The agriculturist will find fully described nearly all of the insects which devastate his fields, orchards, etc., because we are gaining most of our injurious insects by importation from Eastern sources. This work, well studied will forewarn the farmer and teach him ways to meet his foes. It is fully illustrated, excellent engravings being made of the leading pests. The publishers are the "Orange Judd Company," of New York city, and price, post free, is \$4.

Another book, smaller than the foregoing and excellent within the limits it places upon itself, is "Half Hours with Insects," by Prof. Packard, author of Packard's "Guide." It is the most recently written of the books we have named, and contains some notes of later discovery than the others. The book is divided into the following parts: Insects of the garden, the plant-house, the pond and stream, the field, the forest, the apple tree, together with chapters on edible insects, insects as mimics, as architects and other special themes. It is excellently written and contains much information of popular interest. The illustrations are beautiful and numerous. The publishers are Estes & Lauriat, Boston, Mass., and the book is sent post free for \$2.50.



### What the University Can Do for the Agriculturist.

We have a word or two to say of the practical value which the University can contribute to the agriculture of the State. We do not propose to enter upon the educational question; that is now under consideration by a competent committee and we shall await their conclusions. The point which we would now impress is the possible value of the University, its Faculty and its laboratories, as a means for ascertaining and publishing experimental truths concerning the fitness of our soil for certain crops and the wisdom or folly of our present agricultural practice. We would remark upon the value of the University as an institution for pursuing valuable agricultural investigations which the individual agriculturist has not the time to pursue for himself, and for the scientific investigation of points which the practicing farmers have not the appliances for determination.

We print upon another page this week a description of a plan adopted by the agricultural department of the University for the systematic examination of the soils of the State and a report on their characteristics and adaptations. This is, of course, a basis upon which all subsequent investigation of special products and special methods of cultivation must rest. It is a work in which the farmers of the State are invited to co-operate, and by which each one can secure scientific examination of the materials with which he is working, and at the same time contribute to the general description of the soils of the State which will be the result of the full development of the project. We ask from all a careful study of the points which Prof. Hilgard sets forth.

Now, in addition to this general information concerning the soil of our State, we are at this time in great need of experimental knowledge of the crops which will thrive upon this soil under the different conditions which prevail. We want to know exactly the results of different methods of culture for the production of the cereals. We need to know what we can do to improve our pastures and what new growths we can introduce for the production of large quantities of fodder for cattle and sheep. We want a group of fodder plants for our dry plains and uplands. We need to know the adaptations of our State for the production of special crops, like tea, coffee, cinchona, ginger root, upland and low-land rice, and a dozen others which we might mention. All these things are beyond the time of the working farmers to investigate, and yet the experiments with them, by those whose time is devoted to such work, would determine whether there is anything in them which would be of practical value to our agriculturists. It would, of course, be impossible to make all experiments on the University grounds, for not all conditions are there represented; but if we had a well equipped investigating center, we think it would not be difficult to organize a score of tributary stations, under the charge of farmers' clubs and Granges which would carry on the work and furnish the results so that they could be promulgated by the department at the University. This could all be accomplished by the co-operation of the farmers in their support of their local experimental grounds and in sympathy of effort with the University.

We are well aware that to call upon the University to undertake any wide experimental work under its present condition of finances, is very like Pharaoh's command to the Israelites to make bricks without straw; and yet the needs of the agriculturist in the experimental direction are plain to see. Who will put a financial shoulder to the wheel and put the University in a position to begin this needed work briskly and widely? Where are our wealthy men whose pockets are heavy with material for endowments and who wish to do a good work for the State and for the upbuilding of our splendid agricultural interests? Money enough is expended in unproductive magnificence every day to build up for us one of the grandest experimental departments in the world. Money enough is lost in official disgraces every few years to accomplish the same results. Why should we longer lack a fund for the securing of knowledge which we sorely need for our industrial advancement.

The latest advance in the way of agricultural experiment for public benefit, is in the State of Connecticut, where a station has been fully equipped and has already gained the fullest co-operation of the farmers and is doing useful work for them. If in old Connecticut, where generations of farmers have labored and do not yet understand the conditions under which they work and the agents they employ, there is need for public investigation and experiments for the public information, what is the need here, where a single generation has not finished its work, and where the capabilities of the soil and climate are altogether beyond our understanding of them? And what are we doing to possess ourselves of this knowledge? We are working with the most enlightened and progressive farm-

ing population of any State in the Union, and each year new agricultural triumphs are being attained. We are extending our production and our commerce by sending new products to new markets. This is good. But there are questions continually arising which no man can answer because the answer must be sought for by most careful investigation and experiment. What are we doing as a State to bestow upon our grand agricultural interest the benefits of a scientific investigation of the thousand questions which arise concerning the true practice under our new conditions?

### Grass for Dry Sandy Soils.

EDITORS PRESS:—Can you or any of the readers of the RURAL PRESS tell me if there is any kind of grass that will grow on dry sandy land tall enough to mow, and, if there is, what time in the year is best to sow it.—JAMES MOFFITT, Summit, Cal.

We know of good results with perennial ryegrass in such situations. It holds its fresh green when other grasses fail, and starts briskly after a rain. The time to sow depends upon the time of the rainfall, for we do not suppose our querist has reference to absolute desert sands. The seed should be put in the ground at the beginning of the rainy time, so that growth may be gained and rooting enough to withstand the drouth. In the case of desert sand we can prescribe nothing which will give satisfactory results without irrigation. This subject of forage growth upon dry sands is one which many of our readers are thinking of and experimenting with. We trust they will inform us of their new experiences, whether they be successes or failures. Thus, by comparing results, perhaps the problem may be solved.

A HIGH COMPLIMENT.—We have received a compliment which we prize very highly, because we know that the friend who sends it is at the same time one of the most practical and progressive of English agriculturists. Mr. J. P. Sheldon, of Sheen, [Ashbourne,] Derbyshire,



AN ILLINOIS HAY BARN WITH HAY CARRIER

England, has been reading the RURAL PRESS for the last six months, and this is what he thinks of it: "I consider the RURAL PRESS the best of the American agricultural papers that I have had. It is certainly a well-edited and well-printed paper, and I am much pleased to read it." Mr. Sheldon has been appointed to prepare for the journal of the Royal Agricultural Society of England a report on the American meat trade, and asks us for information on this subject from our coast. We hope to have the pleasure of furnishing him with the points, through the PRESS, in a short time.

SALE OF JERSEY CATTLE.—A herd of thoroughbred Jersey cattle, from the farm of A. Malliard, of Marin county, was offered at auction in this city Thursday, by Crego & Bowley, at Saxe's stock yards. The attendance was good, but buyers were few and the prices correspondingly low. Some of the choice animals were not sold. "Annie," a two-year-old fawn, was bought by Harry Pierce, of Marin county, for \$205. Charles Mayne bought "Delfield," a five-year-old solid fawn, for \$150, and W. W. Grey, of Oakland, was the purchaser of "Bessie," a two-year-old, for \$115. James McM. Shafter bought "Abbess," solid orange, three-year-old, for \$95, and "Lady Blanche," two-year-old, gray and fawn, for \$85. "Janet," fawn and grey, two-year-old, was taken by Henry Pierce for \$130.

PERSONAL.—We have had a call from one of our Healdsburg readers, Mr. A. Bouton. He reports the feeling good among the farmers of his county. There is, however, some anxiety expressed for some more good showers to bring up the late stuff a little. Mr. Bouton says the fruit crop is coming on well because of the absence of frosts, but he does not expect very large amounts of some kinds of fruit because this is the off year. An item of interest in the neighborhood is the fact that the cut worms have taken to the vines and are doing some injury on the lower lands. Mr. Bouton has found that plowing the earth away from the vines is effective in restricting their work. Frequent stirring of the soil and exposure of the worms to sunlight does not accord with their ideas of life.

### An Illinois Hay Barn.

We give on this page an engraving showing the hay barn of Abner Strawn, of Ottawa, Ill., partly with an idea of showing a well proportioned structure for the purpose, and also to give our readers information of a new style of arrangement for unloading and moving away hay by horse power. So much of our hay in this State is pressed in the field, both for ease of movement and convenience of handling, that we have not the same need for hay carriers as in the East, where most of the hay not intended for shipment is put away in bulk; and yet the subject is not without interest. The carrier shown in the engraving is called the "Champion," and is the invention of J. E. Porter, of Ottawa, Ill. The following claims for the apparatus are put forth by the manufacturer and inventor:

It will do the work of three or four men in a barn. It is perfectly simple in its construction, is easily and cheaply put up, and can be used either on derrick, in the field or in barn, and actually reduces the labor of stacking or moving hay more than one-half. It is so constructed that it may be taken off the rod or wire cable without removing the track from the derrick or barn, thus enabling the owner to use it either in the barn or field. Any good horse fork can be used in connection with it. The Champion is much better than any carrier that slides or travels on a wood track; it can be put up much cheaper and never gets out of order; the rod costs much less than wood, and when you count all the extra hooks and cross-pieces on your rafter, say nothing of the time it takes to erect your staging and platform when you put up your wood track. When your track is once up, your work is done; no watching or repairing bolts, as is the case with the wood tracks. A

hay carrier is a labor-saving machine all will admit, and that it is a great deal better to have a horse do your work than to injure your health by pitching hay in a tight barn. The Champion is the only carrier that travels on an iron rod or cable wire for a track, which is the simplest and cheapest yet offered to the public. With the Champion you can remove hay from the mow without changing. It works as perfect in loading as it does to unload.

RATES FOR GRAIN THRESHING.—We notice that some of the threshers men of Contra Costa county are discussing the prices which they should receive for threshing this harvest. They announce that the competition which has prevailed during the late years has brought the price of threshing below the actual cost of the work and the interest on the capital invested in the machinery. The rate which has ruled in that part of the State has been 11 cents per cth. At the meeting to which we refer, and which was held at Antioch, two detailed statements were made. One showed that the owner was running the machine at a loss of \$1.66 per day, and the other at a loss of \$6.93 per day. The reason was set forth to be the competition among the machines. Other meetings will be held and we may have some remarks to make on the subject when their character shall be announced.

OLD NEVADANS.—We have received a card announcing the second re-union of "Old Nevadans," at Badger's park, Oakland, on Saturday, June 9th. The occasion will doubtless be very enjoyable to all of old Nevada memory. Full particulars concerning the re-union can be gained on application to the Secretary, C. C. Leavitt, at the Custom House, San Francisco, or P. O. box 987, San Francisco.

ON FILE.—"Paradise Valley, Nevada," A. C. K.; "The Best Layers," M. E., Jr.; "The Fruit Drier Controversy," G.; "Items from Tuolumne," J. T.; "Items from Santa Barbara County," J. W. J.W.; "In Memoriam," Yolo Grange.

### State Board of Agriculture.

The Record-Union gives the following report of the recent meeting of the State Board of Agriculture: The State Board of Agriculture met Thursday evening at the pavilion. Present, President Biggs, Directors Green, Boruck, Coleman, Perkins, Hamilton, Shippee and Secretary Beck. The President presented a letter from the President of the Cattle Breeders' Association, as follows:

You doubtless have seen the report of the proceedings of the Thoroughbred Cattle Breeders' Association, held on the 4th inst. at San Francisco. I have tried very hard for the last two years to reconcile the differences that have heretofore existed between breeders of this State, and there is now but one thing in the way to accomplish the result, and that is the exhibition of cattle at the State fair. We, as a society, have asked the State Board to grant the exhibitors of cattle permission to exhibit before the grand stand and to have the awards made known at the time by tying on the ribbons. This was complied with last year, but we asked for two more things. One was to do away with the daily parade. The breeders are willing to make two parades during the fair. The other is to take off the 10% entry fee on sweepstakes. Now I am satisfied that you are willing to do everything in your power to reconcile these matters and have a grand exhibition at the fair this fall. The breeders will all exhibit and make the fair a success if the above requests are granted. Very truly yours, CYRUS JONES.

The letter was considered, and that portion requesting the daily parade to be waived was complied with, on motion and vote had, the parade to be had to be conducted under the direction of the officers of the Society. The request to abolish the 10% entrance on sweepstakes was declined, the Board holding that it could not comply with the request, offer the premiums which it does, and present uniformity of the entry system.

The Printing Committee reported the premium lists printed, and presented the books to the Board.

At this point in the proceedings Director Byrle appeared and took his seat.

The question of letting the pool-stand for the fall races came up, and R. S. Covey made a statement to the Board relative to the matter. The matter was discussed and a motion prevailed to let the privilege to Killip & Co. for \$3,000 in gold.

On motion the Board ordered that the Society offer a purse of \$250 to be added to the inside stake, free to all two-year-old fillies, three-quarter mile dash; \$50 entrance; \$25 forfeit. Entries to close June 1st. Also a purse of \$300 to be added to the inside stake, free for all two-year-old horse colts, dash of one mile; entrance, \$50; \$25 forfeit. Entries to close June 1st.

The Board discussed the question of giving a large purse for a four-mile race on the last day of the fair, to encourage the breeding of animals with bottom, as well as speed, and the conclusion reached was that it would be advisable to arrange for such, and the matter was left to the Committee on Speed Programme, which the President appointed as follows: George A. Johnson, San Diego; L. U. Shippee, Stockton, Christopher U. Green, Sacramento; and the Secretary.

On motion the President was added to the committee.

The committee on the arrangements of the park reported progress and was granted further time.

The Board ordered that on the park grounds no fire or cooking be allowed, except in the main building.

The Board authorized its President to confer with the President of the Cattle Breeders' Association with regard to harmonizing any conflicting interests between the associations.

The matter of the request of the lessee of the park for a reduction of rent was taken up and laid over until the next meeting, June 2d.

The Board passed a resolution inviting Prof. George Davidson to deliver an address on the subject of irrigation, on the evening of the fourth day of the fair.

The Board then adjourned to June 2d, at 3 o'clock P. M.

A NEW FRUIT SHIPPING COMPANY.—The Call says: "The newly organized Western Refrigerator Car Company, of San Francisco has elected the following officers: A. T. Spotts, President, Robert Williamson, Vice President; Bank of California, Treasurer; Bernard Lane, Secretary. Two cars belonging to the company, may be seen at the railroad depot, on Townsend street. They differ somewhat from those used by the Grangers. The shell of the car is about six inches thick. Then there is an inch of felt lining, and, in addition, a four-inch padding of charcoal and an inner envelope of galvanized iron. The ventilation is through the roof, and it can be regulated at will. The ice-box is suspended and so arranged that air cannot enter to thaw the contents. Each chest has a capacity of one ton, enough for four days' service, and the temperature maintained ranges from 34° to 40°. One of the cars, grape-laden, was dispatched from Sacramento on the 27th of October last, and arrived in St. Louis, its destination, on the 2d of November. Some of the fruit was allowed to remain in the car until December 7th, and when taken out was in as good condition as if newly taken from the vine."



## THE DAIRY.

### Butter Making.

A Los Angeles county dairyman writes to the Santa Ana News the following practical suggestions to butter-makers: Butter making in this State can be improved. The dairyman who suffers least from an abundant supply is the one who produces the best article. He holds his customers and suffers a slight decline while common and poor stuff is a drug in the market and the producer is at a loss. In the first place, to make good butter an abundance of good pure water is needed, both for dairy use and for the cows to drink. The milk room or dairy house should be built so that the temperature can be easily regulated in order that the milk may be kept in good condition without thickening too soon. Milk should stand about thirty-six hours before the cream is removed. Great care should be taken to remove the cream as soon as the milk thickens on the bottom of the pans. If the cream is allowed to remain on until the milk thickens entirely the cream will make butter greasy, salty, tasteless and without grain or texture. Some old-fashioned dairymen hoot at the idea of skimming milk so soon. They want it to stand and ferment and get moldy and then they say they lose no cream. That is not so, as I am going to prove. The dairy room should be at a temperature of 72° almost all of the time, for this reason: When the milk is milked from the cow it is from 80° to 90° of temperature and if put in cold pans and a cold room it will drop down to at least 62° to 65°, when if put in a room of 72° the cream will commence rising and in twenty minutes a coat is formed over the pans so as to exclude all air and cold and the process develops more quickly, and better butter is obtained, whereas, if put in a cold room and allowed to stand until clabbered the whey would begin to separate and eat up the cream and make small white specks of milk in the butter which can not be removed by washing, salting or working. This injures the sale and flavor of butter.

### Churning Cream.

Cream should never be allowed to remain in cans more than one day and the sooner it is churned the better. If the cream be allowed to remain on the milk until there is a separation of curd and whey, little particles of curd will rise up and mingle with the cream, and also with the butter. This curd gives the butter a cheesy flavor and it will become rancid and unfit for table use. In tempering the cream before churning you should be governed by the temperature of the churning room. If the air is very warm, some allowance should be made and the cream tempered to about 56° or 57°, but in California cream put into the churn at 61° or 62° will make good solid butter. Hot or cold water should never be put into cream to temper it, as the one melts the cream and the other chills it. If water is used for that purpose the cans containing the cream may be placed in a larger vessel or tub containing warm or cold water as required and the cream stirred gently to keep the outer edges from being either chilled or melted. It should be stirred until an even temperature is obtained through the entire mass.

### Washing.

When the cream is churned well, gather the buttermilk and remove it. Then cold water may be turned in and the butter thoroughly washed three or four times until all the milk is removed, then take out the butter and spread it upon the brake or worker, salt with pure salt, which should always be sifted, as small lumps are in it which will not dissolve evenly in the butter, and some parts will be more salt than others. If the butter is for immediate use one pound of salt to 20 pounds of butter, if for packing, one pound and a half of salt to 16 pounds of butter.

### Working Butter.

Do not work too much or too fast. Work slowly until all the salt is thoroughly and evenly absorbed. If the salt is not evenly absorbed the butter will not be of uniform color. Working it too fast will destroy the grain and the butter becomes salty and lard-like in its texture. Let it stand or put it away in the tray for 24 hours. Then work it enough to remove all the buttermilk or surplus brine so that the butter may become dry or like a piece of cheese. Mold into rolls, then set them away for 24 hours or until they become hard and firm. The cloth should now be put on, so as to cover one end while the other is left open for the stamp. The cloth should be cut in pieces of exact size and dipped in brine and the butter rolled when the cloth is dripping wet. Butter should never come in contact with the bare hand. When in bulk, it can be easily handled with a ladle and a flat paddle. The farmer may say, who milks from three to five cows, that the above rules are very good for a large dairyman to follow, but he will excuse himself by saying that he cannot afford to go to all that expense and trouble. But I will say he is the very man I am talking to and for his benefit that I write these suggestions.

A NEW AGENT IN DAIRYING.—The *Moniteur Scientifique* contains an interesting paper by MM. Manette and Muso on the employment of salicylic acid in the dairy industry. They describe four series of experiments made in order to elucidate the influence of salicylic acid:

(1) on the preservation of milk; (2) on the separation of cream; (3) on the preservation of butter; (4) on the course of the phenomenon of caseification. The addition of a little of the acid to milk, by processes and in proportions that are specified, is shown to retard considerably the acidification and coagulation of the liquid, without giving it a disagreeable taste or smell or making it in the least injurious to health, without diminishing the yield of butter and of cheese, and without altering their quality. The use of salicylic acid is recommended as economical in two cases: (1) for preserving cream on small farms, where butter is prepared only a few times in the week; (2) for preserving butter in localities where rooms cannot be had whose temperature is under 6-8° C., or for keeping from rancidity butter that has to be sent long distances in the summer months.

### Agricultural Survey—Soil Analysis.

#### What the State University is Doing.

The Regents of the State University have agreed to do all in their power to forward the execution of an agricultural survey of this State, such as Prof. Hilgard plans and is anxious to perform. The work which Prof. Hilgard has done in this direction for the State of Mississippi is surely that he is able to make known the agricultural adaptations of this State in a most thorough and explicit manner, if he has the support of the people in his undertaking. We deem the matter of wide importance and practical value, and therefore give space below to the following description of the undertaking written by Prof. Hilgard:

#### The Need for the Survey.

A full and accurate knowledge of the agricultural features and other industrial resources of a State is of the most direct and obvious importance to every one concerned in industrial pursuits. It is wanted by the immigrant or the settler seeking a new home suitable to his tastes and resources, as well as by the large farmer and capitalist desiring to locate and invest to the best possible advantage. Most of the older States have long ago satisfied this demand in some form; mostly in connection with the public surveys usually named, from their fundamental feature, geological surveys, but commonly charged as well with the full investigation of the other industrial features of the State. The geological survey of California having stopped just at the point whence this most important part of the work could be intelligently carried forward, it is now practically impossible for most of those interested to obtain full, authentic and impartial information concerning any particular region of the State, without the trouble and expense of a personal visit. The demand for this kind of information is shown by the publication of numerous pamphlets and newspaper articles, describing more or less fully and correctly certain regions recommended for settlement. But the fact that these publications emanate largely from interested parties, and are compiled by persons unused to accurate observation of natural phenomena, and not possessed of the means for thorough investigation, greatly reduces the usefulness of the large amount of correct information thus conveyed.

Moreover, the possession of an accurate description of the agricultural features and peculiarities of the State is an indispensable prerequisite to the giving of truly practical instruction to the youth of the State in the agricultural course at the State University. Nothing can be more obvious than that they should be taught, not only what they should have to do in certain suppositious cases, but also what are the circumstances and difficulties with which, in actual fact and practice, they will have to deal in their own State.

Realizing the importance of these considerations, the Regents, on the recommendation of Professor Hilgard, have made an appropriation, and authorized the appointment of an assistant analytical chemist, with a view towards the inauguration of a system of thorough investigation of the agricultural and industrial resources of the State, or what might be termed an industrial survey. Such a work is the needful complement of the geological and topographical survey heretofore made, which forms its necessary basis, the results of which it will utilize and expand, and render practically available to the people of the State, by direct application to every-day life.

#### The Plan.

In carrying out the portion of the work more directly related to agriculture—the investigation of soils and their relations and adaptation to crops—the plan will be to obtain, so far as our resources permit, first, a full knowledge of the occurrence, location, extent, natural peculiarities and climatic position of each prominent variety of soil, by examination in the field; and at the same time to elicit by inquiry from those cultivating it, whatever of information or experience they may possess as to the soil's merits, demerits, peculiarities or adaptations; thus gaining suggestions as to the most immediately important points to be investigated. Specimens of the soils, carefully taken to secure representative samples, will then be subjected to such examination, mechanical and chemical analysis, etc., as may be seen advisable in each case. The results of these investigations, with suggestions as to the soil's treatment and adap-

tation in culture, may then be published and subjected to the practical trial which must form the final test in questions of this nature.

So far as practicable, such tests, as well as experiments of a general nature, relating to culture, manures, etc., will be conducted on the University grounds. But since it is impossible to realize in any one locality the conditions of soil, climate, etc., which govern the practical application of the results of the investigations proposed, such tests should most properly be made at local experimental stations, established for the purpose in each agricultural subdivision; as is done in Europe, as well as in some of the Eastern States. But agricultural societies, as well as intelligent individuals, may largely replace such stations for the present; and the co-operation of societies and individuals willing to aid in this work is most earnestly invoked and invited.

The knowledge thus obtained of the State's agricultural features—the kind, distribution and adaptation of the soils, their modes of treatment and cheapest means of improvement—will not only enable the farmers to purchase and cultivate more intelligently and profitably, but it will render possible the publication of an authentic and accurate description and industrial map of the State, conveying the information wanted by every immigrant, and the best possible advertisement of its industrial advantages. The students of the agricultural college will then go out with definite knowledge of what they will have to deal with in actual life, and prepared to turn the knowledge acquired to direct account.

#### Co-operation of Farmers Solicited.

The means at the command of the agricultural department of the University towards carrying out this work is, at the present time, very limited. The duties of class instruction are incompatible with any extensive operations in the field. But it is thought that much may be accomplished by the aid and co-operation of intelligent persons all over the State, who, comprehending the importance of the object to be attained, can with comparatively little trouble, supply specimens and communicate observations bearing on the agricultural features of their section. It is for the guidance of such that the following directions relating especially to the taking of representative soil specimens have been compiled.

#### The Utility of Soil Analyses.

It may be proper and necessary to refer in this place to some wide-spread prejudices on the subject of soil analysis and the practically useful results to be expected therefrom. While some imagine that such an analysis can, like the assay of a mineral, tell them just what the soil is worth and what it needs to make it productive, others have, on the contrary, been taught to believe that soil analysis is utterly useless, and can convey no information useful to the farmer. As usual, the truth lies between the two extremes, which represent consecutive phases of opinion resulting from exaggeration either way. It is true that a single soil analysis, like other analyses or assays, by itself sometimes conveys little or no information of practical value. But it is no less true that sometimes such an analysis, when taken in connection with accurate observations regarding its occurrence, or with the experience that may have been had in its cultivation, will reveal at a glance more in regard to the true nature and value of the soil, and the cheapest and most direct means of improvement, than could have been acquired in any way save the long and expensive one of blind experimenting. And when not one, but numerous analyses of soils from the same region have been examined and compared in all the available points, it will be found that the great majority convey information of the most unquestionable importance, and which could have been acquired in no other way.

Similarly, the mechanical analysis of soils, in its present perfected condition, is capable of supplying information regarding the tillability of soils, and the best mode of improvement in this regard, which only long and costly experience could furnish.

#### Directions for Taking Specimens.

In taking soil specimens for examination by the agricultural department of the University, the following directions should be carefully observed—always bearing in mind that the analysis of a soil is a long and tedious operation, which cannot be indefinitely repeated:

First. Do not take samples indiscriminately from any locality you may chance to be interested in, but consider what are the two or three chief varieties of soil which, with their intermixtures, make up the cultivatable area of your region, and carefully sample these, first of all.

Second. As a rule, and whenever possible, take specimens only from spots that have not been cultivated, nor are otherwise likely to have been changed from their original condition of "virgin soils," e. g., not from ground frequently trodden over, such as roadsides, cattle-paths or small pastures; squirrel holes, stumps or even the foot of trees, or spots that have been washed by rains or streams, so as to have experienced a noticeable change, and not be a fair representative of their kind.

Third. Observe and record carefully the normal vegetation, trees, herbs, grass, etc., of the average land; avoid spots showing unusual growth, whether in kind or quality, as such are likely to have received some animal manure, or other outside addition.

Fourth. Always take specimens from more than one spot judged to be a fair representative

of the soil intended to be examined, as an additional guarantee of a fair average.

Fifth. After selecting a proper spot, pull up the plants growing on it, and scrape off the surface lightly with a sharp tool, to remove half-decayed vegetable matter not forming part of the soil as yet. Dig a vertical hole, like a post hole, at least twenty inches deep. Scrape the sides clean, so as to see at what depth the change of tint occurs, which marks the downward limit of the surface soil, and record it. Take at least half a bushel of the earth above this limit, and on a cloth or paper break it up and mix thoroughly, and put up at least a quart of it in a sack or package for examination. This specimen will ordinarily constitute the "soil." Should the change of color occur at a less depth than six inches, the fact should be noted, but the specimen taken to that depth nevertheless, since it is the least to which rational culture can be supposed to reach.

In case the difference in the character of a shallow surface soil and its subsoil should be unusually great, as may be the case in tule or other alluvial lands, or in rocky districts, a separate sample of that surface soil should be taken besides the one to the depth of six inches.

Specimens of salty or "alkali" soils should, as a rule, be taken only at the end of the dry season, when they will contain the maximum amount of the injurious ingredients which it may be necessary to neutralize.

Sixth. Whatever lies beneath the line of change, or below the minimum depth of six inches, will constitute the "subsoil." But should the change of color occur at a greater depth than twelve inches, the "soil" specimen should nevertheless be taken to the depth of twelve inches only, which is the limit of ordinary tillage; then another specimen from that depth down to the line of change, and then the subsoil specimen beneath that line.

The depth down to which the last should be taken will depend on circumstances. It is always desirable to know what constitutes the foundation of a soil down to the depth of three feet at least, since the question of drainage, resistance to the drouth, etc., will depend essentially upon the nature of the substratum. But in ordinary cases, ten or twelve inches of subsoil will be sufficient for the purposes of examination in the laboratory. The specimen should be taken in other respects precisely like that of the surface soil; while that of the material underlying this "subsoil" may be taken with less exactness, perhaps at some ditch or other easily accessible point, and should not be broken up like the other specimens.

Seventh. All peculiarities of the soil and subsoil, their behavior in wet and dry seasons, their location, position; every circumstance, in fact, that can throw any light on their agricultural qualities or peculiarities should be carefully noted, and the notes sent with the specimens. Unless accompanied by such notes, specimens cannot ordinarily be considered as justifying the amount of labor involved in their examination.

Send by express to "University of California, Berkeley, Cal., care of Prof. F. W. Hilgard."

Communications, inquiries, specimens, etc., relating to agriculture or cognate subjects, addressed to Prof. Hilgard, will receive prompt attention and answer so far as practicable without the data to be supplied by the agricultural survey.

EFFECT OF SUNLIGHT ON FLOUR.—It is maintained, says the *Millstone*, that the inferior quality of certain kinds of wheat and rye flour is frequently due to the action of sunlight on the flour; even when in bags or barrels the gluten experiences a change similar to that occasioned by heating in the mill. The tendency thus imparted to it, to become lumpy, and to form dough without toughness, is similar to that of most grain, or of flour when it is too fresh, or made from grain ground too early, or when adulterated with cheaper barley meal. Such flour can be improved by keeping some weeks.

MAKING WOOD STRONGER.—Soaking wood at 80° to 100° C. in linseed oil for two or three days increases its resistance to fracture. Throwing the pieces to be treated into a kettle, in which linseed oil is being boiled, and leaving them in it for a few days, is better still. This is a good remedy when the wood has to be exposed to moisture; when it is to be kept in a dry place, it is better still to soak it in a boiling solution of glue. This penetrating the pores, makes it stronger still.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

Dewey & Jordan have been at 433 Montgomery street, S. F., for 13 years. They are reliable—like the "New York watches" they sell.

Patronize papers that avoid humbug advertisements.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

### POULTRY.

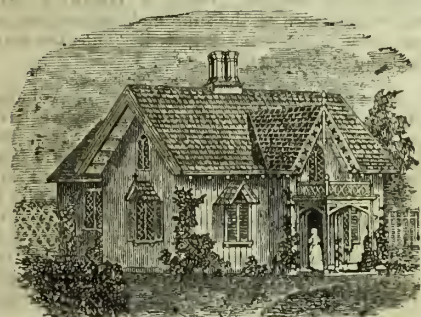
ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

## The Nurseryman's Directory.

A REFERENCE BOOK  
OF THE

NURSERYMEN, FLORISTS, SEEDSMEN,  
TREE DEALERS, HORTICULTURAL  
IMPLEMENT MAKERS, ETC.,  
of the United States.

Volume II Now Ready.

The book is indispensable for every Nurseryman, Florist or Seedsmen in the country. It gives the name, Postoffice and Business of those engaged in any of the departments of the Nursery Trade, alphabetically arranged by States and Postoffices, making the Book of easiest reference. Price, \$10.00 per copy. Address,

D. W. SCOTT & CO.,

Publishers, Galena, Illinois.

DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

\$55 a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine.

Farmers, write for your paper.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

### OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

### SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street,

San Francisco.

### OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00.

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

### Poultry.

RENO, - I. P. LORD, - NEVADA.



BREEDER AND SHIPPER OF PUREBRED  
AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. State where you saw this.

### WHITE LEGHORNS.



Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock. Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few sittings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

### LOOK!



ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc. Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## H. H. H.

### HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Sprains, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,

Stockton, Cal.

### INTERNATIONAL HOTEL,

ALL NEWLY FURNISHED.

824 & 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. C. PATRIDGE, Proprietor.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

## TO COLOR BUTTER.

EVERY DAIRYMAN SHOULD USE

Wells, Richardson & Co.'s

### PERFECTED BUTTER COLOR.

It adds five cents per pound to the value.

It gives a pure rich Dandelion color.

It imparts no taste or smell.

It is as harmless as salt.

It is better than Carrots.

It is better than Annatto.

It is better than any other coloring.

Foreign or domestic, liquid or solid.

A sample sufficient to color fifty pounds of butter will be sent to any address, postpaid, on receipt of ten cents. Every Dairyman who wishes to realize the highest price should give it a trial now.

An energetic man wanted to act as agent in every town. Liberal terms to the right man. For terms and territory, address at once,

WELLS, RICHARDSON & CO.,  
Burlington, Vermont.

GREAT

### IMPROVEMENTS

ARE NOW

BEING INTRODUCED

## IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

### Practical

## BOOKS

—AT—

### BANCROFT'S.

A. L. Bancroft & Co. keep on hand a large stock of American and European Books, Suitable for

CIVIL ENGINEERS,

FARMERS,

MACHINISTS

And Industrial Classes generally, and supply them, post free, at published prices; for particulars of which, see catalogues, which will be forwarded on application.

A. L. BANCROFT & CO.,

721 Market Street, S. F.

## SANBORN & BYRNES,



Mechanics' Mills, Mission Street,

Ret. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Newels and Balusters.

## HEALD'S

### BUSINESS COLLEGE.

No. 24 Post Street

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College. TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

Don't waste your time in reading cheap trash.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,

433 Montgomery St., S. F.

### MOUSTACHE PROTECTOR.

Will fit any Cup.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent toe, Willimantic, Conn.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

Get the best. Take the RURAL.



## No Answer.

*Messrs. Dewey & Co., Gents:* The advertisement you inserted for the Western Gun Works, Chicago, Ill., in the Press of March 10th 1877, I pronounce as a fraud. I have sent them the requisite amount of money they called for in premium certificate (March 5th), but as yet no long range revolver has been received, nor is it likely to come. —D. D. O'HARRA, Wells, Nevada, March 20th.

This is hardly fair. Mr. O'Harra wrote March 5th; his letter was posted March 6th, probably. If there be a daily mail from Wells, Nevada, it perhaps reached Chicago on the 13th or 14th. If the mail from Wells be weekly or bi-weekly, or if any delay occurred, and delays do happen very often, the letter would not reach the Western Gun Works until, perhaps, March 17th to 20th. If they sent the goods at once I doubt if in any case they would reach Mr. O'Harra by March 20th—the date of his letter. It was too soon to complain. Mr. O'Harra may have his pistol now. Those who denounce others as frauds on such very slight foundations, often forget to correct their errors.

The Press needs no one to tell its readers how cautious it is in admitting advertisements into its columns; and this in face of the fact that every religious paper in the land, with perhaps one exception in 1,000, is reeking with the pollution of unseemly and tricky advertisements. For this reason, and because the Press is so quick to denounce fraud, even when the result is a direct money loss to its proprietors, we should hesitate to make such charges as this on such slight foundation. Fraud in the advertiser should be the last, not the first reason sought for this delay. I myself received a letter, a few weeks ago from San Francisco, containing 10 cents for a copy of my pamphlet on the care of fowls. I sent the pamphlet at once. In about 10 days after came a letter from the party, asking why I had failed to send the book when I had received the money. I answered the letter and sent another book. The last letter has been returned to me as uncalled for. No fault rests with me, and yet perhaps this man is denouncing me as a fraud too. I never fail to answer each letter received, and yet I am daily discovering that my answers often miscarry. The mails, or rather those who have charge of them, are far from perfect. I know nothing of these gun works, but it is due to every advertiser that the proof—not vague assertions or such facts as these of Mr. O'Harra—should be plain before his advertisement is refused or he denounced as untrustworthy.

M. EYRE JR.

Napa, Cal., April 23d, 1877.

On the same day with the above from Mr. Eyre came the following letter from parties to whom we addressed some queries after receiving Mr. O'Harra's letter:

*Messrs. Dewey & Co., S. F., Cal.—Gents:*—Yours of the 19th inst. at hand, concerning Western Gun Works. So far as I know, or can find out, they are doing a legitimate business. They are men well known and have been doing business a good while. They tell me that they could not send pistols with cartridges through the mails, as it is a State prison offense to do so. W. H. VAN ORNUM.

[We think the gun company did wrong in sending their goods by express without pre-paying charges; also by not notifying purchasers by mail.—EDS. PRESS.]

## New Laws for Homestead Entries.

The following is a copy of a law passed at the last session of Congress. It relieves parties of the trouble and expense of visiting the land office in the district in which they may reside for the purpose of making proof of residence, etc.:

*An Act to amend Section 2,291 of the Revised Statutes of the United States, in relation to proof required in Homestead Entries.*

Be it enacted by the Senate and House of Representatives of United States of America in Congress assembled, That the proof of residence, occupation or cultivation, the affidavit of non-alienation, and the oath of allegiance required to be made by Section 2,291 of the Revised Statutes, may be made before the Judge, or in his absence, before the Clerk of any court of record of the county in said State or district and Territory, in which the lands are situated, and if said lands are situated in any unorganized county, such proof may be made in a similar manner in any adjacent county in said State and Territory; and the proof, affidavit and oath, when made and duly subscribed shall have the same force and effect as if made before the Register or Receiver of the proper land district; and the same shall be transmitted by such Judge, or the Clerk of his court, to the Register and Receiver with the fee and charges allowed by law to him; and the Register and Receiver shall be entitled to the same fees for examining and approving said testimony as are now allowed by law for taking the same.

SEC. 3. That if any witness making such proof, or the said applicant making such affidavit or oath, swears falsely as to any material matter contained in said proof or oaths, the said false swearing being willful and corrupt, he shall be deemed guilty of perjury, and shall be liable to the same pains and penalties as if he had sworn falsely before the Register.

Approved, March 3d, 1877.

*An Act for the Relief of Settlers on the Public Lands under the Pre-emption Laws.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that when any person who has made a settlement on the public lands under the pre-emption laws shall change

his filing to that for a homestead entry, the time required to perfect his title under the homestead laws shall be computed from the date of his original settlement made under the pre-emption laws.

Approved, March 3d, 1877.

## General News Items.

BOTH China and Japan have insurrections on their hands.

CARDINAL VANTICELLI TEASONI, Archbishop of Ferrara, is dead.

A GANG of counterfeiters were caught by the detectives in this city this week.

CLARA LOUISE KELLOGG, the famous prima donna, is coming to California.

THE editor of the San Francisco Mail has sued the Virginia Enterprise for \$100,000 damages for libel.

RED CLOUD and Spotted Tail Agencies, which for some time have been in charge of the military, will soon be turned over to the civil authorities.

It is understood that the quarrel with Dahomey has been settled, Great Britain remitting a large part of the fine of 500 puncheons of palm oil.

THE Alaska, the last steamer from China, had considerable small-pox on board on her arrival here, and she will remain in quarantine for 20 days.

DUDLEY KIMBALL, six years old, shot Stephen Cox, seven years old, in Boston, last week, while playing in the street, on account of a juvenile quarrel. Both are sons of prominent business men.

A special to the News from Alexandria announces that the King of Abyssinia has released Mr. Mitchell, the American geographer, who has arrived at Massowat, in a pitiable condition.

A LATE dispatch from Vienna announces that the Russian army will commence its march to Roumania on Wednesday. Russian naval authorities have suspended navigation between Crimea and Caucasias.

THE Cincinnati Commercial publishes crop reports from 200 points in Ohio, Indiana and Kentucky, showing that the wheat crop is generally in an unusually good condition, and the prospects good for more than an average yield.

It is not considered probable that the Powers will offer mediation between Russia and Turkey, as provided in the eighth article of the treaty of Paris. It is stated that the Porte would not be disposed to accept it. War is now admitted on all sides to be inevitable.

REPORTS that special measures have been taken against American vessels on account of the transport of war materials to Turkey, are contradicted in official quarters. It is added that Russia's relations with America are excellent, and that any disturbance of them is carefully avoided.

A TEMPERANCE organization has been formed in Washington under the name of "Mrs. Rutherford B. Hayes Temperance Society." Resolutions were adopted indorsing the sentiments of Mrs. Hayes in regard to the use of intoxicating liquors at State dinners, and similar occasions.

THE strike among the Columbia river fishermen is over, and the men have gone to work again. The owners of the canneries were compelled to accede to the demand of the fishermen, and pay 50 cents for every salmon caught. There are over 600 boats employed along the river.

INSTRUCTIONS have been sent by the Secretary of the Treasury to San Francisco, directing that the revenue cutter *Rush* shall commence a summer cruise along the coast from the first of May. The *Rush* will pay particular attention to the American interests in Alaska and on the other grounds, watching the seal fisheries. The *Rush* is well armed, and should it be found that further force is necessary, a man-of-war will be sent to the otter and seal grounds.

THE STATE LAND INVESTIGATION.—The Sacramento Record-Union, Thursday morning published in full, tables and figures showing in detail the report of the State Land Commission. It is set out that ex-Surveyor-General Bost conducted his office with lamentable irregularity, extravagance and want of system, as did also ex-Surveyor-General Gardner. The report charges that Bost did not make the reports required of him by law, and that he is behind in his accounts nearly \$44,000. The Commission recommended that a suit be brought against him for the money. Accompanying the report is a letter from Bost explaining the charges against him. This the Commission takes up and answers in severe language, and charges him with direct malfeasance in office and great extravagance. The report concludes by saying: "The immense bodies of land disposed of by the State during the term under consideration would have brought a princely revenue into the coffers of the State had it been honestly and carefully managed; but instead of the office being self-sustaining, the State has disposed of her lands, and investigation shows a deficit of over \$43,800 in four years administration of the State's public lands. It is submitted that the receipts of this office ought at least to balance the expenditures, and that they do not, can only be accounted for on the score of gross negligence or dishonesty in its management."

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

FOR WEEK ENDING APRIL 17TH, 1877.

189,570. STENCH TRAP.—P. F. Morey, Oakland, Cal.  
189,643. TIDE POWER.—H. Newhouse, Oakland, Cal.  
189,964. BOARD LATHIE.—A. A. Smith, Boulder, Col.  
189,688. GRAPNEL FOR SUBMERGED PILES.—J. H. Bogert and H. C. Holmes, S. F.  
189,717. DISTRICT TELEGRAPH SIGNAL BOXES.—S. D. Field, S. F.  
189,740. WASHING LIST INDICATORS.—H. E. Israel, Stockton, Cal.  
189,744. HAY PRESS.—W. Kelly, Sonoma, Cal.  
189,782. WATER-CLOSET.—F. Pohley, S. F.  
189,794. STATION INDICATOR.—J. P. Schmitz, S. F.  
189,806. WATER FILTER.—W. S. Snook, Oakland, Cal.

REISSUES.

7,607. GRIPPING ATTACHMENT FOR ROPEWAYS.—A. S. Halliday, S. F.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

BUTTON-HOLE ATTACHMENT TO SEWING MACHINES.—Eugene Moreau, S. F. This invention relates to an improved clamp for gripping the cloth around the borders of button-hole openings in the cloth plates of button-hole sewing machines, so as to hold the cloth immovably in place while the button-hole is being worked. Heretofore these cloth clamps have been made either in the form of a single clamping plate, which entirely surrounded the button-hole opening; or in two parts or halves, one part or half serving to clamp the cloth on each side of the opening. Cloth and finished work, however, when ready for the button-holes, is often unequal in thickness at different points along the border of the button-hole, because most frequently the button-hole must be made through two and even more thicknesses of cloth. The difficulty experienced has been that although a solid clamp is pressed firmly on the cloth around the button-hole opening or upon each side as above stated, there will be still places where the pressure is not sufficient because of the unequal thickness of the material so that the needle of the machine will cause the edge to draw and thus mar the finish and uniformity of the button-hole work. The invention under consideration consists in constructing a clamp with two or more narrow independent pressure feet, placed side by side, each of which will exert an independent downward pressure upon that portion of the cloth directly under it, and thus provide a continuous clamp which will adjust itself to the inequalities of the cloth, and thus insure its immovability.

VALVE FOR STEAM ENGINES.—Samuel H. Wheeler, San Francisco. The object of this invention is to give such a distribution of steam or other fluid in reciprocating engines that the motions of the main piston of the engine shall correspond both in extent and time of movement with the motion impressed upon the distribution valve of the engine; the distribution valve being operated by any means independent of the main engine, as, for instance, by manual force or by an auxiliary or supplemental engine. This is accomplished by placing a movable seat under the distribution valve and connecting it to the main piston in such a manner that when the motion of the distribution valve upon this seat gives steam behind the main piston, the motion thus impressed upon the piston will be communicated to the movable seat and will cause it so to move under the distribution valve as to cut off the steam supply. By this means the motions of the main piston are made to correspond with those of the distribution valve, the piston moving while the valve is in motion and coming to rest when the valve is arrested. This valve motion, while it has for its object the regulation of the motion of the main piston of the engine to correspond with the motion of the piston of a supplemental engine or the hand of an operator, as in the United States letters patent issued to the same inventor, July 25th, 1876, and in those issued to H. Davey, September 7th, 1875, has this difference from them: that in this invention the distribution valve always makes its full stroke forward and backward during the continuous working of the engine, while, by the combination described in those patents the valve is constrained by the motion of the main piston to remain very near to its middle position. Mr. Wheeler, therefore, claims that in this invention, on account of the combination of parts that he uses in it, the motion of the main piston corresponds, both in extent and time, with the motion impressed upon the main valve. The drawings accompanying Mr. Wheeler's patent illustrate the application of his invention to a pair of rotative engines designed to be used on

a foundry crane. In this instance motion is given to the distribution valves through the medium of a shaft and eccentric operated by a crank handle, the crank handle being turned by the attendant; the engine shaft will receive a corresponding motion, and will continue its motion, stop or reverse, just as the hand of the attendant may be moved. This arrangement Mr. Wheeler considers to be particularly well adapted to this and similar purposes, as for instance, steering gear for ships, etc., since the motion of the engine is under complete control.

HORSE-POWER.—D. T. Gillis, San Leandro, Alameda county. This invention is to provide an economical and effective means for working pumps by horse-power, and it consists in a running gear and pivoted bearing, in combination with a walking beam and rods arranged to operate a pump movement. The axle of the running gear is arranged to be propelled around a fixed center by horse-power, with a traction wheel and weight for insuring the necessary friction and rotation of said wheel, the other end of the axle is a crank rod of a pump movement. When it is desired to employ a horse to pump, he is hitched to the running gear by means of a pole and driven around in a circle, the rotation of the traction wheel and axle imparting to the pump movement the requisite stroke for pumping purposes through the medium of the crank joint, walking beam and vertical rods.

THE SACRAMENTO ENTERPRISE.—Not long ago we made mention of the incorporation of a stock company in Sacramento to manufacture and sell agricultural implements. The project has been in incubation since that time, and now we read in the Sacramento Record-Union that a basis of agreement has been marked out by which the new company shall become the successor of the Sweepstakes Plow Company, of San Leandro, and in event of a final agreement to this effect the San Leandro establishment will be removed to Sacramento, where it will be expanded in several directions, but still remain under the efficient management of Mr. F. A. Hill, who pushed it to its present success. The contingency upon which this movement depends is the raising of a fund of \$300,000 among the men of Sacramento county. Baker & Hamilton subscribe one third of the sum and subscribers to the balance are being solicited. Thus the matter stands at present.

MESSRS. D. M. OSBORNE & Co., of Auburn, N. Y., whose branch office in this city we have so often mentioned, desire us to say that the farmers and dealers in the interior should bear in mind that it is more the interest of San Francisco "Sole Agents" to run down the Wheeler & Kirby machines than any other, on account of the direct trade, and the country dealers getting the discounts pay no attention to false reports circulated by irresponsible parties. Address D. M. Osborne & Co., box 1818, San Francisco.

THE PERMANENT EXHIBITION.—We have received a handsome card of invitation from the President and Board of Directors of the International exhibition of 1877, to be present at the opening exercises on May 10th next. This will be the opening of the permanent exhibition under the auspices of the company which purchased the "Main building" for the purpose. Those of our readers who may be in Philadelphia during the summer will, we doubt not, be profited by a visit to Fairmount park.

A NUMBER of Turkish army officers arrived in New York, Saturday. They come to inspect the arms ordered, to learn the American method of manufacturing arms, and to witness the working of the machinery employed in their manufacture in the United States.

## AMERICAN WATCHES ABROAD.

The London correspondent of the New York Times writes: "There is a significant paragraph in the *Behn*, under the heading of 'The Labor Market.' It bemoans the shock which the watch trade has received by the continued large importation of American chronometers. The London watchmakers are described as getting alarmed, and quite a panic has seized the Swiss watchmakers, who have for years supplied the English market with cheap goods."

It is the advantages of such new watch manufacturers as that of the New York Watch Company, of Springfield, Mass., in style, finish and cost, that brings about the above mentioned state of affairs. In less time than we can tell it, you can see the practical reasons for all this by calling on Dewey & Jordan, No. 433 Montgomery street, San Francisco, who have a large and splendid assortment of the New York Springfield watches.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill., want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

## COUNTRY BOARD WANTED.

By a gentleman and wife, servant and infant, board for three months, commencing about May 15th, in a private family in one of the interior valleys or among the foothills. Good home accommodations required, for which the highest rates will be paid. Address with particulars, C. W., Rural Press Office.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, April 25th, 1877.

War is declared, and the Russian and Turkish armies are in motion. As an expected result the Grain markets of the world are excited and advance by jumps. The talk this morning on the S. F. Exchange was of the possibility of a speedy advance to \$3 per cwt for California Wheat. There was, on the other hand, talk against prices on the part of those whom one would expect would talk that way for the sake of keeping producers' views from exceeding their desires. Several large dealers believed that the surplus of Grain would be greater than country advances would now indicate. We are perfectly willing, yes, desirous, that it would be so, but we would advise no one to count much on a larger crop than expected and consequently make contracts at existing prices. According to the best light we have, we cannot see any chance for a recession in price and all the chances for still further advance.

The Liverpool market has advanced largely, as may be seen in the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	11s	6d	11s	11d	11s	10d	12s	2d
Friday.....	11s	8d	12s	—	12s	—	12s	5d
Saturday.....	11s	8d	12s	—	12s	—	12s	5d
Sunday.....	11s	8d	12s	—	12s	—	12s	5d
Tuesday.....	11s	11d	12s	3d	12s	3d	12s	8d
Wednesday.....	12s	2d	12s	9d	12s	6d	13s	—

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	9s	—	9s	3d	9s	4d	9s	9d
1876.....	9s	7d	9s	10d	9s	11d	10s	5d
1877.....	12s	2d	12s	9d	12s	6d	13s	—

## The Foreign Review.

LONDON, April 23d.—The *Mark Lane Express* agricultural advice are still unfavorable regarding the progress of spring sowing, which, already tediously protracted, has been carried on more or less desultory. The sudden condition of the soil has rendered it almost impossible to sow Barley, and farmers are anxiously waiting dry weather. In the low land of Scotland farm work has fairly advanced, but in the north sowing has been stopped by the continued falls of rain and snow. Winter Wheat has made slight progress. Supplies have been very light at the country markets, and farmers have shown little disposition to sell their Wheat, except at extravagant prices—68 shillings for White and 60 for Red. The provincial trade has been excited and prices irregular under the prevalence of political excitement, but where sales have been made prices have advanced three or four shillings. Imports of Wheat into London continue moderate, the arrivals from America being insignificant. In the absence of more definite warlike news the excitement in the Grain trade at Mark Lane has decreased since Monday, and our market is more subdued. Prices have not, however, declined, and the present attitude is one of eager attention. Heavy insurance is being effected to cover the loss of profit arising from war or prohibition of export from Russian ports. With the small supplies immediately available and daily diminishing stocks, the position of trade seems critical, as free importation from Russia was never before really needed so much as at present.

## Freights and Charters.

As the present price is above the views of shippers, there is no demand for shipping Wheat except for speculative purposes, consequently there is no demand at present for freights. We hear this morning, however, that holders of vessels are demanding £4, in view of the war declaration and the foreign advance in Wheat. There is considerable Wheat tonnage now in port disengaged.

## Eastern Grain Markets.

NEW YORK, April 22d.—Breadstuffs would have advanced without the war stimulus, as the surplus stock has not been so small at this season of the year, as it is at present in a long period. Wheat almost daily advances. No. 2 Milwaukee to-day's market fetching \$1.72@1.73, closing with no prime to be had below \$1.75, a further advance of 10 cents per bushel during the week. No. 2 Chicago is up to \$1.70 and prime Winter, \$2.02 to \$2.15. Corn has been active for export and on speculation, closing at 62½¢, in store. Flour has gone up to \$7.50@8.50 for shipping brands, and Barley has advanced to 90 cents for ordinary, and up to \$1.10 for prime Canada. Reports regarding the Wheat crop are mainly very favorable; and under the stimulus of war an increased area of land has been devoted to Spring Wheat. Good crops this year will go farther toward placing the industry and commerce of the country on its feet again than any other agency, and the prospect thus far is favorable to such a result on the Atlantic slope.

CHICAGO, April 22d.—The week has been an active and unsettled one, reflecting in the markets and on change the feverish state of things on the stock exchanges throughout the country. Prices for Wheat have been higher than for years, and closes at the top. There has been a general advance in both produce and provisions, as the following will show: Wheat closed at \$1.50; Corn, 47c; Oats, 37c; Rye, 80c; Barley, 76c; Pork, \$15.60; Lard, 10c. The influences have been as usual, but war news has been anxiously looked for, and the movements of railroads have caused much interest. The receipts for the week are: Wheat 12,000, Corn 133,000, Oats 35,000. Shipments: Wheat 21,000, Corn 81,000, Oats 220,000. Receipts same time last year: Wheat 124,000, Corn 50,000, Oats 36,000. Shipments: Wheat 67,000, Corn 113,000, Oats 82,000. This is a great falling off in receipts, especially in Corn.

CHICAGO, April 25th.—On account of the European war news the markets on the Board of Trade are active and prices higher. June Wheat opened this morning at \$1.80, an advance of 22 cents since Monday.

## Eastern Wool Markets.

NEW YORK, April 22d.—The result of the San Francisco Wool sale was in every respect contrary to the expectations of dealers generally. The opinion of dealers on this side of the Continent was that the auction sale plan would never work, for various reasons; but, as before noticed, their ideas are to-day greatly changed. The market has ruled dull during the week, but the lots of new Spring California that have come to hand have found purchasers, the prices realized having in most cases been below previous estimate. Fall California has ruled dull, owing to the undesirable quality of that which remains in stock. To effect sales the holders are compelled to submit to concession. No quantities of new Texas has been received. Fleeces are still quiet and nominal; decidedly firmer, but no higher. Sales for the week are: 40,000 lbs Curacao at 14c; 10,000 lbs Mexican, 14c; 45,000 lbs Oregon, 31c; 30,000 lbs Domestic Noils, 38c; 10,000 lbs State Fleeces, 38c; 10,000 lbs Ohio X do, 38c; and 20,000 lbs No. 1 Delaine do, 10,000 lbs do, 55,000 lbs State do, 40 bags Super Pulled, 15 do X do, 70 do Combing do, 60 do No. 1 do,

70,000 lbs Georgia, 70,000 lbs Eastern Texas, 45,000 lbs Western do, 20 bags low Scoured do, 70,000 lbs new Spring California, 60,000 lbs Pulled do, 58 bales Rio Grande, and 44 do New Zealand, on private terms.

Boston, April 21st.—Wool has been quiet and steady during the past week. The demand has been principally for California Fall and Spring and Super X pulled. Fleece Wool has been comparatively quiet. Sales of Ohio and Pennsylvania, 78,000 lbs XXX; Pennsylvania, 50c; XX Ohio, 46c; X Ohio, 46¢@46½¢; Michigan Fleeces steady at 37¢@38¢; 18,000 lbs new sold in this range. New York, New Hampshire and Western Fleeces ranged from 35c to 38c, but sales have been in small lots. Transactions in Combing and Delaine Fleeces are confined to small lots. Pulled Wools are in fair demand. Sales 211,000 lbs for the week. Eastern and Main Super 40¢@46c, down to 30c for low Super, and X Pulled, 37¢@40c. Combing Pulled is in request, and has been selling at 44¢@47c. In California there has been an increased trade, the sales of the week comprising 753,000 lbs, at from 15¢@25c for Spring, and 22¢ for Fall, mostly Fall Wool at 16¢@18c.

PHILADELPHIA, April 24th.—The Wool supply is light and the market prices firmer, but not higher. Ohio, Pennsylvania and West Virginia XX and above, 44¢@48c; X, 43¢@45c; medium, 42¢@45c; coarse, 30¢@35c; Few York, Michigan, Indiana and Western fine, 34¢@40c; medium, 42¢@44c; coarse, 34¢@36c; combing, Western, 49¢@50c; unwashed, 35¢@37c; Canada, combing, 52c; fine unwashed, 24¢@27c; coarse and medium unwashed, 27¢@30c; tub washed, 33¢@42c; Colorado washed, 20¢@24c; Colorado unwashed, 17¢@18c; extra and merino pulled, 25¢@29c; No. 1 and super pulled, 30¢@33c; Texas fine and medium, 15¢@25c; Texas coarse, 15¢@17c; California fine and medium, 20¢@25c; California coarse, 18¢@22c.

## Wheat in Oregon.

The Portland Oregonian of April 14th says: The estimates of the surplus Wheat in this State at last harvest placed the amount variously at 3,500,000 to 4,500,000 bushels, though reports prior to the harvest had not justified such high figures by several hundred thousand bushels. The exports of Wheat and Flour reduced to Wheat, of the crop of 1875, were in the aggregate 4,272,565 bushels. The exports so far the current harvest year have not exceeded 3,200,000 bushels altogether, and according to all present indications the shipments for the entire year will not exceed 3,350,000, or nearly a million bushels less than of the harvest of 1875. Should the present complications in Europe terminate in war and raise prices to a fancy figure, or should other circumstances produce that result, the entire surplus of the State might be drawn out and the total exports for the harvest year reach 3,500,000 bushels, but this can hardly be expected. Present prospects for the crop of 1877 are excellent, and with the continuance of favorable weather the yield will be larger by at least 20% than ever before in Oregon, but the local statisticians are compelled to make a material reduction in their estimates of last harvest's yield.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. April 4.	WEEK. April 11.	WEEK. April 18.	WEEK. April 25.
Flour, quarter sacks..	34,933	15,873	31,805	37,987
Wheat, centals.....	93,437	47,677	96,465	29,139
Barley, centals.....	10,509	12,425	10,225	6,918
Beans, sacks.....	2,235	350	480	380
Corn, centals.....	5,208	1,683	757	2,189
Oats, centals.....	7,665	3,857	6,492	5,557
Potatoes, sacks.....	6,058	7,220	11,862	9,318
Onions, sacks.....	673	855	894	483
Wool, bales.....	5,297	7,095	8,957	8,363
Hops, bales.....	8	563	—	—
Hay, bales.....	744	—	881	1,387

Bags—There is still talk about concentration of stocks in Bag circles. A group of the large firms are credited with an effort to gain possession of the mass of the Grain Bags and hold over until another year the amounts which cannot be peddled out at an advance for the present harvest. Whether the effort will succeed cannot yet be told, for all such combinations heretofore in our market have disclosed a weak point and fallen through before their object was accomplished. There is no change in prices for Bags, except for Gunnies, which are higher for the reason described last week. Hessian 40 inch is unobtainable now for less than 8c.

Barley—Barley sustains an advance of about 10c all around. We note sales as follows during the week: 300 s's Coast Feed, \$1.75; 500 s's Bay Feed, \$1.78; 1,000 s's good Bay Brewing, \$1.85 per cwt; 1,300 do choice Coast do, \$1.85; 500 s's dark Coast Feed, \$1.75; 1,300 do choice Coast Brewing, \$1.85; 1,000 do good Bay do, \$1.85; 200 s's choice Bay Brewing, \$1.87; 1,100 do good do, \$1.85; 1,200 do choice Bay Feed, \$1.80; 2,500 cts good Bay Feed, \$1.82; and 1,500 cts Bay Feed, \$1.85; 150 s's good Feed, \$1.80; 800 do Coast do, \$1.82; 550 do Bay Feed, \$1.95, silver, per cwt.

Beans—A few advances have been made in different kinds, as may be seen in our table of prices.

Buckwheat—The price for Buckwheat is nominally \$1.75, but there is no demand for the grain at present. Lots offered at \$1.75 are not taken and no bids can be obtained.

Corn—Corn has advanced 5¢@10¢ per cwt. We note sales: 700 s's large Yellow, \$1.90; 150 s's large Yellow, \$1.95; 140 s's large White, \$1.90; 140 do large Yellow, \$1.95; 66 do small Yellow, \$2.12 per cwt. Three carloads are at hand from Omaha. 500 s's at \$1.95, including 200 s's from Omaha; 500 s's large Yellow, \$1.90; 300 do White do, \$1.90 per cwt.

Dairy Produce—Fresh roll Butter is coming in again in considerable quantities. Packing operations in the country are reported stopping generally and consequently shipments are larger. Choice Butter sells generally at 29¢@30c, with some fancy brands at 30¢@32c. The best selections of California Cheese are reported doing a little better, but there is no change in general quotations. There is no Eastern Cheese now in wholesalers' hands.

Eggs—Eggs are unchanged.

Feed—We have to note a farther advance in Corn Meal and Oil Cake Meal. The mill price for Corn Meal is \$44 per ton, and Oil Cake Meal \$40, with usual discount to the trade. Hay has sold within former prices, but the feeling is stronger. We note sales of Hay as follows: 26 ton Cow, \$15; 40 do do, \$14.50; 45 do choice Wild Oat and Barley, \$20; 52 tons fair Wheat, \$20; 47 tons good Wheat and Oat, \$22; 50 do do, \$23.50; 46 do good Wheat, \$24; 62 do good Wheat, \$24.50; 12 tons fair Clover, \$16.50; 30 do fair Wild Oat, \$19. Choice Wheat is firm at \$25 per ton.

Fruit—Strawberries are cheaper and more plentiful. It is reported that there is a movement on foot among the growers of Strawberries in Santa Clara valley to concentrate their shipments upon four leading commission houses, in the belief that better prices will be obtained than when 12 or 15 houses are competing with each other

in supplying the trade. Tabiti Oranges are now in the market. The *Call* notes the following valuable fact concerning them as compared with our State Fruit: "We understand that there are certain brands of Los Angeles Oranges that, in keeping qualities, are even now fully equal to the Tahiti fruit, while for eating qualities they are preferred by all buyers." Cherries are now quotable at 25¢@50c per lb.

Hops—We hear of no change in the local market since the notes we made last week. The telegraph redorts the New York and foreign markets more propitious. Emmet Wells, in his circular of April 13th, reviews the New York market as follows:

Inactivity has been the ruling feature of the trade this week. Choice export stock has been in demand at full rates, but the supply of this class is very small. The arrivals continue quite liberal, but they consist chiefly of a class of goods not at present wanted. Brewers are as exacting on quality as shippers. The price, they say, is low enough, but the quality is too poor, especially for carrying over as yearlings. A few Hops are changing hands in the country markets at prices ranging from 5c to 13c. Eight thousand bales will cover the stock in this market to-day. This is a little under the usual supply at this season of the year. Quotations: New Yorks, choice, 15¢@17c; New Yorks, common to prime, 10¢@13c; Eastern, 10¢@13c; Wisconsin, 8¢@12c; Yearlings, 6¢@10c; Olds, all growths, 4¢@6c; Californians, nominal, 12¢@17c; Oregon, nominal, 12¢@17c.

Oats—Oats have not changed. The demand has been good but the large supplies at hand from Oregon during the last few weeks have kept the supply up to requirements. We note sales of 785 s's fair Feed, \$2.07; 160 do choice Oregon do, \$2.25; 400 s's choice Feed, \$2.30; 200 s's choice Oregon milling sold for \$2.50, an extreme figure.

Onions—Onions have nearly doubled last week's prices, and are now quotable at \$3¢@3.50. There have been receipts from Oregon, but we do not learn the prices which these stocks obtained.

Potatoes—Old and new Potatoes are doing better. We quote to-day: 75c for choice Petaluma and Humboldt while Early Rose new bring \$2¢@2.25.

Poultry and Game—Hens are weaker. The trade is now doing best with young birds, both Chickens and Geese. Ducks are lower, Turkeys do 1c better for the best.

Provisions—Fresh Beef is in fair supply and best qualities are quotably higher. There is, however, much poor Beef offering which sells low. Mutton is unchanged and in ample supply. The supply of Pork is large and the demand moderate. The market for cured meats is firmer under sharp advance at packing points, and moderately increased sales in the market.

Rye—Quotable at \$1.80¢@2¢ per cwt for choice. Sales 1,300 sacks at \$2, silver.

Vegetables—Our price list for Vegetables below will be found to contain many changes from last week. Asparagus, Peas, Summer Squash and String Beans will be found much cheaper; while Beets, Carrots, Celery, Rhubarb and Horseradish have advanced. We see now novelties this week.

Wheat—The sharp advance in Wheat is commented upon elsewhere. There was a sale reported, this morning, of fine Wheat, at \$2.85 per cwt. Almost anything in the way of advance may be expected, as the feeling is strongly upward. Flour joins in the advance, being 62½¢@75c higher per bbl than last week. Sales during the week, and before the declaration of war, were as follows: 1,800 s's choice Milling, \$2.55; 200 do fair Milling, \$2.55; 3,000 cts choice White Australia Milling, \$2.70; 1,600 do do, \$2.70; 1,000 do good Milling, \$2.65; 300 do choice Milling, \$2.67; 1,540 s's good Milling, \$2.60; 10,000 do choice White Australian, to a miller, \$2.62; 500 do do, \$2.65; 3,000 cts choice Shipping, \$1.42; 700 s's Milling, \$2.50; 5,800 do choice Milling, in lots, \$2.25; 5,000 do Oregon Milling, \$2.55; 800 cts choice Milling, \$2.65; 300 do do, \$2.67; 5,000 do do, \$2.70.

Wool—The market is wholly without change in price from last week, although there is a little higher feeling discernible. The disposition seems to be towards the best selections, and the poor are neglected. We note sales of 325,000 bales, at 12¢@25c; 240,000 do, 13¢@25c. Our quotations below give the basis of transactions in the different classes of Wools. Some choicest lots are held above the present rates.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

FRUIT MARKET.		WEDNESDAY M., April 25, 1877.	
Apples, bx.....	50 @ 2 50	Prunes.....	12¢ @ 17
Crab, lb.....	2 @ 3	Raisins, Cal, bx 1 lb	2 50
Bananas, bnch..	20 @ 3 50	Malaga.....	3 00 @ 4
Cherries, lb.....	2 @ 5	Zante Currants..	9 @ 10
Cocoanuts, 100..	5 00 @ 6 00	Artichokes, doz..	— @ —
Limes, Mex.....	8 00 @ 12 50	Asparagus, bx..	1 25 @ 1 50
Cal.....	10 00 @ 15 00	Beets, cwt.....	75 @ —
Lemons, Cal M..	10 00 @ 20 00	Cabbage, 100 lbs	50 @ —
Sicily, bx.....	10 00 @ 11 00	Carrots.....	70 @ 75
Oranges, Mex..	— @ —	Cañiflowers, doz	75 @ —
Tabiti.....	20 00 @ 25 00	Celery.....	75 @ —
Cal.....	15 00 @ 20 00	Cucumbers, doz..	75 @ 1 00
Pears, bx.....	1 00 @ 2 00	Garlic, lb.....	1 @ 2
Pineapples, doz	6 00 @ 8 00	Peas, Sweet.....	2 @ 2½
Strawberries, ch	4 00 @ 6 00	Lettuce, doz.....	2 @ 2½
APPLES, DRIED.		New Potatoes..	2 @ 2
Apples, lb.....	4½ @ 6	Rhubarb.....	1 @ —
Apricots.....	10 @ 12½	Horseradish.....	6 @ —
Citron.....	28 @ 30	Squash, Marrow-	— @ —
Figs, Black.....	5 @ 7	fat, tub.....	6 00 @ 8 00
White.....	6 @ 8	Summer, do.....	6 @ 8
Peaches.....	7 @ 10	Spring Beans.....	5 @ 2½
Pears.....	7 @ 8	Tomatoes, lb.....	— @ —
Plums.....	3 @ 4	Turnips, cwt.....	50 @ —
Pitted.....	12½ @ 13½	White.....	75 @ —

## LUMBER.

WEDNESDAY M., April 25, 1877.

CARGO PRICES OFFUGET SOUND PINE.		RETAIL PRICE.	
Rough, M.....	18 00	Rough, M.....	22 50
Refuse.....	15 00	Fencing.....	22 50
Clear.....	30 00	Flooring and Step..	32 50
Clear Refuse.....	20 00	Pickets.....	25 00
Rustic.....	32 50	2d quality.....	25 00
Refuse.....	22 50	Lathe.....	3 50
Surfaced.....	30 00	Furring, lineal ft..	—
Refuse.....	20 00	REDWOOD.	
Flooring.....	28 00	Rough, M.....	22 50
Refuse.....	15 00	Refuse.....	18 00
Beaded Flooring.....	30 00	Pickets, Rough.....	20 00
Refuse.....	20 00	Pointed.....	20 00
Half-inch Siding.....	20 00	Fancy.....	30 00
Refuse.....	16 00	Siding.....	25 00
Half-inch Surfaced.....	25 00	Surfaced & Long Beaded	37 50
Refuse.....	20 00	Flooring.....	35 00
Half-inch Battens.....	20 00	Refuse.....	32 50
Pickets, Rough.....	1 00	Half-inch Surfaced.....	32 50
Rough, Pointed.....	13 00	Rustic, No. 1.....	40 00
Fancy, Pointed.....	26 00	Battens, lineal ft..	—
Shingles.....	35 00	Shingles, M.....	—

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., April 25, 1877.

BEANS.		HOPS.	
Bayo, ctt.	3 25 @ 3 75	California.....	15 @ 20
Butter.....	1 50 @ 1 75	NUTS—Jobbing.	
Pea.....	2 40 @ 2 75	Cal. Walnuts.....	9 @ 10
Red.....	3 00 @ 3 25	Almonds, hd sh lb	7 @ —
Pink.....	3 00 @ 3 25	Soft sh lb.....	15 @ 17
Sm'l White.....	2 25 @ 2 40	Brazil.....	14 @ 16
Lima.....	2 25 @ 2 37½	Peanuts.....	17 @ 18
BROOD CORN.		Peanuts.....	4 @ 6
Common, lb.....	2 @ 2½	Filberts.....	15 @ 16
Choice.....	3 @ 4	Union City, ctt.....	3 00 @ 3 50
CHICORY.		Stockton.....	3 00 @ —
California.....	4 @ 4½	POTATOES.	
German.....	6½ @ 7	Petaluma, ctt.....	75 @ —
COTTON.		Salt Lake.....	1 50 @ —
Cotton, lb.....	15 @ 18	Humboldt.....	75 @ —
DAIRY PRODUCE, ETC.		Curry Cove.....	— @ —
BUTTER.		Early Rose, new, 25	00 @ 25
Cal. Fresh Roll, lb	27½ @ 30	Sweet.....	87½ @ 1 00
Point Reyes.....	30 @ 32½	POULTRY & GAME.	
Pickie Roll, Old.....	22½ @ 25	Hens, doz.....	6 00 @ 7 00
do, New.....	27½ @ 30	Roosters.....	6 00 @ 10 50
Firkin.....	25 @ 30	Broilers.....	4 50 @ 7 00
Western Reserve..	16 @ 20	Ducks, tame.....	6 00 @ 6 50
New York.....	— @ —	Geese, pair.....	2 00 @ 2 50
CHEESE.		Wild Gray.....	1 50 @ 2 00
Cheese, Cal, lb.....	12½ @ 15	White.....	75 @ 1 00
Id.....	8 @ 12	Turkeys, Live, lb..	20 @ 23
Eastern.....	— @ —	Dressed.....	20 @ 23
N. Y. State.....	— @ —	Snipe, Eng.....	2 50 @ —
EGGS.		Rabbits.....	1 00 @ 2 25
Cal. Fresh, doz.....	26 @ 27½	Hare.....	1 50 @ 2 50
Ducks.....	20 @ 22½	PROVISIONS.	
Oregon.....	22½ @ —	Cal. Bacon, L't, lb	14 @ 14½
Eastern.....	19 @ 20	Medium.....	14 @ 13½
FEED.		Heavy.....	13 @ —
Brn, ton.....	27 50 @ —	Lard.....	12 @ 14
Corn Meal.....	15 00 @ 25 00	Cal. Smoked Beef	9½ @ 10
Hay.....	15 00 @ 25 00	Eastern.....	— @ —
Middlings.....	37 50 @ —	Eastern Shoulders	— @ —
Oil Cake Meal.....	40 00 @ —	Hams, Cal.....	13 @ 13½
Straw, bale.....	75 @ —	Id.....	14 @ 15
FLOUR.		Dupe's.....	15 @ 15
Extra, bbl.....	8 12½ @ 62	Davis Bros'.....	15 @ 15
Superior.....	00 @ 75	Magolia.....	15½ @ —
Graham.....	7 00 @ 75	SEEDS.	
FRESH MEAT.		Alfalfa, Cal.....	27½ @ 30
Beef, 1st quality, lb	6½ @ 7½	Canada.....	10 @ 12
Second.....	6 @ 7½	Clover, Red.....	50 @ 55
Third.....	4 @ 5	White.....	50 @ 55
Mutton.....	3 @ 4	Cotton.....	6 @ 10
Spring Lamb.....	8 @ 10	Flaxseed.....	3½ @ —
Pork, undressed.....	4½ @ 6	Hemp.....	5 @ —
Veal.....	7 @ 9	Italian Grass.....	35 @ —
Dressed.....	7 @ 9	Perennial.....	35 @ —
Milk Calves.....	6 @ 8	Millet.....	10 @ 12
GRAIN, ETC.		Mustard, White.....	10 @ —
Barley, feed, ctt., l	1 80 @ 1 85	Brown.....	3½ @ 4
Brewing.....	1 90 @ 1 95	Ky. Blue Grass.....	30 @ —
Cheval.....	6 @ 6½	Medium.....	28 @ —
Buckwheat.....	1 75 @ —	Sweet V Grass.....	75 @ —
Corn, White.....	1 15 @ 1 90	Orchard.....	30 @ 35
Yellow.....	1 35 @ 1 90	Red Top.....	25 @ —
Small Round.....	2 00 @ 2 05	Hungarian.....	8 @ 12
Oats.....	1 70 @ 2 20	Lawn.....	50 @ —
Milling.....	2 25 @ 2 40	Wazette.....	20 @ 25
Wheat, shipping.....	2 70 @ 2 80	Timothy.....	10 @ 10
Milling.....	2 70 @ 2 80	TALLOW.	
HIDES.		Crude, lb.....	6 @ 6
Hides, dry.....	16 @ 17	Refined.....	7½ @ 9
Wet salted.....	7½ @ 9	WOOL, ETC.	
KEY, ETC.		SHEEPING.	
Beeswax, lb.....	25 @ 27½	Short Froe, dusty.....	13 @ 15
Honey lu comb.....	10 @ 15	Good.....	15 @ 18
Strained.....	6 @ 8	Choice Northern.....	22 @ 25
		Burry.....	12 @ 15



## Seedsman.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. Trade price list on application.

\* \* We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT &amp; CO.,

607 Sansone street, S. F.

P. O. Box 1023.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

THE DINGEE & CONARD CO'S  
BEAUTIFUL EVER-BLOOMING

## ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND POTTED PLANTS. A large and general assortment of the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA  
SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

500 CHOICE VARIETIES OF  
PLANTS

Trees, Plants, Spring Lists free. F. K. PUGH, Bloomington Nursery, Illinois.

## Nurserymen.

## LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, - San Jose, Cal.

A large and general assortment of

## Fruit and Ornamental Trees,

Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. 1 offer for sale a well assorted stock. Low-topped, stately fruit trees a specialty. Address,  
S. NEWHALL, - San Jose, Cal.



## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, - Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

## HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.,

Wholesale Grower of

## ORANGE, LEMON and LIME TREES.

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

SQUILLS, Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

## Agricultural Articles.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps &amp; Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

## The "ENTERPRISE" FEED MILL

(PACKER'S PATENT),

FOR GRINDING BARLEY, ETC.,



Equally as commendable, has now been tested to entire satisfaction of all, and meets the demand for an article of that kind that has not been supplied on the Pacific Coast heretofore.

CHEAP AND RELIABLE.

All Goods Warranted.

Send for Illustrated Circulars and information to

## HORTON &amp; KENNEDY,

Managers for California and Pacific Coast,

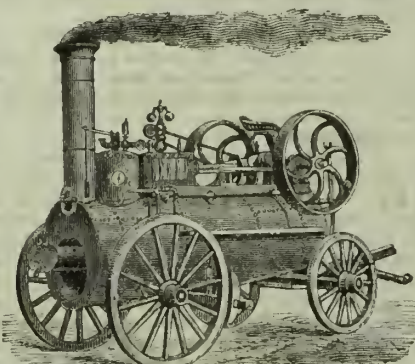
General office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## H. W. RICE,

Manufacturer of

The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood-Burning Engines changed to Straw-Burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 36 Bluxome Street, near Fifth, San Francisco, Cal.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON &amp; WILLIAMSON,

STOCKTON, CAL.

## Fraud! Fraud!!

COLLINS &amp; CO'S

## CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

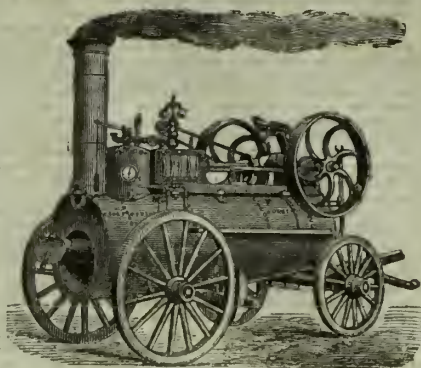
## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS &amp; CO.,

212 Water Street, New York.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 &amp; 309 Market St.

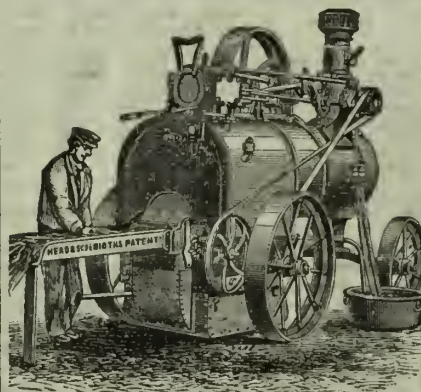
SAN FRANCISCO.

43, 45 &amp; 47 J Street,

SACRAMENTO.

## HEAD &amp; SCHEMOITH'S

## STRAW-BURNING ENGINES

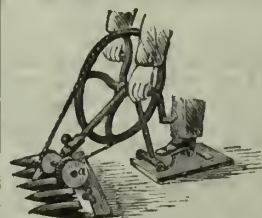


At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes, Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required.

The knives can be sharpened without taking them out or hitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, a, is regulated by a set screw so that in grinding, the exact level can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.  
Address,  
WIESTER & CO.,  
17 New Montgomery St., San Francisco.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,

LUCAS &amp; CO.,

Nos. 215 and 217 Main Street, San Francisco.

## CALIFORNIA FARMERS' MUTUAL

## Fire Insurance Association,

No. 38 California Street,

(GRANGERS' BUILDING.)

SAN FRANCISCO, CALIFORNIA.

CAPITAL, - - - - \$200,000 00  
ASSETS, DEC. 31, 1876, - 310,793 69

## MUTUAL PLAN.

AMOUNT	PREMIUMS
Risks written to Dec. 31, '76, - \$6,202,435.00	\$136,622.18
Less Amount Cancelled, - 435,419.00	9,608.38

Amount in force, Dec. 31, '76, - \$5,767,016.00	\$127,053.80
Losses paid, - - - - -	\$16,830.00

## CASH PLAN.

AMOUNT	PREMIUMS
Risks written to Dec. 31, '76, - \$3,605,935.00	\$71,805.16
Less Cancelled and Expired, - 1,557,346.00	28,585.16

Amount in force, Dec. 31, '76, - \$2,048,589.00	\$43,280.00
Losses paid, - - - - -	\$12,713.71

## OFFICERS.

J. D. BLANCHARD, - - - - - PRESIDENT  
I. G. GARDNER, - - - - - VICE-PRESIDENT  
G. P. KELLOGG, - - - - - TREASURER  
A. W. THOMPSON, - - - - - ATTORNEY  
FERD. K. RULE, - - - - - SECRETARY

## TRUSTEES.

J. D. Blanchard, - - - - - San Francisco  
G. P. Kellogg, - - - - - Salinas  
I. G. Gardner, - - - - - San Francisco  
Chas. Laird, - - - - - Salinas  
Uriah Wood, - - - - - San Benito  
A. B. Nally, - - - - - Colusa  
A. W. Thompson, - - - - - San Francisco  
A. D. Logan, - - - - - Colusa  
I. C. Steele, - - - - - San Mateo  
G. W. Colby, - - - - - Butte County  
A. Wolf, - - - - - Stockton  
C. J. Cressey, - - - - - Oakland  
J. C. Merryfield, - - - - - Dixon  
E. W. Steele, - - - - - San Luis Obispo  
C. S. Abbott, - - - - - Monterey  
Dr. T. Flint, - - - - - Hollister

Farm property insured at actual cost on the Mutual Plan. Other desirable property insured, and rated according to merit.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER, - - - C. J. CRESSEY.  
VICE-PRESIDENT, - - - JOHN LEWELLING.  
TREASURER, - - - J. V. WEBSTER.  
CASHIER, - - - ALBERT MONTPELLIER.  
SECRETARY, - - - FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## MUSIC BOOKS

-FOR-

## Schools, Academies &amp; Seminaries.

THE HIGH SCHOOL CHOIR, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents), SHINING RIVER, (35 cents), GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

## OLIVER DITSON &amp; CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

ROWELL & CHESMAN  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.

Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulations, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.



# AVERILL MIXED PAINT,

MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

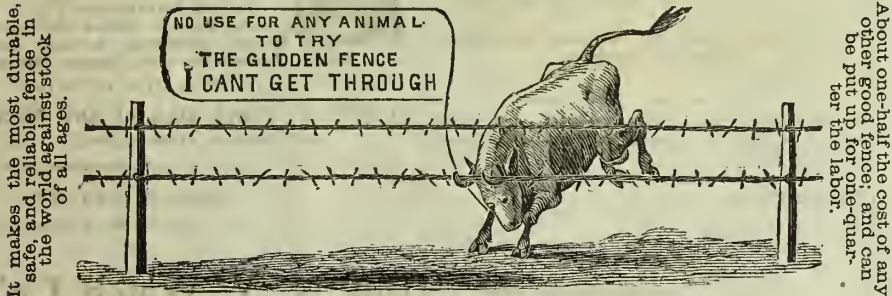
It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

For Sample Cards and Circulars, Address

## CALIFORNIA PAINT COMPANY,

27 STEVENSON STREET, S. F.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.  
Manufactured by Washburn & Moen Manufacturing Company.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

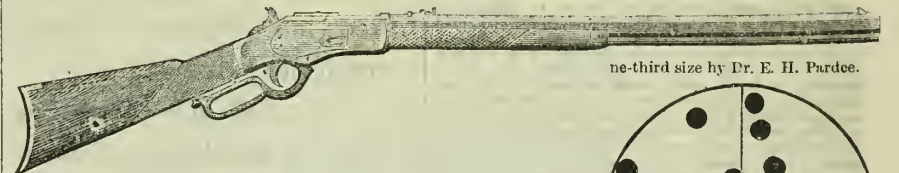


CALVERT'S CARBOLIC  
**SHEEP WASH,**  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

## Winchester Repeating Rifle.

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting  
Defense, or Target Shooting.



The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**  
SOLE AGENT FOR THE PACIFIC COAST.

**FALKNER, BELL & CO.'S**  
**WOOL AND LIVE STOCK AGENCY.**  
Office—430 CALIFORNIA STREET.

Warehouse, Corner of 6th and Townsend Streets.

**FIRE INSURANCE AT SPECIALLY REDUCED RATES**  
Stock Yards, Butchertown, Corner of 14th Avenue and Second St.

Live Stock of All Descriptions Received for Sale.



## The Triumph of Art in Railroad Travel.

Year by year we note the footsteps of progress in many directions. In no direction is progress more palpable than in the facilities offered the railroad traveler of the present day. Looking back but a few years, we can see the tolling snail-like advance made day by day by the emigrant's wagon, as it was slowly but surely drawn toward sundown by the patient ox, or the slowly moving farm horse; then came the old-fashioned stage coach; following closely, we had the canal packet; then the steamer on the lakes and rivers; then the locomotive engine and the stage, like car. Now! the palatial coach, and more than palatial drawing room and sleeping car. Yet, not satisfied with these, that marvel of mammoth Western corporations, the Chicago & North-Western Railway, as we stated some weeks ago, has developed hotel cars that will, for elegance, usefulness and real comfort, eclipse everything of the kind that has been hitherto placed in service on any road. Some of our readers seem to have some doubts about the merits of hotel cars, or their superiority over the so-called dining car, that is run for a few miles on some roads. "I am not so sure about that," said one of our friends, as he had finished reading our first article about these hotel coaches that are to be run on the Omaha and California line of the Chicago & North-Western Railway, "I am not so sure I would care to take my dinner in any car, no matter how much like a palace, while running at the rate of 40 miles an hour." It is a saying, "that the faster you run the safer." Why, last June it will be remembered, that this road hauled from Chicago to Council Bluffs, in less than ten hours, the now celebrated "Jarrett and Palmer Train." On that train was a hotel car, not as large, with less wheels under it, poorer springs, and in no way as strong and easy for riding in as these new cars are to be, and yet, Mr. Jarrett said "while on the Chicago & North-Western line, running at an average rate of 50 miles an hour, we took our breakfast as comfortably as we would at Delmonico's, in New York."

It is well known that the Chicago & North-Western Railway is built over the most favorable line as to grades that could be found between Chicago and the Missouri river, with but few curves; its track is mostly of heavy steel rail, gravel ballasted, with wide roadway, giving it permanence and solidity—it is as smooth as a floor; all its cars strong; with plenty of wheels under them, and with springs so adjusted that the usual "bouncing" and oscillation is reduced to the minimum. We observed in an ordinary car the side motion and rising and falling of the car was less than half an inch, and sometimes scarcely perceptible. We believe it will be found that a person will sit in these hotel cars and eat or write as comfortably as he could at his desk or table at home; *this we choose to call the triumph of art in railway travel.*

We learn that this new line of hotel cars is being pushed to completion as fast as the full force of workmen in the Pullman shops can do it. We shall be certain to see them in a few weeks.—*Cedar Rapids Republican, Feb., 1877.*

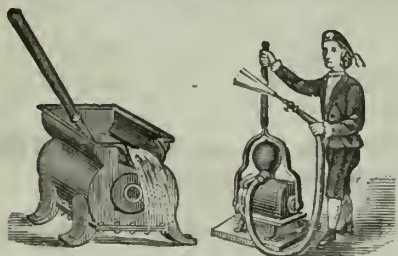
## Canadian Patents for U. S. Inventors and Patentees.

It is only recently that the Canadian Government has granted patents to United States citizens. In consequence hereof the many immensely valuable inventions patented in this country are now patented in Canada. Patents are much sought for and are readily disposed of at fair cash prices. In our country about three-fourths of all manufacturing is based upon patents, especially in the New England States no manufacturing business of any consequence is started without being protected by such. Our neighbors across the border have not been slow in observing and learning that inventions and patents are the foundation of all prosperity in manufacturing purposes. Hence all our patents for labor saving and agricultural machinery, and innumerable improvements in home comforts meet a ready market in Canada. Inventors and Patentees should therefore not delay to secure their patents in Canada; many good inventions are already pirated by Canadians, who, against law and right, appropriate United States inventions and have them patented in their own name. After a patent is granted it is extremely difficult to prove who is the first and original inventor. Therefore, inventors and patentees to be safe, you will have to secure your patents in Canada without delay. We have facilities for securing Canadian patents second to none. Our charges for securing Canadian patents are only \$65, which is from \$10 to \$20 lower than other solicitors. A model is required.

Inventors and patentees! do not delay and lose your opportunity. Things may change. With model and description of your invention remit \$25, and we will prepare all drawings and documents and forward them to you for signature. In about 30 to 50 days we can return your Canadian patent.

DEWEY & CO.,  
Patent Solicitors, S. F.

## IRRIGATION and PLACER MINING



## THE SLUTHOUR PUMP

Has been thoroughly tested for irrigating purposes, and for economy in power, durability and simplicity of parts, and large results, it really has no equal, and our orders show that the farmers are at last fully convinced of this important fact. Send for circulars to

J. M. KEELER, AGENT,  
(Late of 330 Sansome Street.)

Now with MESSRS. M. C. HAWLEY & CO.,  
301, 303, 305, 307 & 309 Market St.,  
SAN FRANCISCO.

## Superior Pianos for the People at Popular Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

## The Brilliant and Durable GOLDEN PIANO

Which we now offer the readers of this paper

## At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

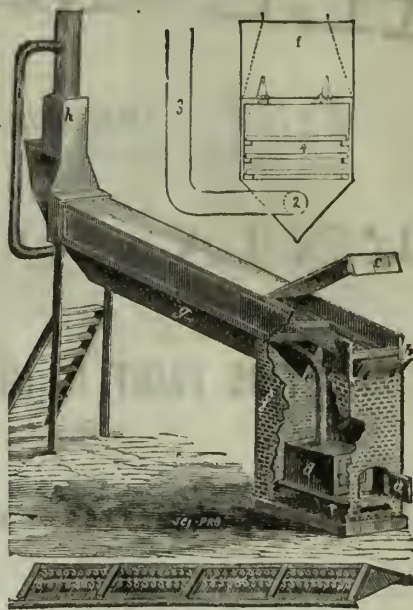
## Prices of the Golden Piano:

The Golden Piano, \$500	\$350
(UPRIGHT-C.)	
The Golden Piano, \$375	\$300
(SQUARE-No. 1.)	
The Golden Piano, \$500	\$350
(SQUARE-No. 2.)	
The Golden Piano, \$600	\$400
(SQUARE-No. 3.)	
The Golden Piano, \$800	\$450
(SQUARE-No. 4.)	

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.

## KEELER'S IMPROVED AMERICAN FRUIT DRIER



## AND SOLAR HEATING ATTACHMENT.

We have abundant testimony to prove that this is the best Family and Farm Drier on the Pacific Coast. Its merits and working are fully set forth in an illustrated circular which will be sent to every inquirer by

J. M. KEELER, Patentee and Agent,  
(Late 330 Sansome Street.)  
Office with Messrs. M. C. Hawley & Co.,  
No. 307 Market Street,  
SAN FRANCISCO.

## FARMERS!

We solicit the favor of your orders for any kind of

## FARM LABOR.

Our office is one of the oldest Labor Bureaus on the Pacific Coast, (formerly the "Free" California Labor Exchange), and is well known for its efficiency in the selection of

## COMPETENT

## and RELIABLE

## HUSBANDMEN.

No Shiftless, Drunken or Lazy Applicants are knowingly

Furnished with positions. Your wants will be promptly filled without any expense to you. Please write or telegraph, stating wages, duties to be performed, location of farm, etc. Good

## TEAMSTERS,

## MILKERS,

## BUTTER-MAKERS,

## HARVEST-HANDS,

## BLACKSMITHS,

Wood-choppers, Engineers, Cheese-makers, Threshing Machine hands and all others ready to start at short notice.

## A. ZEEHANDELAAR & CO.

Employment and Real Estate Agents,

(Removed to)

No. 606 CLAY STREET, (up stairs).

Near Montgomery Street, SAN FRANCISCO, CAL.

N. B.—Our Mr. Zeehandelaar has furnished for the last 10 years over 200,000 farm laborers with employment, and fills only places with a view to give satisfaction to both employers and employees.

## ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.

25

Elegant Cards, all styles, with name, 10 cents. 20 Rose or White Bristol, with name, 10 cents; 20 Beautiful Scroll Cards, 15 styles, no name, 10 cents, post-paid. J. B. HUSTED, Nassau, N. Y.

## TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

## SEEDS. SEEDS.

## IMPORTED.

Crosby's Extra Early Marblehead Mammoth } Sweet Corn.  
Stowell's Evergreen Mexican Sweet, New

Early Canada } Yellow Flint Corn.  
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe  
White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. \*My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge, Cochins, White and Brown, Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 650, San Francisco, Cal

## Buy N. Y. Watch Co's Superior Watches.

C. H. DEWEY. GEO. JORDAN.

DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware,

Etc., Etc.,

No. 433 Montgomery St., near Sacramento, SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

## American Watches a Specialty.

## THOROUGHbred FOWLS, BRONZE TURKEYS, Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

Eggs Shipped to

EGGS, \$6.50 per doz.

Any part of the

BRAHMAS } \$5.00.

Coast to Hatch Af-

LEGIHORNS }

ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

35

FASHIONABLE VISITING CARDS, 15 varieties, in an elegant case, with your name handsomely printed in the latest style of type, for 25 cents. Agent's outfit, 20 cents. Samples for stamp

D. F. COOLEY, BROCKTON, MASS.





Volume XIII.]

SAN FRANCISCO, SATURDAY, MAY 5, 1877.

[Number 18.]

#### Agriculture in Oregon.

From all accounts that come to us, our neighbors to the north are having a very good time agriculturally, and enjoy the prospect of a most abundant and profitable harvest time. It cannot be doubted that theirs it will be to profit from the unusual prices which the Eastern wars will bring to Western producers. We notice also that there are indications that both Oregon and Washington Territory will partake largely of the summer's tide of immigration. We read of large parties heading for Walla Walla, leaving the railroad and crossing overland from Kelton, in Utah. The largest plum of which we hear in the shape of immigration, is a proposition for a tract which will accommodate 60,000 Norwegians, who propose to move in a body from the grasshopper regions of the central West. This is immense. We would doubt the truth of the statement if it were fair to doubt without proof of the error of it. But whether this be true or false, it is true that the northern coast country bids fair to receive its full share of the moving tide.

Our attention is called to the subject of agriculture in Oregon by the receipt of the annual report of the Oregon State Agricultural Society, for which we are indebted to the Secretary, E. M. Waite, Esq., of Salem. The pamphlet is one of which our Oregon readers may be proud, for it shows gratifying life and sets forth many useful facts. One feature of the report, and one which we wish were more frequent in the agricultural publications of the different States, is a group of certi-

fied statements of yields of different crops. We propose to quote a few of these for general information. Of course they would be much more valuable if they had been accompanied by statements concerning the quality and price of the land on which the crops were grown, and the fertilizers used in the cultivation of the crops. But such as they are they are interesting and may set our readers in this State to comparing their own results and thus form a comparative idea of their successes. We may note that most of the statements are made under oath and duly certified:

"In Clackamas county last year P. M. Rinearson raised 106 bushels of corn on an acre. He planted in hills three feet apart and gave it no unusual cultivation. Oregon is not a corn country, of course, but in a few localities crops of corn by no means discreditable are raised. Mr. Rinearson also sowed in drills, three feet apart, one-half acre of yellow onions in sandy soil; they were cultivated twice and hoed twice, and the yield was 412 bushels, or 824 bushels per acre. He also planted in hills 14 inches apart, one-half acre of ruta bagas or Sweet turnips; they were cultivated once and hoed twice, and the yield was 41 tons and 260 pounds.

"On the farm of Beckett & Hobson, near Eola, Polk county, the yield of hops was 136 boxes of 12½ pounds each, per acre, and Geo. E. May, of Lane county, picked from one acre 3,290 pounds.

Among the dairy reports we find the following, sworn to by H. E. Ankney, of Salem, and dated October 11th, 1876: "Cheese manufactured in Roe's premium vat. Night's milk strained into vat, cooled down to about 62°, morning's milk added, cream strained and mixed in milk; then heat to 84°, sufficient runnet added to curdle in 15 minutes; when curd hardens it is then cut with curd knife. Then let stand until whey begins to rise, then heat is turned on and gradually raised up to 98°, curd having been cut in the meantime until about the size of a pea. It is then kept at about 98°, stirred in the meantime to keep from packing together, until the whey becomes acid. The whey is then turned off and curd cooled down to 90°. Then salted, two and a half pounds to the 1,000 pounds of milk. Put in press about 20 hours—use screw press.

"I have manufactured, since April 8th, 1876, 24,406 pounds of cheese. The greatest number of cows milked was 136, and the least 60.

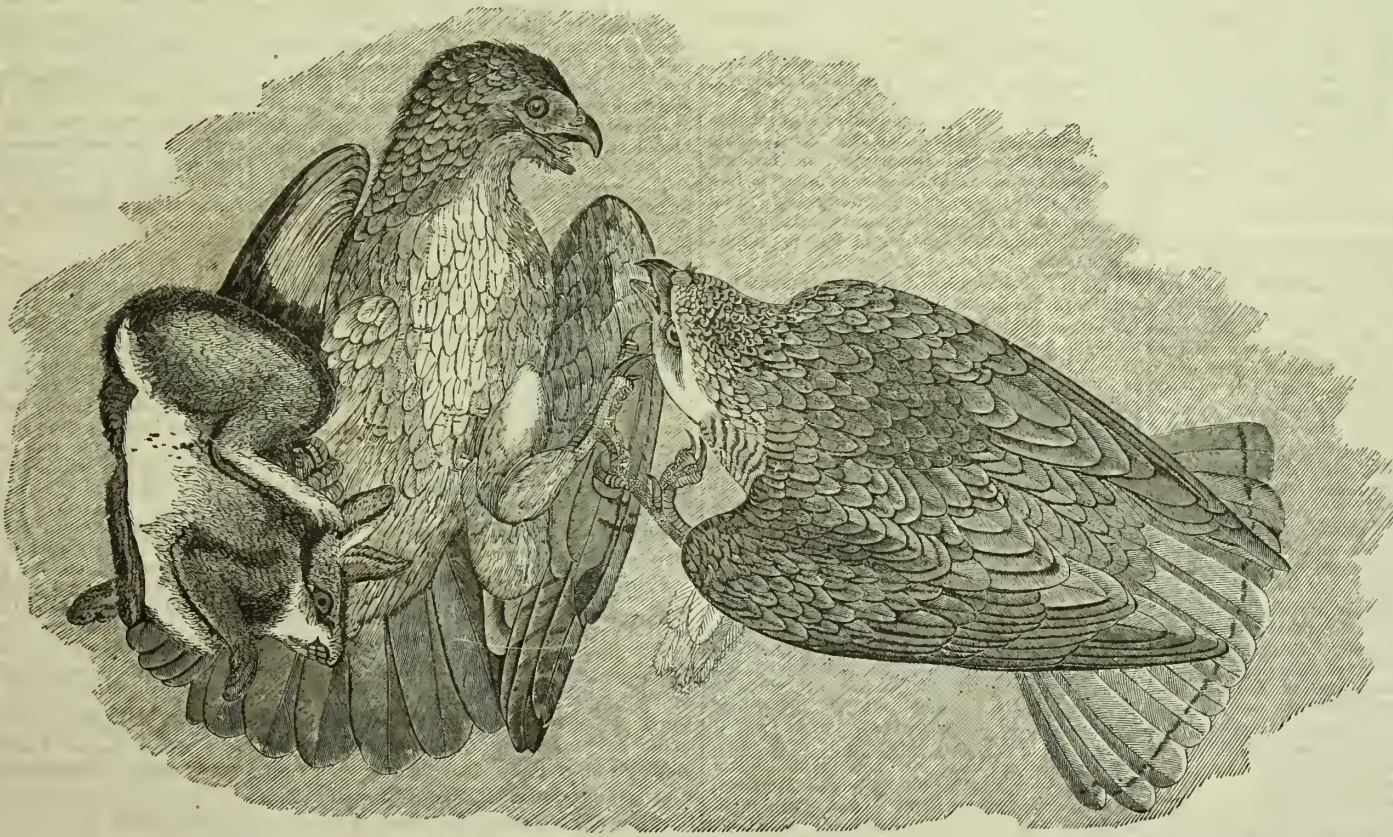
#### The Red-Tailed Buzzard.

The red-tailed buzzard is a resident of every part of the Union, and of Canada. It builds its nest on the largest and tallest tree it can select in the forest, yet not remote from farm-houses. The male and female toil hard for eight or ten days in carrying up dried sticks, slender twigs, and coarse grass, or Spanish moss. The nest is large, of flattened form, and located in the center of a triply-forked branch, and contains four or five very hard and smooth eggs, of dull-white color, spattered with brown or black. Sometimes, though rarely, a nest is found upon an isolated tree. The flight of this bird is firm, long-continued, and at times very high; and it sails a great distance without any apparent motion of its wings, but often repeatedly utters, in a prolonged, mournful cry, without inflection or variation of intensity, the sound *kae*, with no other purpose seemingly than to admonish the

#### Desert Lands.

It is quite evident now that under the law passed by the last Congress, great tracts of our unoccupied domain are passing from the possession of the Government into the hands of speculators, and not into the hands of needy and enterprising settlers, in whose interests the law was ostensibly framed. Although these speculators will doubtless spend money on the land and improve it, the result will only be that they will hold it as monopolists, and the future purchaser will be forced, probably, to pay a dollar for every cent which these monopolists expend. This is directly against the best interests of the State. We need that our unoccupied domain should be filled with *bona fide* settlers and residents, and to attain this result it is wise to smooth their way to the occupation, but until

such men apply for the lands, it is better a thousand-fold that the lands lie as they are than they should pass into the hands of monopolists. Our lands cannot be occupied too quickly in the right way, nor too slowly in the wrong way. The field of the speculators' work seems to lie chiefly in Kern county. The subjoined is contained in a dispatch from Bakersfield, dated the 28th ult.: "Haggin & Carr have made 84 desert land applications, (about 50,000 acres), mostly on the plains on the north side of Kern river. Twelve sections on the plains southeast of Kern river have been taken by other parties. Those on the north side are on the line of the projected canal of the Kern River Land and



RED-TAILED BUZZARD.

Cheese has been sold at 16 cents per pound; the cost of production is about five cents per pound, not including interest on capital invested."

The following is a very good yield for a single cow, as certified by B. E. and Ann Stewart, of North Yamhill: "This is to certify that the Holstein cow, Midwald, aged four years, dropped her last calf on March 25th, 1876, and that from April 10th to April 20th, she gave from 44 to 48 pounds of milk per day, 44 being the lowest and 48 the highest; and that we made of one day's milk two pounds of butter, and on one day five and one-half pounds cheese. Cow on green timothy and wheat pasturage, and was not fed anything besides."

These reports are interesting. They are not so immense as to cause distrust, but are very satisfactory showings. We trust that at the next State fair, which will be held at Salem, commencing on Monday, October 8th, there will be a much fuller showing of farmers' results in all departments of husbandry.

THE United States Supreme Court has rendered a decision ending the protracted oyster war between Maryland and Virginia. The Court held that Virginia can prohibit the citizens of other States from planting oysters in the beds of tide waters within her jurisdiction while permitting her own people to do so.

usual objects of his prey of the danger in which they stand. Upon espying any of these, it usually descends to a convenient perch, from which, with closed wings, it makes a dart with almost unerring accuracy and success. Sometimes, it flies over a field very near the ground, and, upon perceiving its prey, ascends in a beautiful curved line to the top of the nearest tree, from which it again descends in the manner described. At other times, it will alight in the field, devote a few minutes to pluming itself, and then ascend in a series of circles so high as to look like a mere dot in the heavens; yet from this height it no doubt perceives very minute objects; for it occasionally suddenly descends to seize its unsuspecting victim. From a well-chosen position upon a tall tree, it also at times quietly and patiently watches. Squirrels, rabbits, tame pigeons, chickens, wood-rats and meadow-mice are its common food. Soft-shelled tortoises are often aimed at by it, but can escape by diving.

Though these buzzards hunt in pairs for the young, during the breeding season, and are very careful of them, when this period is over they become strangely alienated, and often fight with great fury for the possession of a morsel of food which one of them has captured. Their flesh is not fit to eat. Like other birds of its kind, it is covered with parasitic vermin, which are large and of auburn color.

Canal Company, and are the best of the plains. A few fractional sections on Kern island, first located by fraudulent scrip, have been located under the Desert Land law."

There seems no room to doubt that the dummy system has been freely used in the locations which have been thus made by the largest operators. The *Chronicle* prints lists of the names of the locators, in which it appears that all available family names have been used and then recourse has been had to the list of employees in the establishments controlled by the chief speculators.

We see by a dispatch from the East that the United States land authorities do not think wrong can be done under the law in the way of locating lands which are not strictly desert lands. The *Chicago Tribune's* Washington special says: "The Commissioner of the General Land Office believes that the dispatch stating that great swindles have been perpetrated under the act relating to the sale of desert lands, has been exaggerated. The pre-emptors will be required to prove affirmatively that no acre is susceptible of cultivation except by irrigation. If any swindles have been attempted, therefore, the Land Office has power to defeat them."

We are quite willing that the Land Office should thus assume the duty, which to it belongs, of protecting the people's interests.



## CORRESPONDENCE.

### Paradise Valley, Humboldt County, Nevada.

[From Our Traveling Correspondent.]

"The ground was all covered with snow one day."

EDITORS PRESS:—It was on one of the last days of April. The snow was not likely to last. It melted nearly as fast as it fell. It was just in the nick of time for both field and meadow. For while the grain and grass were looking well, many had fears that the yield for the season would be short. A plentiful snowfall in winter is as much a necessity here for irrigating as the "early and latter rains" for the land of Palestine or the bay counties of California. The valley is bordered on three sides by mountains, and is ordinarily well watered by many a sparkling rivulet from the melting snows of their slopes and summits.

It has a linear extent north from the Central Pacific of 40 miles, with perhaps one-fourth as much in width and is justly placed among the best grain-producing valleys of the State. About 10,000 acres are devoted to the cereals, chiefly wheat and barley, giving an average yield per acre of 25 bushels, or about 250,000 in the aggregate.

#### To the Manor Born or Imported, Which?

The soil seems admirably adapted also to rye. A fine new species—new to the writer at least—and claimed as a native of the county, was met with on the rancho of Mr. C. Lamanche. It is known as the mammoth, and by some as the Wild Goose, from a report that the seed was found in the claw of the bird of the same name. It is more than likely that it has been introduced by some shrewd farmer from the coast of the Mediterranean or some other foreign clime for purposes of speculation. Be this as it may, it is found to grow here very tall and luxuriantly, at the same time giving a fine yield. The heads are well filled and nearly six inches in length, the grain long, hard and plump; in color much like that of wheat, and makes delicious bread, whiter and sweeter than any rye bread you have ever tasted, and distinguishable from that of wheat flour by an appreciable difference in the sweetness of the flavor, as well as in a slightly more yellowish cast in its color.

#### Mills and Other Improvements.

There are two good substantial flour mills in the valley, supplying all wants for home consumption, with a large surplus for Winnemucca and other places on the line of the railroad, together with the mining districts of this and adjacent counties. In the upper end of the valley there is a very flourishing settlement, with large well-tilled farms from 100 to 600 acres each, where they have a post-office and a store, a fine district school, in charge of Professor Case, an I. O. O. F. lodge, and a Grange, numbering 60 members, who have erected a large hall of two stories—the lower soon to be used for another store.

The PACIFIC RURAL PRESS is found in many of their houses and highly valued, a fact speaking well for the intelligence and progressive spirit in the community.

Land is by no means dear in the vicinity, and can be safely recommended to the attention of the immigrant in search of a comfortable home.

Owing to the high price of material, little attention has thus far been given to fencing, the only rancho of any size under fence entire, being that of Mr. B. Fisher, of 640 acres. The kind adopted on his place, and generally, is the post and wire, which answers well for

#### Horses, Sheep and Cattle.

Large bands of which are found grazing in the valley or on the surrounding mountains. The number of sheep is estimated at 10,000 head, and that of horses and cattle at about 5,000 each, some 3,000 beef cattle having been fattened here last winter for the San Francisco market. Stock of all kinds is represented to do well in winter. In addition to an abundance of grass, hay is produced to the annual amount of 2,000 tons, and is often sold from the stack at from \$6 to \$10 per ton. Alfalfa is also found to do well, and much has been sown recently, more particularly for hog feed, as the farmers are beginning to look more to the making of their own pork and bacon. There are perhaps already from 500 to 400 head of hogs, all told, with here and there a commencement made in the improvement of the breed. A few Berkshire and a small lot of beautiful Poland China pigs (making, by the way, an excellent cross), were seen at Mr. T. J. Bradshaw's, giving evidence of a step in the right direction. If it pays to raise the common stock, there can be no loss in feeding and fattening the finer breeds.

#### An Experiment

Was tried by Mr. B. last year, of sowing barley with alfalfa seed, resulting in a yield of 40 bushels to the acre of the one and a pretty well-set growth of the other. A thinner sowing of the grain would doubtless have led to a wider spread of the clover, as it is a well-known fact that a given quantity of timothy seed mixed with the alfalfa tends to shield it from the sun's rays, and at the same time keeping the ground

in a moister state for a wider and deeper rooting.

In conclusion it may truly be said, that few lovelier spots than this are to be seen in the State. That, while the valley is well-deserving of its beautiful name, it sadly lacks the trees and the fruits to make it another Garden of Eden. With the exception of apples and some of the smaller varieties, such as currants and gooseberries, all other kinds may be classed among "the forbidden fruits," but so far as vegetables are concerned, potatoes in particular, better are rarely, if ever produced.

A. C. K.

### Agriculture in Mexico.

EDITORS PRESS:—Having received several letters, on account of a small article published in your valuable paper some time ago, and as I cannot answer every letter separately, I will give some more information about this part of Mexico to your readers, through the columns of your much-read periodical.

The climate here, as in any country, is much varied. We have a tropical, and a temperate climate. Parts of the country are unhealthy, and parts very healthy. All along the coast we have some fever, while the larger part of this State is entirely healthy, but none so unhealthy but what whites may live there with impunity. Pests and ravaging diseases are entirely unknown.

The products vary much. The temperate climate produces wheat, barley, all kinds of semi-tropical fruits, coffee, sugar-cane, etc. The tropical part produces the different palms, cotton, cocoa, ramie and all kinds of tropical fruits.

Lands are here in abundance. They are rented at low prices, according to situation and water facilities, in small or large parcels. Lands are generally bought in entire ranches, varying from 5,000 to 20,000 acres. Still, for a colony, lands may be purchased on easy conditions, to be divided in homesteads.

The price of land, by buying good and bad, is from 50 cents to \$25 per acre, according to water facilities and qualities.

Labor is from 37½ to 50 cents per day, without board, on the coast; 25 to 37½ cents in the mountains, and may be procured in abundance.

The mode of working lands here at present is very primitive, and liable to considerable improvements. The importation of farming implements and all kinds of machinery is free of duty, still the price is generally doubled by freights and incidental expenses. At present there is no firm here dealing in farming implements.

Cotton sells here readily at 75 cents per 25 lbs, with seed, on the farm. Rice at \$2 and \$3 per 100 lbs; coffee is now worth 25 cents per lb, but must in a short while come down to 15 cents. Wheat is \$2 to \$2.50 per 100 lbs. Corn from 50 to 75 cents per 125 lbs. Beans from \$2 to \$2.50 per 125 lbs; castor oil beans are worth \$1.50 per 100 lbs; sugar sells here from \$2.50 to \$2.75 per 25 lbs.

Cotton is planted largely on the coast, in a very primitive way, and raised entirely without irrigation, producing 150 to 200 arrobas, or 25 cents per panonega (about nine acres). The cost of planting one fanega of cotton, from the beginning to the end, is about \$75 at the way of doing business now. There are three cotton mills in Colima, and cotton there is worth about \$1 and \$1.12½ per arroba, with seed.

There are large tracts of land where cotton can be raised by irrigation, near Colima, but Mexican intelligence has as yet not come to watering cotton. Coffee is giving extremely good results. The tree gives its virgin crop at three years of age, and lasts from 15 to 25 years. 100,000 trees can be planted and taken care of during three years, including buying land and personal expenses, for \$10,000, taking the highest figure, but as only only one-third part of the money is required in the first year, the planter has good chances to grow other crops and so reduce the cost to one-half. The net proceeds of 100,000 trees is at least \$5,000 per year. This crop has never been known to fail. Beans, corn, rice and wheat generally double the money invested and good crops triple it.

Cows are worth from \$15 to \$20 (gentle milk cows); horses from \$20 to \$30; mules from \$20 to \$40—of course Mexican stock; hogs are cheap, but very profitable to raise.

Fruits are very cheap, owing to the fact that there is no way of shipping them. A company for canning fruits would be profitable to the owners and farmers.

The roads are poor, and freights are shipped only on mule back. Wagons are almost unknown. As soon as we have better roads, or a railroad there are thousands of articles which would fetch a good price in foreign markets. The vine is only cultivated as an ornament. It does very well here, and bears at eighteen months from planting. The consumption of imported wines is considerable, and home production would be a promising business. Ramie is cut here four to six times per year, and grows abundantly anywhere in the state, but as there is no machinery for working it, it is only planted experimentally.

Peanuts grow luxuriously and fetch a good price. The castor oil tree grows anywhere in the streets wild. The cocoa tree yields at five years old the first small crop, and has a good price. Tobacco grows well; and gives a fine

leaf, selling at \$1.50 to \$2 per 25 lbs., cured, but would fetch a far better price if properly cured. The Colima coffee got the first premium at the Mexico fair, and the second premium at the Centennial, the first being awarded to Vera Cruz coffee, so that Mexican coffee has beat all other coffee countries.

There are good chances for soap and paper factories, there being any amount of material here for their products and good sale. The cotton and oil mills are doing a good business.

Mines, which it is generally supposed are scattered broadcast around here, are rather difficult to find, on account of the density of the woods and sparse population. There are mines, and good ones, but it takes large capital to work them, and the ore must be very rich or else it will not pay, besides I want the American miner to know, that if he comes back from prospecting dead-broke he will find it impossible to get work to make his living, much more to make a raise. The whites here are the employers, the Mexicans the laborers.

Let it be distinctly understood that I should advise anyone without money to stay where he is, for him Mexico is the last place to go to. A drunkard better go to the infernal regions before deciding to come to Mexico, where Tuscauesco and Tequila would burn him up sooner than ever the lower fires could do it.

A single young man wants \$500 clear, to invest in his farming, and he don't want to go about spending his money foolishly; then a family needs at least \$1,000 clear. With anything less, they better stay at home, unless they want to work with Mexicans at the rate of 37½ cents, and board themselves.

Rain commences here, generally, in June, and lasts till October, mostly raining every afternoon, being clear in the morning.

Corn, beans, etc., are raised anywhere without irrigation on dry lands; pasture is plenty. Building materials, such as adobes, are cheap. Lumber has the same price as in San Francisco. House rents are cheap and living is cheap; a single man can live well on 50 cents per day. Traveling facilities are not very good, mostly horse and mule back. Dry goods have about the same price as in the United States. Cigars are cheap, but anyone accustomed to chew will have to provide himself with enough of the filthy weed to do him while he stays here, for there is not one ounce of chewing tobacco around this part of Mexico. The insecurity here is not any greater than in California, and accounts of revolutions and robberies are greatly exaggerated. The pronunciamentos are mostly bloodless, and farmers are perfectly safe going on the principle "to keep out of trouble's way."

The voyage to Manzanillo can best be performed by taking the steamer, from which port a person can proceed to any part of the State on horseback on fair roads.

Anyone intending to come to Mexico and stay, and bring money, better deposit his money in a good bank in San Francisco, taking a check from the same bank, payable at sight by the bank. Such checks can always be sold here with at least from five to eight per cent. premium, and readily, besides being the safest way. I will with pleasure give any information desired, and having good connections all through Mexico can guarantee reliable answers. Anyone writing will have to enclose 50 cents for postage, as postage is one of the most expensive things in Mexico. E. GROTHASS.

Colima, Mexico, 1877.

### Santa Barbara County.

EDITORS PRESS:—I find the idea prevalent abroad, north of us, is that there is a general drouth in this county, and that nothing will be raised. But this is not quite so. In Lompoc valley we shall raise quite a little hay, and could have raised much more had we but plowed it in, and have done that early on corn, bean, and potato land. Messrs. Howell & Peck have some sixty acres in two places in the valley harrowed in early, and good judges think it will certainly make about two tons to the acre. Others have a good prospect too. But little if any will be kept for grain, as hay will be in such demand. A good breadth of potatoes, corn, squash, beets and beans is planted. Much is up and looking well, but it is too early to hazard confident prophecies. The sandy sediment land is proving itself to be much superior to the stiffer soils for holding moisture. We have had scarcely any spring frosts. We have also yet had but few fogs, but it is early for them. We look for heavy fogs a little later. They will be the salvation of many crops, and do immense good. A great many head of stock have been brought in from drier regions to be tided over on our exceptionally good pasture in the hills, which was never known to fail. We have yet considerable grass, too, among the timber in the valley. Where land is stiff adobe, or was plowed too late and left rough instead of being smoothed off or rolled, it will certainly fail of raising a crop. Scarcely any volunteer grain will make hay. That this valley stands a short rainfall better than some places is clear from the fact that a number of families have come in from Tulare and Kern counties and are surprised at the agreeable contrast.

At New Vineland, the new temperance town and settlement, now being surveyed for sale by R. T. Bnell, proprietor, they have been favored with some heavier showers, but the crop will be light. He has some splendid sediment

soil near where the new town is to be. One of the finest grazing ranches in the State is the Santa Rosa, of J. W. Cooper. He expects to carry his heavy stock of sheep, some 17,000, on his 16,000 acres, but has had to kill a great many exceedingly fine lambs. His grain is luxuriant, even falling in places. This will be another temperance settlement soon, as he promises to allow of its being colonized on those good principles after he disposes of his stock, but it cannot be till next year. The San Julian—the queen of stock ranches; as I heard it called recently—and the adjoining ranches of Messrs. Hollister & Dibblee, have a large amount of good feed on them yet, but their stock of sheep has increased too rapidly under such favorable conditions. I am glad to hear that they are not averse to putting up their fine property to meet the constantly increasing demand for homes by the continued influx of settlers. But that will not be before another season.

We are now having freight and passenger steamers call very frequently at the Gaviota wharf, as the demand calls for increased accommodation. It is said that Messrs. Hollister & Dibblee purpose building a wharf at a naturally sheltered spot, south of Lompoc that will be a great advantage and bring considerable new land into market. All things point to this section being thickly settled within a few years.

Between Lompoc and the New Vineland temperance territory there is quite a little settlement of families on government land. Some grain and other crops there look very well. On land broken for the first time of course it is not as moist. I do not speak of the Guadalupe and Santa Maria country because I have not been over there for some time. I regret to say very drying winds have been blowing for some days, but they are abating now. J. W. WEBB.

Lompoc, April 21st, 1877.

### Los Alamos Valley.

EDITORS PRESS:—Knowing that you are always anxious to get information about any new settlement of choice lands, I wish to send you a brief sketch of Los Alamos valley, Santa Barbara county. The town of Los Alamos is situated in the center of the valley—half on Mr. J. S. Bell's and half on Dr. J. B. Shaw's ranches. The dividing line is Centennial street, 100 feet wide. The main thoroughfare is called Bell street, also 100 feet, running at right angles. The town is about 50 miles from Santa Barbara, 55 from San Luis Obispo, and about 27 from Guadalupe. It is on the Coast Line stage route, at which place they have a station in charge of, and ably conducted by, "old Uncle George."

There is one nice, clean hotel with good accommodation for travelers, a blacksmith shop, and a saloon kept by Mr. J. D. Snyder, and last, but not least, a well stocked store owned by Mr. A. Leslie, where can be found everything from a needle to an anchor. I saw the last named but it was in a glass case. The town is growing slowly but surely, and I hope the next time I write you, the business places will have become too numerous to mention, which I am sure will not be far distant.

Los Alamos valley is 20 miles long, and about two wide. It is one of those I wrote you about leading out of Santa Maria valley. Precious things are mostly packed into small parcels; this is no exception, for though the valley is small it is good, for I would defy you to find a finer soil in the State of California than there is here. It lies between two ranges of lofty hills very nearly the whole of its length, which break the north winds and keep the temperature even. Being surrounded by hills it attracts the rain more than open plains, which accounts for Los Alamos getting at least one-third more rain than Santa Maria. Last year the valley was cut up into farms ranging from 60 to 200 acres. There is already a good number of farmers settled upon some of these tracts, and this being their first year they had not much time to build their houses and barns, and get much land under cultivation, but what they have is looking splendidly; it fact it would be good for sore eyes to look at it, for it is a picture compared to the surrounding country, where there is little green for the eyes to rest upon but, as it were, a barren waste. It did me good to see the crops of Messrs. D. Coiner, Jewett, and Judd, and others who have smiling faces; a contrast from the doleful look the farmers of other localities wear. Mr. Bell, who lives about half a mile from the town, has a pasture fenced wherein there is the finest feed, and the hills around are looking green, proving that there must still be good feed on them. Should there be any of our Eastern farmer friends coming to California looking for homes, I say, for one, let them come here, for it is impossible for them to do better than settle in this part of the country, for there is room for at least 1,000 families. Mr. Coiner showed me around his farm, pointed out the grain sown at different times, and his nice garden where he has most all kinds of vegetables looking well. He told me others had as good, if not better; that he has traveled a good deal, but never lived in a finer climate, or saw better soil. Every one can raise an orchard, and on the side-hills have a vineyard. There is very little of Jack frost, if any, and just enough wind to keep the valley healthy. To prove what can be done, a look at Mr. Bell's homestead will convince one that a prettier place would be hard to find. W. H. S.

Guadalupe, Cal., April 20th.



## Tuolumne County.

EDITORS PRESS:—The denizens of the foot hills have a worse plague on hand than Kansas grasshoppers. Sheep, sheep alive, half alive, and sheep dead. There never were sheep in such numbers as are now flocking to the mountains. There seems to be a sheep and a lamb for every spear of grass. The very chaparral is denuded of its green leaves to satisfy the hunger of this ravenous army of feed-hunters, who seem driven to extremities for the lack of water and feed. Now they must devour the last morsel of feed from settlers along the highways. And what they can't steal by daylight is picked up by the rays of a friendly moon. In reality, this sheep pestilence has become a daily annoyance. Our stock will be the sufferers, for after the thousands find green feed towards the snow belt, nothing will be left for the settler, and the dead stock will find a bed amongst the dead sheep. Bravado and pistols are freely in sight, and an unarmed or single individual has no chance in defending his cherished spot of green feed.

I am now speaking of the homesteads or pre-emption claims. Outside of these the land is cleared of grass, roots, stems and flowers. Ten and twelve thousand head per diem pass my humble dwelling, making me a herder more than half of my time, but I cannot keep guard by night, and sheep eat and travel by night as well as by day.

The "soap root" has proved too much for the poorer class of sheep. It seems that there is something of a poisonous nature about it never developed before. As many as six bands of sheep have been more or less poisoned with it, especially if the flocks camped where it grew in abundance. Three flocks from the Coast range became its victims. Many have died, and many more have been so sick that the flocks had to lay over. Prostration and vomiting follow the eating. Strong and healthy flocks have been enabled to conquer the effect, but the poor sheep succumb to the soap-onion, or, as it is generally termed, "soap root."

We had the first severe frost last night. Ice was found upon stagnant water; enough to blight the young bean crop. The fruit is beyond its reach, except in exceptional cases. From appearances the fruit crop will be abundant. The first crop of figs will be heavy, but there is no market, and no way of transportation to one. The crops in this county will be good, perhaps more so than any former year. Dry years for the plains produce the proper conditions amongst the foothills for an extra yield. Take it all in all, the foothills are more to be depended upon for steady home comforts and general supplies, than the ever-changing conditions of the great plains. These things will continue until a true system of irrigation relieves the settlers from the varied phases of a California climate. Ten acres, well irrigated, would be of more real value than 1,000 with present chances.

JOHN TAYLOR.

Mt. Pleasant, April 21st.

## Bear Valley, Kern County.

EDITORS PRESS:—Nothing having appeared in your columns from this place during the nearly five years' time that I have been a subscriber to the PRESS, the first thing in order will be to let your readers know where Bear valley is. It is the smallest of the three principal valleys which constitute the arable portion of the Tehichipa country, and is distant by good wagon road, 10 miles west from the station of Tehichipa Summit, on the Southern Pacific railroad.

The Tehichipa valley proper, through which the railroad passes, is about 12 miles in extent, southeast and northwest, by three or four miles the other way. Cummings valley is about six miles east and west, by three in width, while Bear valley, lying to the north of the other is about three miles east and west, by a little more than one mile in width. All these valleys are very nearly contiguous and are connected by good natural wagon roads. In all are found good water and good health. The two last-named, being good farming land, are all taken up, and for the most part under fence, a number of places being well improved in all respects. As the first settlers do in most places, many are offering their farms for sale at prices barely covering cost of improvements, some with good titles, others without, while others again, with better holding qualities, are reaching out for more than they now have. Oak and pine timber being plentiful and easy of access, farms can be improved very cheaply, the arable lands being free from all encumbrances in the line of grubs and brush.

All kinds of small grain, and in some places corn, grow here without irrigation, and in many places the finest of potatoes and other vegetables are produced. Wherever tried for a sufficient length of time, fruit trees are in bearing, showing that the best quality of those kinds of fruit adapted to the temperate climates will grow here. Mr. George Cummings, after whom the valley by that name is called, has 2,000 fruit trees growing on his farm, many of them bearing fruit unsurpassed in excellence of quality.

The altitude being about 4,000 feet, some snow falls in winter, although the weather does

not get very cold. Springs are generally late, the falls also late. In summer the west wind blows with great regularity, making a summer climate quite equal to that of the coast counties, but free from the fogs of that locality. The soil of the surrounding mountains being for the most part a rich productive loam, fine grazing is afforded for stock of all kinds. Until the trespass law was enacted (which, by the way, is a nuisance in the mountain portion of southern California), this section was used almost exclusively as a stock country, for which use nature seems to have formed it, although there are many beautiful farms here. For hog raising it is especially adapted, the mountains and hills being covered with oak timber, while the wild lettuce, alfalfa, with other favorite kinds of hog feed, remain green very late in summer, affording pasturage far superior to the much boasted alfalfa for eight or nine months of the year. I have had frequent occasion to notice hogs on the alfalfa pastures on Kern island, and I have yet to see an instance in which the same class of hogs have done as well as on the wild ranges here during the time named above.

One great peculiarity of this locality is that those seasons when other portions of the country have failed of a crop of grain, and of feed for stock, both have been good in Tehichipa. Spring rains do more good here than winter rains, and it has so turned out, thus far, that spring showers have been copious after dry winters. At present the prospects for crops and feed are very good.

The town of Tehichipa, situated about three miles from the depot, has three variety stores, one drug store, two hotels, well kept, three saloons, well patronized, two blacksmith and wagon shops, and a flour mill, just built last summer, and which makes good flour. Mr. Wm. Baker, the proprietor of the mill, paid the farmers two cents a pound for wheat last season, there not being enough raised to supply the local demand for flour.

Hay and barley are marketed mostly at Mojave, the railroad depot for the mines of Inyo county and other mines to the northeast. Wild hay is now worth \$15 and grain hay \$20 a ton on the ranches, in bale, and barley is worth two cents per pound, although last fall prices were considerably below these figures.

P. S. MARTIN.

Bear Valley, Cal., April 28th, 1877.

[We thank our correspondent for the information given. We are always glad to hear from new localities, for thus our readers may gain acquaintance with new portions of our wide domain.—EDS. PRESS.]

## THE APIARY.

## Not a "Moth Protector."

EDITORS PRESS:—In your issue of the 7th inst., we notice a communication from your correspondent, Solomon W. Jewett, entitled "Honey Bees.—A Moth Protector."

We would ask of you to allow us space in your columns to make a correction which we deem necessary, for many inexperienced beekeepers, and especially those that do not take a bee magazine or a paper with an apiary department, (yours has the latter, but we suppose some of the RURAL readers do not read this department as often as they should) may be deceived by the publication of the above mentioned article. We presume the authors of the "new wrinkle" were unaware that they were putting aside a well established fact when they supposed they had the "boss" or "bonanza" moth trap or excluder.

We are always glad to hear of any new inventions, when of practical use, connected with the apiary, but as for a moth trap or a contrivance to prevent this troublesome insect from ravaging the hives, we are not ready to accept.

The moth question has been and is still being discussed in the bee journals, and all the conclusions are the same, or nearly so, as those arrived at by our eminent apiarians. A moth need never enter a colony to deposit her eggs, for as has been proven, the eggs are often laid on the bottom board at the entrance of the hive, sometimes a short distance within the entrance, and they (the eggs) are carried in on the bees' feet. In this manner moths are brought to the top of the hive and are often found in the honey frames several feet above the entrance.

As to the usefulness of the "moth protector" we consider it a cruel practice to compel best when laden with honey to travel so far when there is no necessity. As to its keeping the moth out, we repeat we do not believe, for wherever a bee can go you may depend upon it a moth can follow. They are more wide-awake than our friends give them credit for. Not likely you will find them come out at the other "end" (of the horn) "surprised and trembling."

Large hives, when in the extremes as the one mentioned by your correspondent, are the best kind of a moth generator, and it is a little strange that it is not filled with the progeny of the beekeepers' pest. One reason we can account for them being free from moths is: there is and has been a good, healthy and strong stock of bees in it.

Very large hives are not to be recommended, and we caution any one launching too strongly

into them. There is no harm in trying one to experiment with, and we would be pleased if Captain Stevens would furnish the readers of the RURAL with a more complete description of it, also of its construction and style of frame. A great many inconveniences are experienced in using such a hive and having it divided into compartments by perforated division boards, as described by Mr. Jewett.

The best moth protector we know of is a strong swarm with a prolific queen in a good hive—the American or Langstroth, for instance.

U. K. LYPTUS.

North Temescal, Cal.

## HORTICULTURE.

## The Rival Driers.

EDITORS PRESS:—Fruit drying by artificial heat is destined to become one of our leading industries, no doubt, and it is gratifying to observe that great efforts are being made to reach perfection in that direction; but cannot "the rival claimants for popular favor" advocate their respective machines and processes without so much bitterness, as has been shown in your paper lately between the Blowers and Alden folks?

What the fruit growers want is *solid facts* of what has been done and not what is proposed to be done, and they take precious little interest in what the patent machine gentlemen may say in the newspapers about the great merits of their contrivances. If they would advertise in the RURAL, for instance, their respective wares and place of business, we could find them and get what information they could give, and save you the labor and expense of printing, and us the trouble of reading, their windy and unprofitable stuff. If Mr. Blowers really has such a wonderful machine as he claims, a year's work will show it, and then the Alden people will have to come down in their prices, or give up the contest.

The method which will do the most and best work, with the least running cost, will eventually get away with the business, even if the original cost of machinery is greater than of the inferior contrivances. There is one thing not generally known as regards Mr. Blowers' raisins, and that is that his are made from the White Muscatel grapes, which is by far the best raisin grape, and is as yet quite scarce in California, most of our raisin vineyards having the Muscat Alexandria grapes. If Dr. Chandler, for instance, had the same variety of grapes he would doubtless be able to produce just as good a raisin as Mr. Blowers, and so be classed among "the raisin kings of California." G. Sacramento, Cal.

[We do not quite agree with our correspondent that the facts could be just as well ascertained by each one interested going to each of the fruit drier men and hearing his story. We think the truth will be more likely to appear by allowing these gentlemen to expose each other's weak points in a discussion, but we do not expect the controversy will be much prolonged. There are more people interested in finding out the merits of fruit driers than our correspondent thinks, and if each of them had to make a tour of the State to ascertain the facts which he can read in his own sitting-room in the PRESS, there would be an enormous expenditure of time and money to find out what it costs nothing to read. As for Dr. Chandler he is fairly entitled already to the distinction named as a raisin producer.—EDS. PRESS.]

## THE VINEYARD.

## The Huasco Raisin of Chile.

The Huasco of Chile is probably the most delicate and delicious raisin in the world. The quantity produced is quite limited, and it is scarce and dear even in that country. Small consignments occasionally come to this market, but the supply is irregular, and as the fruit cannot be sold for less than fifty cents per pound, our grocers find but little call for it. Thinking that the vine might be worthy of a trial here, and that any information regarding it would be of interest to the raisin producers of the State, a gentleman connected with the S. F. Call wrote to an intelligent agriculturist of Valparaiso, formerly of California, and received the following interesting particulars:

About sixty miles from the Port of Huasco, Chilo, S. A., is situated quite an extensive valley, celebrated for its excellent raisins, which are divided into two classes. One is called the Muscatel, and is inferior in quality to the Huasco. The latter class is scarcely procurable, on account of the demand for it, and, comparatively speaking, the limited quantity raised. The price probably exceeds that of any other raisin cultivated in the world, and as high as fifty cents per pound has been paid for them. The former is inferior in quality and taste to the latter, and is preferred to the Malaga raisin by many strangers.

## Cultivation.

The ground outside, or surrounding the vine-

yard is laid out in paths, over which an arbor is built, and over this grapevines are carefully trained to keep off the early spring winds which sometimes effect the young sprouts. The vines inside the square are planted in rows six feet one way by eight feet the other, the intervening space being planted to alfalfa, from which two or three crops are cut for hay each year. The vines are trimmed in bush or tree fashion, and in the fall of the year all extra wood is cut off, leaving two eyes to each branch. When it is discovered that a branch is a poor bearer, it is cut off close to the trunk. The vineyards are planted on the side-hills and in the valleys.

The vines are thoroughly irrigated (no half work will do), first, when the eyes begin to swell, again, when about to blossom, and lastly, when the fruit is formed. There is no rain in the valley during any part of the year. Dew is abundant during the winter, and the summers are warm and dry.

When fully, but not over ripe, the fruit is carefully removed from the vine and taken to the thatched-roof open sheds and hung up, care being taken that the bunches do not touch each other, and each day they are carefully watched, to see if any of them need turning. Once dried, the different grades of raisins are separated and packed in boxes of 25 pounds each.

## Remarks.

The Huasco grapevine was imported into Chile by the Spaniards long before the establishment of the republic, and is a Spanish Muscat. The berry is of a golden yellow color, large size, and the vine is a good bearer; the raisin is yellow and quite transparent. It is much esteemed for its peculiar flavor, and is used for the table exclusively.

A great many attempts have been made to transplant the cuttings to other parts of South America, but in each case it has been a failure as far as the production of raisins of the same flavor and quality is concerned. It is a curious fact, as yet unaccounted for, that different vineyards in the same valley do not all produce alike; some give the Muscatel and others the Huasco. It is supposed that certain action of the winds makes the difference, the most sheltered locations giving the best results. A few cuttings were sent to California three years since, but what success attended them is unknown. Mr. C. T. Ward raised a few plants from seed at Hayward, Alameda county, and it is presumed that by this time they have borne fruit, being now four years old. Could a suitable location be found for this grape in California, it would enrich the owner of a vineyard. It is worth a trial, especially in the southern portion of the State. It would be difficult to procure proper cuttings, and more difficult to get them safely to San Francisco. The better mode of giving the grape a trial, would be by procuring the raisins and planting the seed. In four years seedlings would bear fruit, at least they do so here. From my observations in this country and in California, I am satisfied that a superior raisin grape could be raised from the seed of the Huasco in the southern portion of California where there is little or no rain. A small valley, no matter how rocky and stony, should be selected, which is surrounded by hills, in order to give protection from winds, and where the full benefit of the sun can be had. It should not be less than 250 feet above the level of the sea, and should have a small stream of running water for irrigation. Well water, unless it stand some time in a deposit, is not good for the plant, and a redwood tank in this country has been proved to effect the water to the injury of the vine. Here they do not plow deep for setting out vines, and when once they begin to bear but little care is taken to cultivate the land. On the contrary, nearly every one plants his alfalfa between the rows, thus getting more profit from the land, while the vines do not appear to suffer from the treatment. Great care is taken in pruning.

DRIED POTATOES.—A German journal thus describes the manufacture of "dried potatoes," as conducted at Carsten's works at Lubeck: The potatoes are peeled with the hand and cut into disks by a machine. These are put into a basket and this into a boiler, where the potatoes are nearly but not quite boiled. The disks are next put on wire frames in a dry oven, where they are dried quite hard. It is important to preserve the color of the potatoes, and to prevent their turning gray, as they would by the above process alone. The material, after slicing, is treated with cold water, to which has been added 1% of sulphuric acid or 1% to 2% of muriatic acid. Then it is washed in pure water and the drying proceeds. The preparation obtained, which has lost none of its starch, is of a slightly citron-yellow tint and transparent like gum. Boiled with water and a little salt, it is said to resume the natural color and fibrous structure of potatoes, and is not distinguishable in taste from the newly boiled vegetable.

CLIMATIC CHANGES FROM COAL BURNING.—Mr. H. S. Eaton, President of the British Meteorological Society, estimates that the heat developed from the present annual consumption of 5,000,000 tons of coal on the metropolitan area of 118 square miles, and from all other artificial sources, would suffice to raise the temperature of a stratum of air 100 feet in depth resting on that area 2.5° every hour. The climate of London has been greatly modified during the present century by its great growth in population and corresponding consumption of fuel.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### Worthy Lecturer's Visits.

**EDITORS PRESS:**—Again in the lecture field, I deem it both a pleasure and a duty to give through your valuable paper to the Order at large, a few items of Grange interest as I pass along. Leaving San Francisco by Friday morning's boat—Yosemite—for Vallejo, and there taking the Cal. Pacific cars for Calistoga, gave me a pleasant and most delightful ride up the Napa valley, which for so doubtful and dry a season looks quite promising in the crop line. I could only wish the lower counties had as good a prospect. At Calistoga, after a hurried dinner at the Cosmopolitan hotel, we were ushered into the stage for Lower Lake, drawn by six restive horses, well suited to the mountain roads, and at a pace of nine miles per hour over mountains and down valleys, through the most picturesque and lovely scenery ever traversed in any country, for it is a peculiarity to our Golden State that every variety of scenery is presented to the sight-seer in passing over our mountain roads. The passing through Guenoc, the residence of our Past State Master, Bro. Hamilton, we could not stop, as our appointment was Lower Lake for the next day; so, as much as we should have loved to stop over and talk with the Guenoc brethren, necessity in the fulfillment of present appointments sent us whirling on, till about six o'clock in the evening of the same day we reached Lower Lake—and true to Grange instincts found the W. M., Bro. Harris, of Lower Lake Grange, in waiting to meet us, and to at once convey us to his house to partake with himself and his dear Grange family of their hospitalities. The evening spent in interchange of inquiries upon Grange matters, the next day by 11 o'clock A. M. we were in Grange meeting making the acquaintance of the brothers and sisters at Lower Lake Grange hall, and after a Grange feast with a genuine social time, we adjourned to the church at 12 o'clock P. M. to give the Grangers, farmers and citizens generally a chance to meet the State Lecturer, who we found had been duly advertised by posters to address Lower Lake citizens upon Grange matters.

Such was the full attendance and deep interest manifested, that our lecture lengthened out to near two hours in length, ventilating the aims, purposes and objects to be accomplished through the Grange organization, not alone for Grangers, but for the agricultural and labor interests of the State and nation, or in a word for the best interests of all classes, whether rich or poor, by the presentation of practical plans through a system of co-operation that equalized all conditions of society on plans and principles of equality and equal justice to all classes, and especially the enlightening, educating and ennobling of the labor element to a plane of equality with capital, in which neither need be antagonistic, but both work to the advantage of the other and thus benefit all.

Such was the interest and enthusiasm manifested in the afternoon meeting that a meeting was called for early candlelight at the same place, open to all, to give the citizens more generally a chance to attend. At the appointed time and at the ringing of the church bell the house was crowded, and for one and a half hours more the Lecturer continued his theme of Grange work to one of the most attentive audiences he had ever addressed; after which congratulations came in from all sides, and introductions to members that had been cold, if not dead, in the Grange work for a year or more, all promising a renewed energy in their work for so noble a cause and so glorious a work.

#### Kelseyville.

We then returned home with the Bro. Harris to be taken by him next day to Kelseyville, some 20 miles distant over Chimise mountains, in full sight of Uncle Sam mountain, who rears his peak to the height of 2,500 feet above the level of Clear lake, which at Kelseyville is in plain sight. On our passage over the mountain we were overtaken by a snow, rain and thunder storm, which served to give variety to our trip and to verify to us most practically that in California, truly every variety of climate is obtainable. The dry, bracing atmosphere of Lake county is especially suited to invalids suffering with bronchitis or many lighter pulmonary affections, and its numerous mineral springs make it a county of great resort for invalids generally.

After our arrival in Kelseyville on the 22d, and after taking care of Bro. Harris's team, and ourselves with a dinner at the hotel, we sauntered out in the storm (as it was yet raining) and found Bro. Ormstead, Worthy Secretary of

Kelseyville Grange, who at once claimed us as his guests, and with his good Grange wife and family made us perfectly at home. We found here that great exertions had been made by the working few of Kelseyville Grange to get up a good meeting, not only of Grangers but farmers not Grangers, and the citizens generally. The Presbyterian church was obtained to accommodate the meeting, and at the appointed hour, 2 o'clock, P. M., on Monday, the 23d, the ringing of the church bell announced the hour of meeting. A most respectable meeting was had, as to members, and great interest manifested, so much so that a night meeting was called, and at early candle-lighting our numbers, from both the members of the Grange and citizens, were more than doubled, and had I not been compelled to continue my journey to Lakeport, to fill my appointment there the next day, we might, with profit, have held a regular camp meeting on Grange interests in this new field of Grange work, that takes not hold of the Grange only but of every citizen interested in the labor elements and agricultural industry of the country.

#### Lakeport.

Bro. Renfro, Past Master of Kelseyville Grange, was on hand betimes on Tuesday morning, the 24th inst., to take us to Lakeport, there to meet with the Lakeport brethren and to talk with them on Grange work.

Let me here for a moment digress from Grange talk to say a word of the country we pass through. Lakeport is situated at the head of Clear lake, in a most beautiful and charming valley, with rich farming lands, well improved, and this season particularly promising in crops, with climate that cannot be excelled anywhere, and with that class of mountain and valley scenery that defies excessive description, truly a little natural paradise below, when to make it so, in fact, belongs to its citizens only.

We arrived at Lakeport about 10 A. M., and at once found upon the street such a number of Grangers that we were made completely at home, being taken in charge first by one and then handed to another, and so marched to all of their offices and places of business, till we had made the complete acquaintance of the town, including the editorial staff of both papers, one Democratic and the other Republican.

At 2 o'clock, the general Grange hour for lecture, we were assembled in Grange hall, aggregating numbers so great that seats had to be improvised to accommodate the audience, and after a discourse of one and a half hours, it was announced that the State Lecturer would again address them at early candle-lighting in the Court house, where everybody would be accommodated with seats. Then came congratulations and introductions and invitations to go home with them and partake of their hospitality, etc., so thick and fast, that we thought we must truly be in paradise, for so genial and comfortable were we made to feel that we felt that here at least, in Lakeport, the Grange work is far from dying out.

We were also met by a delegation from Potter valley, who had come 40 miles to literally carry off the State Lecturer (as we had no appointment there), and secure from him a visit to their two live Granges before proceeding elsewhere.

The time for the evening meeting arriving, the Court house was filled with Grangers, farmers and citizens of all classes. The subjects discussed were the objects of the Grange as an Order; its new work as a means, in the hands of the producing and labor element, to completely reform the political condition of our State on taxation; education and finances generally by legislation for the people instead of class legislation for the rich at the expense of the poor, and the plans, ways and course to be pursued in so doing, being to forget all political partisanship and to fail to know that we are any longer Republicans, Democrats or Independents, but to feel the overwhelming necessity of placing none but honest and competent men in office, without regard to name of party, and that while the Grange, as a body and organization, ignores all partisanship of every kind, claims that a wise political economy is our only salvation.

The meeting was all enthusiasm, but one feeling, one opinion and one expression of duty; and can we perform that duty? Brother and sister Grangers throughout California be encouraged, the Grange is not dead or dying, but truly alive to our new work and duty.

I would like here to mention names that gave me such kind attentions, but to do so looks so much like discrimination that I forbear, and close my notes on Lakeport Grange by saying they appeared each to vie with the other, brother and sister alike, to do me honor. We accepted the kind invitation of Bro. Deming, who lived three miles on our way to Potter valley, to go with him and his good and true Grange wife to enjoy their hospitalities for the night. Bro. Maze, from Potter valley, also going with us, and Brothers Eddy, Worthy Master; McCrery, Worthy Overseer; and Foster, Worthy Treasurer of Potter Valley Grange, being also taken by other brothers and provided for with similar hospitalities.

On the following morning, Wednesday, the 25th, we all met at Bro. Deming's, and took up our line of travel for

#### Potter Valley.

Forty miles distant. The route led through Scott's valley to the Blue lakes, from the Blue lakes down the Cold Creek canyon to the Russian river, and thence up Russian river to Potter

valley. A more wild, picturesque, romantic—nay, adjectives fail me in description of this passage from Lake to Mendocino county. And though we rode 50 miles that day before ending up at our stopping place in Potter valley, we were fresh and vigorous from the snuffing of Lake and Mendocino counties' mountain air and the continued enjoyment of mountain and valley scenery.

Sufferers with asthma, here are your paradisaical homes—the air dry and bracing, clear as a bell from moisture that is so disastrous to that disease. And to farmers seeking places where crops never fail, make a tour of Lake and Mendocino counties before giving up in despair that there is no retreat from the drouth of this unpropitious season.

Arrived at Potter valley, and dined at the house of Bro. Maze. We were still kept going till we had seen the whole valley in its length and breadth, stopping along as we journeyed at the different homes of the brethren to receive congratulations, and ending up at Bro. Eddy's, W. Master of Potter Valley Grange.

After supper, being near their Grange hall at Centreville (a hall built and belonging to the Grange), we attended a meeting of the brothers and sisters, called for the purpose of meeting the State Lecturer in the secret work of the Order—the open lecture being announced for two o'clock P. M. of the following day—at which time these live Grangers of Potter valley were all on hand, showing anything but signs of the death principle having entered their valley—either as Grangers or among their crops, for truly abundance and plenty were everywhere spread around them in green pastures for their stock, and waving grain awaiting their bounteous harvest.

Having been taken charge of by brother and sister Slingerland for the night, where the comforts of their beautiful and well-provided home had been afforded us, we were in good keeping again for the day's service. So at the appointed hour for lecture found a well-filled house of Grangers and citizens awaiting us, and after discoursing to them for nearly two hours, a meeting was announced by Past Master Bro. McWhinney, who presided, for early candle-lighting, at the

#### Pomo Grange Hall.

Where the State Lecturer would deliver his peculiar lecture on finance. After more and continued congratulations we were taken charge of by Bro. McWhinney, and with his noble Grange mother and other family friends, conveyed to their elegant and in every way comfortable mansion and home at the head of Potter valley, to take supper and to be in readiness for the night meeting. While we thought the day meeting a great success, we found the night meeting to far surpass it in numbers, and a most intense interest manifested in all the subjects treated at both lectures. Remarks were called for and freely offered at both meetings on the necessity and duty of Grangers to now ignore all partisanship and work for the reform so greatly called for in taxation, education and finance.

Potter Valley Granges are fully awake and alive on this subject—were but all the Grangers of the State equally so, the producer and the laborer in the varied industries thereof would not much longer be paying four-fifths of the taxes of the State while the capital element is only paying one-fifth. Nor would this one-fifth tax-paying element be running much longer their system of class legislation to the paralysis of all the industries of the producer and manufacturer and laborer.

Again carried to the more than comfortable home of the McWhinneys, we were taken charge of for the night; and by eight o'clock next morning on our way to

#### Ukiah.

Provided as we had been by Bro. Carpenter, of Ukiah, with a carriage for our special use to convey us to his home. Arriving at Ukiah about 11 o'clock on Friday, the 27th, and the Ukiah Grange having given up their appointment to Potter Valley Grange, we, after partaking of the hospitalities of Bro. Carpenter, took the stage at one o'clock P. M. for Cloverdale, where arriving at Bro. Cooley's valley farm, one mile from Cloverdale, about six o'clock P. M., we were there stopped and taken charge of by Bro. Cooley, whose guest we at once became.

Our appointment to speak at

#### Cloverdale.

Being on the following day at 2 P. M., we found the arrangements were for a closed Grange meeting at 11 o'clock, then a harvest feast at 12, and lecture in the Congregational church at 2 o'clock P. M. After enjoying the hospitalities and good company of Brother Cooley and his family for the night we started out on our Grange work, being introduced to our various Cloverdale Grangers, and partaking of such a harvest feast as Grangers alone give, we all adjourned to the church where we found a respectable but not as large an audience as was desirable, on account of the farmers having been pressed into haying, it coming on them by surprise so rapidly had their grain ripened. But the Cloverdale Grange is not dead, but ready with the Grange element to at once join them in the work before them, and at Cloverdale under the management of Brother Cooley, they are thoroughly posted and can be relied upon to enter the vanguard of reform, especially in the line of political economy, and of placing the farmer by their united action with the labor element of the State, in a condition to be represented in his interests of equal taxation.

This, Mr. Editor, ends the week, and after a Sabbath's rest and enjoyment of the company of brothers here, we leave for Healdsburg, Rio Vista and Walnut creek.

BLAKEY PILKINGTON.

Cloverdale, April 30th, 1877.

### Women in the Grange.

**EDITORS PRESS:**—My pen rebukes me, and may the silent pens of all Patrons do the same for inactivity in our common cause. The Secretary has enough imperative work to leave to others the pleasant duty of reporting the welfare and work of their respective Granges, and yet I think that the busiest of us could easily appropriate an hour or two in each month in gathering the scattered thoughts dropped at our meetings and transmitting them to the PRESS or Patron for our common good. I do not like to see the Patrons' department neglected, for it is the first page eagerly read by myself, and I have no doubt by hundreds of others. The fault lies wholly with us and not the managers of the PRESS.

Let us then form a mutual aid society—a co-operative social movement—in which we will pledge ourselves that each Grange shall be faithfully reported, at least once a month. Such a course would elevate and strengthen every Grange in the State. And as we are all "but parts of one stupendous whole," our influence would extend to national headquarters, and the good accomplished, incalculable.

There is reason why so many Granges that were organized with high hopes are now as willingly resigning their charters, and to me the cause is apparent. Individual effort is too much ignored. The majority throw the burden of the work on a leading few. The sisters, either from native modesty or because it has been considered unwomanly for "women to speak in public," allow the brothers to do the talking, and by their very silence confirm the old notion that they should "be seen and not heard."

A few weeks ago I read a well written, complaining letter in the PRESS, from the able pen of a sister in which she finds fault with the ornamental part that women play in the Granges. And I was sorry to believe that such talents and ideas as were developed in her letter had never been utilized in her Grange "for the good of the Order." Earnest workers are wanted without regard to sex, and I have always observed that where talent exists, men as heartily accord positions of honor to women as to their own sex.

And that brings to mind the grand leading editorial in the Patron for March, in which the rights of women in the Granges were so manfully defended. It is woman's fault if her influence in the Subordinate Grange is not felt, and she does not help to correct the glaring lack of female names on executive committees, in State and National Granges.

It is to be regretted that the presiding officer of the Grange received the masculine appellation of Master. It would be more in harmony with the professed principles of the Order had it been Conductor, thus obviating the occasion for the question, "Can a sister become a Master?" The error naturally crept in when men alone were expected to become members, but it is never too late to correct an absurdity.

I intended when I began, to tell you all about our meetings, but I find my letter too long already, so will defer it until next month.

Will some one be so kind as to give me the address of Sister Washburn, of Colorado, a member of the National Grange who at the October session presented a resolution for universal suffrage.

FLORA M. KIMBALL,  
Secretary National Ranch Grange.  
San Diego, Cal.

### Postponement.

Bro. Pilkington, Lecturer of the State Grange, will not start on his lecturing tour through the southern counties of California until the 1st of June, when he will visit San Joaquin, Stanislaus, Merced, Fresno, Tulare, Kern, San Bernardino, Los Angeles, San Diego, Ventura, Santa Barbara, San Luis Obispo, Monterey, San Benito, Santa Clara and San Mateo. To assist me in making out a list of the places, (two or three in each county) to give proper notice, I will renew the request I made in the California Patron, of April, for members living in each county named to send me a list of the most central points, in their own and adjoining counties. The time it will require to go from one point to another, and any other information that may be desirable in the premises. These meetings will be open for the public, and all are invited to attend who wish to hear Grangerism discussed from an advanced standpoint. A list of his appointments will appear in the next California Patron; also the RURAL PRESS for May 17th.

AMOS ADAMS, Sec'y State Grange.  
May 2d, 1877.

**DEFERRED.**—Owing to press of matter we are forced to hold over for a week an interesting letter from Bro. Wright concerning his recent visit to Sacramento county, and a report of resolutions adopted by Walnut Creek Grange concerning taxing growing crops.



## AGRICULTURAL NOTES.

## California.

## COLUSA.

**THE CROP OUTLOOK.**—*Sun*, April 27: We have all along entertained hopes of being able to ship a considerable surplus of wheat from Colusa county this year, but as we write the prospect is anything but encouraging. We have been told all along that the prospect in the upper end of the county was good, and that they would ship almost as much wheat as last year, but on close questioning of the farmers from different sections of the county, we have concluded that one-sixth of a crop for the entire county would be a liberal estimate. There are pieces of good looking grain in all parts of the county, but all admit that the grain will not be plump anywhere, and that alone will make a vast difference in the weight of the wheat. The twice plowed summer-fallow all over the county is making some grain, and the value of thorough cultivation was never more apparent. Most of the winter sown grain, even in the upper part of the county, is failing, and much of the summer-fallow has been given up. Some "lucky" ones—who helped their luck with good cultivation—will make a great deal of money, but the season will be a very hard one with most of our farmers. Grain on Dr. Glenn's farm, at San Jacinto, is said to be looking very well. Mr. Hoag, who has about 15,000 acres in, says he thinks he will cut in the neighborhood of 20 bushels to the acre, but that is a very big yield for any land in this valley this season. We will all have to inaugurate a closer economy and pull through.

## CONTRA COSTA.

**CROPS.**—*Gazette*, April 28: There is nothing at all to be expected from anything but the summer-fallow and earliest plowed lands, and on these there is some quite promising grain that with cool weather for a few weeks will fill out and turn out well for such a season, but the greater portion of the seeded land will make neither grain or hay, though it may afford pasturage that will help carry the domestic stock along through the season until the fall rains bring new grass.

**SHERMAN ISLAND.**—*Antioch Ledger*, April 28: Sherman island grain is free from rust or mildew, and may now be considered beyond all danger. The yield promises to be very large. Farmers there are already shipping their first alfalfa hay to San Francisco. They get two tons to the acre, and will cut three crops during the season. The hay brings \$20 per ton in the market.

**CROPS IN SAN RAMON.**—From parties who have recently visited San Ramon valley we learn the crop prospects are very favorable. Wheat and barley are of rank growth, and have not been damaged by mildew to any appreciable extent. Several brisk showers in that vicinity during the week assure a crop to that fortunate people. San Ramon is one of the most attractive and fertile valleys in the State, and never fails of a fair harvest. Our townsman, J. G. Chase, has a promising crop of grain on his ranch in that neighborhood, which will indeed be a godsend in this season of general failure here.

## EL DORADO.

**CROPS.**—*Republican*, April 26: The summer-fallow lands in this vicinity are producing such crops of hay and grain as were never seen here before. While nearly all fields are looking unusually well, there is a marked contrast between the fields that were summer-fallow and those that were not, and the former will produce, in hay and grain, nearly, if not quite, double that of the latter. It is probable that both grain and hay will be unusually high next fall, and it is comforting to know that we of this section, have good crops assured, and we only wish we had a larger acreage.

**FROSTS.**—The heavy frosts of last week did considerable damage in some localities hereabout, while in others little or no damage was sustained. Even in this city, there are places where nearly everything that could be killed by frost was completely destroyed, while in others no perceptible injury was noticeable. We learn that Coloma suffers heavily from frost. These heavy frosts are greatly to be regretted, but from present appearances there is no reason to fear that there will not be an abundance of fruit yet.

## FRESNO.

**NEW SURVEY.**—*Expositor*, April 26: M. B. Lewis, County Surveyor, has been surveying swamp lands in the vicinity of Summit lake, during the past few weeks. He describes the land in that section as being exceedingly rich, but owing to the drouth and the tule fires, are nearly devoid of vegetation. Some portions of the land he was surveying was covered with what he terms dry bog, a fine substance composed of tule ashes and decomposed vegetation, into which a person sinks up to his knees at every step. Surveying such land is very difficult, but the task is further augmented by the fact that the land is nothing more than a floating island. The ground, or what is termed ground—being a mixture of earth, roots and decayed vegetation—is from two to four feet thick. Beneath this is a body of water, evidently a part of Summit lake. At every step the ground quivers for a number of feet around, and thus it is very difficult to get the correct bearings of the magnetic needle. Good drinking water is procured by

cutting a hole through the soil to the water, which can be done in a few seconds.

## KERN.

**ITEMS.**—*Courier*, April 26: The effects of the last protracted rains are most manifested in the mountains. Farmers in Tehichipe and other mountain valleys will have full crops. In the Kern River valley the rain was not needed, but wild feed on the island is much benefited. The harvest of the first crop of alfalfa is fully under way, and will yield two tons per acre. All grain crops are in fine condition, the heaviest having fallen with the force of the rain. Corn planting does not begin before May, the late planting being considered best. Preparations are making for the largest crop ever planted here. We were shown by one of our farmers some alfalfa, the sample of 30 acres, which measured four feet eight inches in length. He thinks the field will yield four tons to the acre. About 60,000 acres of land have been located in Kern county under the Desert Land law.

## LOS ANGELES.

**THE HONEY SEASON.**—*N. Levering in Herald*, April 28: At present the prospects for an ordinary honey crop are not as hopeful as we had anticipated they would be a few weeks since, when we were favored with a few rains, which did not wet the ground sufficiently to produce the honey flower as abundantly as bee-keepers had hoped for. The cool weather and the winds have done much to dry up the nectar in the flowers that have bloomed, so that little or no honey has, as yet, been obtained by the bees, who have been rearing brood proportionately to the amount of honey to gather. There are many bee-keepers, we understand, that have commenced feeding old honey that they have on hand. This is wisdom, and those who have not honey to feed we would advise to feed sugar (coffee A), which is next best. This should be made into a syrup about the consistency of honey and poured into the cells of empty comb and placed in the hive; but before doing this, we would exhaust all frames of spare honey that the strong colonies might have to spare. On examination of our own apiary, we find our Italian colonies storing some honey, whilst our blacks, many of them, would have starved out had we not assisted them with honey from the stronger colonies. This season will thoroughly test the superiority of the Italian over the blacks. It is a season that will try bees, if not men's souls. Our principal reliance for honey is the sage and sumac, the nectar of whose flowers, we are informed by experienced bee-keepers of southern California, are not so much affected by drouth as most other flowers. If the cool weather we are now having should continue much longer, the result will be disastrous to the crop, and bees will not likely be able to store more than will carry them through another season, requiring, therefore, careful and skillful management. Negligence in the apiary this season will be rewarded with heavy loss.

## MONTEREY.

**DAIRY NOTES.**—*Castroville Argus*, April 28: E. Griffin has driven down the coast, below the Sur, 40 of his dairy cows, and the same number to pasturage in the vicinity of San Juan, there remaining on the farm near town about 30 head, which it will not be necessary to remove. B. Miller has moved his cows, about 50 in number, to the Kirtley place, where he will be able to keep them till next winter. The dairy ranch of H. Mayers has near 150 cows, but with the feed in store and the ample range enjoyed by the stock, there is no present prospect of any being lost. George C. Parsons also has about 150 cows, but is fortunately the owner of considerable swamp land, which, by means of ditches and levees, he is engaged in draining. The land will afford good pasturage and enable Mr. Parsons to get his stock through the season very comfortably. L. W. Church has in the neighborhood of 70 head, and will probably be able to keep them by feeding hay later in the season. G. E. Bennett has 20 head of cattle, to which he is feeding hay in part. His garden, he says, will help him out during the season. M. Barry has 20 and W. Baxter 13 cows, on their respective farms, both being well provided with feed. We desire to direct attention, here, to the practice of Mr. Baxter, in regard to stacking straw, the value of which is fully realized in such a season as this. Suppose a dozen of our 200-acre farmers had put up their straw in ricks, as Mr. Baxter has done, instead of burning it, would it not now in a measure compensate for crop failure, relieve to a certain extent the hardships of scant pasturage while putting money in their own pockets? We are sure they will heed the lesson. The above comprises all the dairies in this vicinity, and careful inquiry concerning the matter of carrying stock through the season convinces us that there will not be, to avert loss of stock, necessity for their removal during the year from their present ranges.

## NAPA.

**THE TAXATION OF VINEYARDS.**—*Register*, April 28: The taxation of vineyards is a matter in which the growers of the vine are very much interested, especially about this time, when the Assessor is going his annual rounds. The low prices which the vinticulturists have been receiving for their grapes and the dull state of the wine trade for some time past, make the owners of vineyards rather sensitive on the subject of taxation, and render low assessments exceedingly desirable. They will be glad to know that it is the purpose of Assessor Kern to assess vineyards at a somewhat lower value than last year, although he has not yet determined upon

the valuation that will be placed upon them. Last year, not receiving his instructions till he had nearly finished making the assessments, each vineyard was assessed as a whole—that is, no separate valuation was put upon the land and the vines. Good foreign vineyards were assessed at about \$125 an acre, and Mission vineyards at \$60. This year the land and the vine will be assessed separately; and although, as before stated, the Assessor has not yet decided just what he will assess the vines, we understand that the vineyards will probably be assessed at about the same figure as good farming land, the assessed valuation of which last year ranged from \$30 to \$80 an acre. Vineyard property (we are informed by the Assessor) has been assessed higher in this county than elsewhere in the State, and a reduction can therefore properly be made.

**THE FRUIT CROP.**—*St. Helena Star*, April 27: Fruits are all good this year. Grapes have already been extensively noticed and are quite sure now of a full crop, the danger of frost having mostly passed. The crop will be large. Next in importance are apples, peaches, pears, plums, cherries, apricots and nectarines. The most of these raised here are marketed at home; very few shipped. The general fruit crop, our informant thinks, will not be as large this year as last; not because it does not look well now, but for the reason that last year was a splendid year—the trees rather overloaded—and two such years seldom come together.

## SACRAMENTO.

**SUMMER-FALLOW AND WINTER-SOWN GRAIN.**—*Record-Union*, April 28: From every quarter the report comes that the summer-fallow grain looks much better than that sown on winter-plowed lands. This lesson has been taught year after year since wheat growing became general in California, but a dry season like the present is calculated to impress it on the grain growers with peculiar emphasis. If the present season would have the effect to bring about a general change of the system of plowing and sowing for wheat, and cause summer-fallowing to be generally adopted, we might well hail the drouth as a blessing instead of a calamity. But while some farmers will practice summer-fallowing hereafter, the great bulk of them will go bludily and obstinately on in the old beaten path, plowing and sowing each year, till the crop will not return the seed and pay expenses. Such farming does not deserve success, and surely it does not attain it. In the best of seasons summer-fallowing grain pays much better than that sown in the usual way, but in a dry season the difference is rendered more striking, and the lesson is more complete and convincing.

## SAN JOAQUIN.

**FINE WHEAT.**—*Independent*, April 24: A handsome specimen of wheat plants was brought to our office yesterday by Levi Carter, from the ranch of Thomas Beach, on the Sonora road, eight miles from Stockton. The specimen is five feet high, with well filled heads three and a half to four inches long. It is represented to be a fair average of the growth of 160 acres of summer-fallow. Adjoining the same field is a lot of spring-sown grain, which is not 10 inches high and is already dried out. In fact all the winter and spring sown wheat in the county is a failure, excepting where irrigated.

## SAN MATEO.

**CANARY SEED.**—*Peoples' Journal*, April 28: H. Dobbel, of Purissima, has an immense crop of canary seed, nearly 100 acres growing. It looks very promising. This is a valuable crop when the seed can be protected from the birds. On the Sacramento and San Joaquin rivers the attempt to raise it is seriously embarrassed by the millions of small birds, chiefly blackbirds, that prey upon it. On the coast, exemption from this difficulty will in time lead to its extensive cultivation.

## SANTA CLARA.

**THE STRAWBERRY TRADE.**—*Mercury*, April 28: The strawberry men met to consult for their best interests on Friday, at Alviso, with an attendance of about 50 members. Judge Thomas, of Santa Clara, was elected permanent President, and D. P. Fenton, Secretary. An Executive Committee, consisting of Messrs. W. A. Z. Edward, William Boots, J. W. Hinds, D. P. Fenton and S. Q. Broughton, was appointed. A resolution was passed that all strawberries should be shipped to one of the following houses, viz.: Steward & Buckley, Onesti & Co., Lusk & Co., Lightcap & Lacy, Allison & Co., Drake & Emerson, and George Hughes. Instructions were given to the Executive Committee that they invite all strawberry growers to join in the organization and attend to all things affecting the association. The meeting adjourned to meet on next Friday at 10 A. M., at Alviso, when a large attendance is expected to be present. All strawberry growers are invited to be present and unite with the association.

## SOLANO.

**ELMIRA.**—*Chronicle*, April 27: G. W. Brake writes: I never saw a better prospect for a grain crop than the present is where the ground is summer-fallow, while winter sown grain will make but very little. But the prettiest field of grain I saw belongs to W. H. Black. He pastured it with sheep during the dry spell of weather we experienced this winter until every spear of wheat was cropped off, and some thought it was ruined; but it is now headed out much more even than other fields, and is not affected with the mildew like other grain is. My barley is good, and will be ready for head-

ing by the 10th of May. I also passed through Mr. Frazer's farm which is in a very high state of cultivation.

**SUISUN.**—Farmers are cutting hay on all sides. Mr. R. C. Haile informs us that even volunteer grain will make a good yield in his section—Wooden valley. John Lockey's 50 acre field of Sonora wheat has passed the period of dough, and the kernels, large and plump are already hardening, and this is only the 23d day of April. Mr. Bassford commenced shipping cherries from Suisun last Monday. We understand that it is his intention to ship all his fruit from Suisun this season.

**RIO VISTA.**—Crops still look surprisingly well for the season; future results only are feared.

## SONOMA.

**CROPS AND SPRING SEEDING.**—*Democrat*, April 28: There has been a great improvement in the growing crop in the past two weeks. The mildew, which caused much uneasiness, has completely dried up. It appears to have left the stalk of the grain uninjured. Much of the barley has headed out and will produce an average crop. The grain in the head is large and plump, though as an average the heads are not as large as usual. The early sown wheat looks uncommonly well. The late sown wheat does not look as well as it should, but a good shower of rain any time in the next two weeks will bring that out. James Shaw, of the Guilcos, informs us that his crop of about 500 acres of early sown wheat looks very promising. Land not over-cropped in the past will produce a full average yield. On over-cropped lands the yield will be from one-third to one-half short. The unusual acreage sown will possibly bring up the total yield of wheat in this county to say 35,000 tons, which would be a little over the total yield of last season. The corn crop will be unusually large. Much is now planting, some is up and looks well. Haying has commenced. The yield is good. The grass crop throughout the county is better than an average. The season will be from three weeks to one month earlier than usual. The fruit crop will not be overly heavy, though a reduction in quantity on the trees will doubtless improve the quality. The season is peculiar and it is difficult to tell what will be the issue. Wild oats and other forage crops have headed well. Reasoning by analogy, it is but fair to expect a like result in crops of a similar nature yet to mature. Taken as a whole, however, the outlook for Sonoma county is good, and the same may be said of Mendocino and Lake counties, which are subjected to the same climatic influences as Sonoma county. There is a good deal of wheat yet to be seeded on the low lands of Santa Rosa and Mark West creeks. The owners of these lands expect rains in May and June and are sowing with that expectation. These lands are rarely ever seeded before the middle of April.

## SUTTER.

**THE BUTTES.**—*Cor. Banner*, April 28: The crops in this section of Sutter are looking full as well as in any other portion of the county. The summer-fallow that was sown early, as a general thing, looks well, and even some of the winter-plowed land that was early sown looks quite prosperous. Barley that was sown in time to be benefited by the early rains, seems to be in no particular need of rain, being in many cases in advance of the wheat, on the road to maturity. But, notwithstanding the fact that barley and summer-fallow wheat is looking well as yet, there is need of a good shower of rain to fetch it up to what it might be, while in many cases of winter-plowing and late sowing there will be almost an entire failure if the rain don't come soon. Some are now haying, and those who have not yet commenced, are making preparations in that direction.

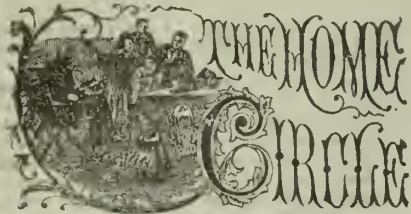
## TEHAMA.

**FEED AND WOOL.**—*Red Bluff Cor. Tocsin*, April 26: Feed, which a week ago was perfectly green, is now dried out, and stock men will have to drive their stock out of the valley ere they eat up their winter's feed. Sheep men are commencing to move their flocks from their valley ranges to other feeding grounds. We hear of several of our large sheep owners who contemplate traveling further than their usual mountain ranges this year, owing to the heavy increase in their flocks. They fear their usual range will be inadequate for their wants this summer. Shearing is now in full blast. Many of the large bands are shorn. The clip seems to have given general satisfaction as to quality as well as quantity. The general average weight of fleeces is over five pounds, which is a good deal over the average weight of even the best spring clip of former years. Prices are very quiet, and sales scarcely any, though the market may open up strong ere this reaches your readers.

## YUBA.

**NORTHERN DISTRICT FAIR.**—*Appeal*, April 22: An adjourned meeting of the Agricultural, Horticultural and Mechanical society of the Northern District of California was held at the City Hall yesterday afternoon, and it was gratifying to see it so well attended and so much interest manifested in the society and the coming fair. After transacting all business incident to the old board and the retiring officers, the following named efficient members were chosen officers for the ensuing year: President, W. P. Harkey, of Sutter county; C. A. Stratton, Treasurer, and W. T. McLean, Secretary. A resolution was passed fixing the time of the next fair for Monday, September 24th, and to continue through the week.





### Red Riding-Hood.

On the wide lawn the snow lay deep,  
Ridged o'er with many a drifted heap;  
The wind that through the pine trees sung,  
The naked elm bows tossed and swung;  
While, through the window, frosty-starred,  
Against the sunset purple barred,  
We saw the sombre crow flap by,  
The hawk's gray flock about the sky,  
The crested blue-jay fitting swift,  
The squirrel poised on the drift,  
Erect, alert, his thick gray tail  
Set to the north wind like a sail.

It came to pass, our little lass,  
With flattened face against the glass,  
And eyes in which the tender dew  
Of pity shone, stood gazing through  
The narrow space her rosy lips  
Had melted from the frost's eclipse;  
"Oh, see," she cried, "the poor blue jays!  
What is it that the black crow says?  
The squirrel lifts his little legs  
Because he has no hands, and hegs;  
He's asking for my nuts I know;  
May I not feed them on the snow?"

Half lost within her boots, her head  
Warm sheltered in her hood of red,  
Her plaid skirt close about her drawn,  
She floundered down the wintry lawn;  
Now struggling through the misty veil  
Blown round her by the shrieking gale;  
Now sinking in a drift so low  
Her scarlet hood could scarcely show  
Its dash of color on the snow.

She dropped for bird and beast forlorn  
Her little store of nuts and corn,  
And thus her timid guests bespoke:  
"Come, squirrel, from your hollow oak—  
Come, black old crow, come, poor blue-jay,  
Before your supper's blown away!  
Don't be afraid; we all are good;  
And I'm mamma's Red Riding-Hood!"

O Thou, whose care is over all,  
Who heededst e'en the sparrow's fall,  
Keep in the little maidens' breast  
The pity which is now its guest!  
Let not her cultured years make less  
The childhood charm of tenderness,  
But let her feel as well as know  
Nor harder with her polish grow!  
Unmoved by sentimental grief  
That waits along some printed leaf,  
But, prompt with kindly word and deed  
To own the claims of all who need,  
Let the grown woman's self make good  
The promise of Red Riding-Hood!

—John G. Whittier, in *St. Nicholas*.

### The Origin of the Cigar.

The devil one day, in a sad, listless mood,  
Had laid himself down on the edge of a wood;  
But, bent on some mischief, he cast his eyes round,  
'Spied near him a bunch of coarse leaves in the ground,  
And pulled the tough twigs, which he crushed in his fist,  
Then rolled out, and worked at, and gave them a twist,  
Then grinned at his work with satanic delight!  
With his old brimstone tail he then struck up a light,  
Set the end of the weed with a spark all on fire,  
And found the result was all that man could desire!  
The stench that arose was so horribly dreadful,  
Bugs, beetles, and spiders swooned off by the handful,  
"Ha, ha," said old Nick, "now I'm off to the ellys;  
I'll kick up a row; if I don't more's the pity."  
From that day forth with these arose such a din,  
Nick wagged his old tail, looked on with a grin,  
While now in each household the women made war  
'Gainst Satan's invention, the potent cigar.  
They were right; for the cash that was squandered that  
way  
All ended at last in the devil to pay.

—New York Evening Post.

POPPING IT "GRAVELY."—An Irish girl, who was very anxious that her scatter-brained brother should not be refused by the demure young English woman with whom he had fallen desperately in love, implored him to try to propose with the seriousness becoming the occasion. He vowed solemnly that he would behave as if he were acting as chief mourner at his father's funeral. The demure young lady, in imitation of many of her countrywomen, graciously accepted her wild Irish lover. She, however, confided to her bosom friend that Edmund had proposed in rather an odd way. He had taken her after church to see the family vault, and had there, in a sepulchral voice, asked her if she would like to lay her bones beside his bones. This he evidently thought was a proper to fulfill the promise made to his sister of treating the matter with becoming seriousness.

THE WOMANLY WOMAN is not ambitious of personal display outside the perfect conduct of her house and her own legitimate beauty. She is fond of her home and of her domestic duties; she respects her husband, and she takes care of her children, whom she looks after, guides, influences, and educates into noble men and women. She is not of the silly sisterhood who think housekeeping a degradation, and who would rather do the third-rate work of men than the best of that which nature and society have apportioned to themselves.

TO GET EVEN WITH HIM.—They were husband and wife, and as they stood before the Capitol in Washington, she asked: "What's that figure on top?" "That's a goddess," he answered. "And what's a goddess?" "A woman who holds her tongue," he replied. She looked at him sideways, and then began planning how to make a peach-pie with the stones in it for the benefit of his sore tooth.—*Erie Dispatch*.

### Woodside Papers.—No. 10.

[Written for the RURAL PRESS by JENNIE E. JAMERSON.]

Mrs. Payson was busy in her pantry, one morning, when she heard a crash of tinware in the kitchen. When she went to see what had happened, she found Mrs. Towne throwing tin cans from the stove at an alarming rate.

"Why, Mrs. Payson," said she, "I came in and found a lot of cans right on the stove. I 'spose your little girl put them on."

"Oh, no, Mrs. Towne, that is all right, I put them on myself. I was down to Cousin Mary's the other day, and she was going to throw these fruit cans away. I told her they were very handy to use after one end has been taken off. You see where the end is opened to let out the fruit; it is all ragged, but just put that end upon the stove and let it get pretty hot, and it will push right off, leaving quite a nice tin dish. If one is a little short of tinware, they will be glad to know how they may fit these for use. She gave me six, and you may have four of them."

"I'm sure I'm much obliged; I often want more tin dishes than I have. I've seen folks throw them away, but never knew they could be fixed so's to be fit to use; and it must be sort of nice to have holders to handle them, or any thing hot, with."

"Don't you have holders?" inquired Mrs. Payson.

"Why, no. I had three when I was married, but after they got worn out I never got about makin' any more."

"I hardly know how I should keep house without them; but I am not surprised to hear that you have none, as I know quite a number of ladies who never pretend to keep a supply on hand," said Mrs. Payson.

"I 'spose 'tis kind of shiftless to catch up a dish cloth or wiping towel, or any old rag to take pies or bread out of the oven with," said Mrs. Towne, as though a new idea had found a place in her brain.

"I think it is decidedly," replied Mrs. Payson. "I have seen people use wiping towels for that purpose, and then use them to wipe dishes with. Some use their work aprons for holders. This might be sometimes, but it is not very neat to take out a loaf of bread with a soiled apron."

"What do you have them little brass rings on them for? Seems to me that's something new," and Mrs. Towne squinted at the rings curiously.

"That is a very nice idea," returned Mrs. Payson, "to have rings instead of loops to hang them up by, as loops soon get scorched and torn open. Just make up your mind to have a lot of holders, and it will not be much trouble to make them. Old socks, or almost anything will do for the inside, and the outside can be made of prints or worsted. Sew in rings large enough to go over any nail, and have some hooks or nails near the stove to hang them on. Make a half a dozen or more. Hang two or three by the stove, put one with your ironing board, and lay the rest away to use when those are worn."

"Well, I know its kind of nice to have all these things done up, but I feel so sort of shiftless that I don't get much done. I won't complain though, for I've a good deal to be thankful about, for Eben stays to home most every evening. I feel better in the mornin' than I did before you told me about havin' more air to breathe durin' the night. I've left the window up a bit at the bottom; and Eben fixed it so it will let down at the top. Then I let the fresh air into the sittin' room before I leave it, and in the mornin' I open the windows for a while, and I do believe its a heap better." "That reminds me of the subjects of our conversation the last time you were here. Were we not talking about bathing?" said Mrs. Payson. "Yes," returned her neighbor, "I haven't tried it yet, but if it will help me any I will do it."

"Help you? I know it will. I am very sure that your health would be better now if you had always practiced it. It looks reasonable, and no one who is candid will fail to be convinced that if all the waste particles cast out upon the surface of the skin remain there and are taken back into the system by the thousands of little mouths upon the surface it will make the blood impure. Baron Liebig says that the progress of nations in civilization can be measured by the amount of soap used. Some say that one should bathe every day in tepid water, rain water being very, very much to be preferred. The effects of frequent tepid bathing is so salutary that Prof. Hebra, of Vienna, the most celebrated physician in the world, put his most obstinate cases in water up to the neck, and left them several days. Some of the patients were put in sacks, through which the water was kept flowing. Those who have made calculations upon the subject say that, by taking proper care of the skin a person can save over \$31 yearly, and if men will give as much care to their own skin as they give to currying a horse, they will gain both health and wealth. I advise you as I did Mattie Storres, to bathe and use a great deal of friction, rubbing with coarse flannel, and spitting with the hand. It has done her a great deal of good. Dr. Hall says that a thorough bath once a week, and a foot bath, and rubbing with a damp cloth every morning is sufficient. The rubbing process does not take long in the morning, but we Yankees

are in such a hurry, from daylight until dark, that but few of us take time to improve our health, or keep it if we have it.

"Some wise writer has said that we directly violate the law, 'Thou shalt not kill!' when we do what tends to risk or shorten our own life, and that God is as much displeased when we injure our own interests as when we injure those of others.

"Of course it is for our interest to have good health, and it has been proven too many times to be disputed that judicious bathing is conducive, I think we may say necessary, if we would enjoy this great and rare blessing."

"Wall," said Mrs. Towne, slowly, "if it is as you say, I should think a person ought to bathe often, as the whole body must need washing as much as the face does." "Of course it does," replied Mrs. Payson with decision, as she put an apple pudding into the oven.

[To be Continued.]

### Color of Dresses.

The *Michigan Farmer* says varieties of complexion and hair require varieties of color in dress, although there are certain colors which go well with all physiognomies, such as black, light gray, pearl-gray, old oak, deep havane, and mushroom brown, because they are warm in the shade and cold in the light.

With regard to black, it is to be observed that a soft deep shade, the black of velvet, is wanted to set off to advantage the freshness of a blonde, or the fairness of a red-haired woman. For a brunette the black ought to be enlivened by a glossy appearance such as in Lyons satin, or silk, or even by faille, or softened like the black of velvet by rich reflection.

According to general opinion, yellow and red suit brunettes, and blue suits blondes. Ordinarily speaking, this is true, but subject to numerous exceptions in practice, for there are many graduated tints in the complexions, both of brunettes and blondes, and the art is to deal properly with delicate admixtures and shades of colors. For a brunette of swarthy complexion brilliant yellows and splendid reds are the most suitable colors, and a jonquil-colored ribbon, a scarlet camelia in the black tresses, a poppy-colored bodice, partially softened by Chantilly lace, will be in style. But if we have to deal with a delicate brunette, with slightly jaded features, or a brunette whose skin is comparatively fair, or the eyes of a velvet black, we must no longer make use of striking and decided colors. Here, on the contrary, soft colors should be employed, especially pale blue.

It is the same with blondes. If the hair of a blonde be golden or red, it ought to be accompanied by its complementary color; a dark violet velvet bonnet, a tuft of violets in the hair, a deep lilac dress, will go with it marvelously well. Green of a medium intensity likewise suits all shades of red hair. If the complexion of the blonde be delicate and fresh, an orange, Turkey, or ruby red will set off the delicacy and freshness, partly by similarity, partly by contrast. Red, then, is not exclusively the color of brunettes; it plays a part also in the dress of fair beauties. The same may also be said of yellow, if matched in the hue to the lightest shade of the hair, and heightened by a well-contrasting color.

Women with chestnut or ash-colored hair, who are placed, so to speak, in the half shades of color, may wear either what suits brunettes and blondes, provided the tones of their dress and ornaments be subdued in proportion to the degree of warmth in their complexion. Half tints, such as pale yellow maize, harmonize with the natural colors. Light chestnut admits of the colors suitable to fair hair, but with a little less decidedness in the tints. As to those who have ash-colored hair, and skin in keeping with it, eyes blue as the sea or sea-green, delicate and extreme softness calls for half-warm tints, with suggestions of neutral gray or slashings of pale blue. Black velvet gives them fairness without detracting from the characteristic distinction and delicacy of their complexion, and pearls form in their ornaments a happy consonance, provided their color is relieved by a decided contrast, concentrated within a short space, such as a polished but uncut garnet, a ruby, or a trinket of gold.

### Children's Questions.

It is as natural for most children to ask questions continually as it is for them to eat. Indeed, they seem perpetually hungry in mind and body; instead of diminishing their appetite for physical and intellectual food, the effort should be to increase it to its utmost healthful limit. When a child eats heartily, has perfect digestion, and sleeps well, we consider him in good physical condition, and accept his eager calls for food as evidence of his bodily soundness. In the same way his constant calls for information, and his curiosity to find out things, are as sure signs of mental health as the other of physical. We housekeepers accept the necessity of providing three meals a day, and as there is no use in complaining about it, the sensible ones among us make no complaint, but do the best we can with resources at command. In like manner, those who have children, feel or should feel, the necessity of supplying them continually with knowledge as they supply them with food. The manner in which this is done varies indefinitely. Some parents will patiently, day after day, and year after year, answer verbally, so many as they can, the innumerable and various questions of their children. This is a tax that no one who has not

paid can adequately appreciate. We think there is a better way than this, better for the children and better for the parent. When Sir William Jones, the eminent Oriental scholar, was a boy, and perpetually asking questions of his mother, her reply to them was, "Read and you will know." But she took care to place such books within his reach as would give him the information he desired, and also such books as would lead him to explore for himself fresh fields of knowledge. So great is the number of juvenile books and magazines that the intelligent parent can much more readily than could Sir William's mother put within his child's reach the answer to a great many of his questions and thus teach him to feed himself.

But it is well to keep the intellectual appetite keen, in order that the digestion be vigorous and complete, and to this end hunger is beneficial. If there is any particular direction in which it is desirable that the love for knowledge should be fostered, a little management will secure the end desired. As a special privilege, the mother of a large family permits her children the occasional use of an astronomical globe and the atlas of the heavens, keeping these most of the time carefully put away. Curiosity to know more about the stars is thus continually whetted, and their questionings become more and more intelligent as their interest in the subject grows deeper. The principle of a stated number of meals a day is as applicable to the mental as to the physical stomach. Hunger is the best sauce for any appetite, and when one is fed it is desirable that the food that he eats should stay by him until the meal time comes again. So a child can by careful management be so occupied with his books or his toys that his questionings will be intermitted for a season, and his mother given a resting spell. But any other way of quenching his curiosity is hurtful.—*A Mother, in N. Y. Tribune*.

### Failure to Credit the Farm.

My neighbor Harris has sold the old farm on which he was born, and on which his people had begun life and succeeded to a competency. The land was rich and productive, the location healthy and attractive. Here, for half a century, the broad fields had ripened their golden harvests, the woodlands had fed the cheerful fireplace, the orchards had bowed their strong branches with ripening fruit, and the pastures had provided for the contented herds. Here, ruddy faced, light-footed, frolicsome children had a birthplace, and every wide-spreading old maple or oak by the wayside, under which they had played, and the brook in which they fished, even the paths worn by little feet across the fields to the school-house were connected with associations that could never be forgotten. Everything was here but contentment. My neighbor was a good farmer and thrived well enough, but he had nursed the belief that "farming don't pay;" he couldn't see that he was making interest on what the farm would sell for, after throwing in all his labor.

Now, I firmly believe that farmers generally do not give their land credit for half of that which it does for them. In the case of neighbor Harris, with his family of six persons, I have made a careful estimate of what he should have given his farm credit for, and the following is the result, without incurring this article with the figures for each separate item. He should give credit for the use of his house and carriage barn, for firewood, for horses and wagons, for pleasure driving, for meat, including fowls, for flour, eggs, meal, etc., for fruit and vegetables, for butter and lard, for milk, for family clothing and groceries paid for out of receipts from the farm, for net profit above all other expenses, which would average \$500 yearly. The sum of the value of the whole of the above for one year, according to my estimate, is \$1,825. Now this is pretty good interest on the value of my neighbor's farm—\$10,000—leaving something for his labor also.

My neighbor has gone to the city, where he expects to live on the interest of his money without doing much of anything himself but looking after good chances to make a strike. Having had no experience with the expenses of city living, he believes he can live there in the same style as in the country—for about a \$1,000 a year. Let us see how far he is mistaken. His house and barn rent in the city, his groceries and provisions, his coal, his family clothing, his expense of housekeeping, his amusements, extra church assessments, car fare, milk bill, small church assessments, beggars, foot up for one year on a low estimate \$1,750. Nor has the worst been told yet, for your farmer once hurried into the tide of city life with \$10,000 in his pocket is a fish for which many a shark has a watery mouth. He is one of a thousand if he escapes the snares of those he fondly imagines his warmest friends.

Stand by the old farm, my friend, whoever you are, believing that when farming don't pay nothing else can prosper. When farmers are poor, the whole business world is poor, and prosperity will knock first at the farmer's door. Let a farmer who has an itching for city life rent his farm for one year and make a trial of life in the city, and we think that in three cases out of four he will be cured. When he comes to pay from \$300 to \$500 rent for a dwelling having fewer conveniences than the plain old homestead; when he comes to buy all his vegetables, fruit, eggs, butter, milk, cream, in fact all of those necessities and luxuries which he enjoyed on the farm, almost without recognition, he will find that \$2,000 will go no farther toward meeting his family expenses than \$1,000 in cash would on the farm.—*American Rural Home*.



## Village Improvement.

Colonel George E. Waring, the well-known farmer and civil engineer, of Newport, R. I., has a paper on the above subject in *Scribner*, for May, in which he gives advice about the organization and practical work of these associations, and presents a draft of form for the organization of such a society, with by-laws, etc. We quote the following: At the outset it is to be said that the organization and control of the village society is especially woman's work. It requires the sort of systematized attention to detail, especially in the constantly recurring duty of "cleaning up," that grows more naturally out of the habit of good housekeeping than out of any occupation to which man is accustomed. Then, too, it requires a degree of leisure which women are the more apt to have, and it will especially enlist their sympathy as being a real addition to their ordinary sphere of life. The sort of enthusiasm which has led to marked success in the Dorcas society, and other limited fields of organized action outside of one's own home, for which American country women are noted, will find here a new and engaging field. This, however, is only a suggestion by the way, and one which may or may not be appropriate under varying circumstances.

What it is especially desirable that a village should appear to be, is, a wholesome, cleanly, tidy, simple, modest collection of country homes, with all of its parts and appliances adapted to the pleasantest and most satisfactory living of its people. All improvements should therefore have this fundamental tendency, and every element of adornment, and every evidence of careful attention, should be only an outgrowth of the effort to obtain the best practical results. Costly park railings, where no railing is needed, width of roadway greater than the needs of the community require, formal geometrical lines and surfaces where more natural slopes and curves would be practically better, elaborate fountains or statuary out of keeping with the general character of the village (the gift of a public-spirited, ambitious and pretentious fellow-townsmen), and isolated examples, as in a church or school-house, of a style of architecture which would be more appropriate for a city, all these are obtrusive and objectionable, and consequently in bad taste. In so far as these or any other elements of improvement are unsuited to the conditions in which they are placed, they are undesirable; and it would be well for those having the interest of the village in charge, to adopt an early resolution to accept no gifts, and to allow no work of construction or embellishment, which is not first of all, appropriate to the modest character of a well-regulated country village.

**A MUSICAL STORY.**—M. Saint-Saens is a frenzied musician as well as the most near-sighted of all near-sighted persons. It is told of him that at a party recently given he consented, after much pressing, to play, and for an hour charmed the company. Then they got tired and departed, exchanging, as they retreated, a significant smile with the host and hostess. Presently the hostess herself became weary and retired. Saint-Saens played more brilliantly than ever. The clock struck 2 A. M. The host feeling drowsiness master him completely, went to M. Saint-Saens, and, laying his hand upon the musician's shoulder, asked: "My dear sir, how can I ever sufficiently express my gratitude for the delightful evening you have made all of us spend? But I am afraid you must be a little tired; aren't you?" M. Saint-Saens replied, without looking up or stopping his play: "Tired? I am just beginning to get in the humor to play." To confirm speech by deed, M. Saint-Saens dashed off with a fire, vehemence and vigor which he had not shown during the whole evening. The host despaired. He went to sleep, and the composer, it is gravely said, stopped playing about daybreak, bowed low, right and left, as he retired to the door, and went home delighted with the still and breathless attention he had received.

**VICIOUS LITERATURE.**—One of the greatest dangers to the present generation of youth is that arising from the circulation of vicious literature. It is an evil that has assumed giant proportions, and its results are exhibited in the numerous revelations of licentiousness and crime continually being exposed. Such writings are distributed far more widely than most persons imagine, and young persons of both sexes obtain and read publications by stealth that are carefully concealed from parents and guardians. The effects of such perusal can never be entirely obliterated. Impressions are left that bring mortification and regret in later years. Let parents and teachers be vigilant in guarding against the introduction of such publications, and let there be a general disposition to prosecute to the fullest extent of the law all who are found in possession of such moral poison.—*Z. Wallace, in Lake Bee.*

**FASHIONS THAT SPEAK FOR THEMSELVES.**—For grass-widows, lawn; for elderly women, moire antique; for Democratic belles, anything but rep; for women inclined to baldness, mohair; for women with poodles, muslin; for shippers' wives, alpaca; for the Misses Never-ready, delaine; for sailors' wives, serge; for dairy women, calico; for soldiers' wives, bombazine; for debtors' wives, ticking; for women with profane husbands, kersey; for careless servants, crash; for Mrs. Sitting Bull, whoop-skirts.—*Louisville Courier-Journal.*

## Young Folks' Column.

## If I Were a Sunbeam.

If I were a sunbeam  
I know what I'd do;  
I'd seek the white lilies  
The wet meadows through.

I'd steal in among them,  
Soft light I would shed,  
Until every lily  
Had lifted its head.

If I were a sunbeam,  
I know where I'd go;  
I'd visit the hovels  
Made gloomy by woe.

Till sad hearts looked upward,  
I'd shine and I'd shine;  
Then they'd think of heaven,  
Their sweet home and mine.

Are you not a sunbeam?  
Whose life is so glad,  
With radiance far brighter  
Than sun ever had?

Since God has so blessed you,  
Go, shed rays divine!  
Let love be the sunbeam  
With which you will shine.

—*Kindergarten.*

## The Pretty Coral.

Thousands of miles away, in the Indian ocean and that part of the Pacific called Polynesia, there are some of the most charming spots in the world for playing Robinson Crusoe. It would not be convenient, however, to be shipwrecked upon the wrong islands; for some of them are already inhabited, and the swarthy Malays who have built their huts there under the tall cocoanut trees might not welcome intruders. Indeed, the monarchs of these curious little islands in the midst of the ocean know little, and care less, for what may be beyond its waves. They spend their quiet, monotonous lives in little worlds of their own, without desiring to explore lands out of sight. Neither do they care to understand the strange origin of their home in the sea.

These lovely little islands were formed in a very wonderful way. Ages ago there were myriads of little creatures called coral polyps, or zoophytes, slowly building in the bottom of the ocean. They had no intention of erecting a monument which would endure as long as the world itself; for they were merely growing in nature's own way, the way in which the Creator designed they should.

Their tiny bodies were at first soft and jelly-like, with gaily-colored fringes at the top, like the petals of a flower. In the course of time little particles of lime began to accumulate in their sides, until at length they became so stiff and hard as to appear like stone. The young polyps had a very singular way of growing from the sides of their parents, like the buds and branches of a tree, and as the lower ones gradually grew solid and perished new ones were continually growing above. After many years a large and high ridge was in this way formed, out of the stony skeletons of these strange little animals. These ridges are called coral-reefs or islands. Some of them extend for hundreds of miles in the ocean. Others are nearly circular in form and are of all sizes. After they have reached the surface of the sea the waves wash over them bits of sand, mud, shells, seeds, etc., until at length a low but solid and immovable island is formed. Various kinds of trees and vegetables grow upon these islands and some of them are inhabited by man. They are called atolls by the natives. They enclose a small sheet of quiet water, which seems like a peaceful lake, set in a verdant ring of land, and planted in the middle of the ocean. This inner lake is called a lagoon, and it is generally connected with the ocean by a narrow channel through which ships sometimes enter and find a safe harbor, even when the breakers are beating the outer coast of the reef in great fury. The atolls or reefs are seldom more than a few hundred yards in width, and the highest portions are not over 10 or 12 feet above the surface of the sea at high tide. Indeed, the natives are sometimes obliged to lash their huts to the cocoanut trees to prevent their being washed away in very severe storms. But the waves do not often molest them, and they pass lives of indolence and quietness, subsisting mostly upon cocoanuts and fish.

A few years ago a party of American explorers landed upon one of these atolls, and they were greeted by the natives as gods from the sun. They were supposed to have launched their ship direct from that bright orb upon the ocean, at sunset or sunrise, when the sun seems to sink beneath the water.

These explorers also landed at another island, not inhabited by human beings, where the birds had evidently never learned that man is an enemy to be feared; for they allowed themselves to be approached and captured without appearing in the least afraid.

Such a quiet, lovely spot, with the beautiful lagoon within and the restless sea without, might possibly make a delightful summer resort; but even Robinson Crusoe would probably become weary of its perpetual solitude and long to hear again the sound of busy life in a larger world.—*Mrs. Farnsworth, in New York Independent.*

## GOOD HEALTH.

## Diseases Spread by Tailors.

We read in an English exchange that the other day a delegation from the Amalgamated Society of Tailors waited upon the British government in the person of Under Secretary Cross. Their object was to lay before him some facts in connection with what was called the "sweating system." One of the delegation said he had seen instances in which garments were lying on a bed in which fever patients were suffering. There were a great many instances in which such things had taken place. They considered that if an employer got people to take work home, he should be bound to get the place to which it was taken registered, and hoped Mr. Cross could see his way clear to make it imperative that every house used as a tailor's workshop should be so registered by the employer. A delegate from Manchester gave the results of visits to 1,000 homes where this work was carried on, and stated that the condition of things was something deplorable. In some cases four or five persons were in a room nine feet by 12 feet. Sometimes people were making these garments in the midst of their domestic arrangements. From the facts that had come under his knowledge, he had no hesitation in saying that the state of things required alteration, and that the people engaged were in a most unhealthy condition. They found somewhere near 1,300 people engaged in this way, and all the surroundings of the place were such as would foster and spread disease. Another delegate said in some instances in London a man and woman would be at work in a small room at the top of a house in which they lived and slept. This people occupied in this were so crowded together that the places could not fail to foster and spread disease. While people went to large shops with showy fronts, they did not know that the clothes they purchased were made in close and unhealthy rooms. He knew a case in which, while the body of a child, who had died from small-pox, lay dead on the table, and two other children lay sick with the disease, the man and wife were at work in the same room, and 12 fashionable coats were in the room, which would be sent all over the town. Mr. Cross said he would introduce a bill after Easter to cover the case.

## Cold Feet.

Cold feet usually result from unequal circulation. The *Phrenological Journal* gives the following hints for avoiding them:

The feet should be washed in tepid water every day or two; but do not put them into water so hot as to make them tender. In concluding the bath, dip them into quite cold water, which closes the pores naturally, and then wipe and rub them entirely dry and warm.

Wear broad, heavy-soled, capacious boots with a loose insole. The foot appears smaller and more genteel in a boot quite large for it than in one in which the compression compels the sides to over-jut the sole and look tight over the instep or toes. Ladies should remember this fact, which is so well known to fashionable shoemakers. A stylish dealer was lately complimented about his small feet and nicely-fitting boots; a compliment which his wife also shared among her lady friends. The secret was they never pinched his feet. He wore number eights, while his wife wore the unpopular size of fives. He could put on a six or his wife a four or perhaps a three. By wearing boots of the form of their feet, of ample size, the boots remained in graceful shape. The gentleman's boots were nearly number nines in length, to lend proportion, and add comfort in walking.

Change your boots often. In use they absorb moisture from within and without and by frequent change and drying will be much warmer. If you have not two pairs, remove the insoles and dry them thoroughly with the boots each night. The patent-covered cork insole is a nice thing for those who can afford them, if they do not sweat the feet. But the smooth, stiff-leather insole is the best for all people, and one good pair will wear out several pairs of boots.

If your feet sweat easily and then chill from the dampness, wear light cotton stockings with your wool socks over them. Just try this expedient and see how nice and warm your feet feel. Ladies who ride will find a large pair of socks, over shoe and all, a great comfort.

**FRAUDS IN OPIUM ANTIDOTES.**—The opium antidote business has been sharply called upon to halt by the Cumberland Medical Society, of Maine. They have caused a quantitative analysis of certain of these nostrums to be made, and report the results widely among the profession. One specimen, manufactured by Mrs. J. A. Drollinger, of La Porte, Indiana, was analyzed by Walz & Stillwell, New York City, who found it to consist of glycerine, colored with aniline red, and to contain in solution 1.333% by weight of the sulphate of morphia—about seven grains to the ounce. The second was the preparation of "Dr. S. B. Collins; the great Narcologist of the Age," also of Laporte. The analysis of this was made by Dr. Henry Carmichael, Assayer of the State of Maine, and differed from the preceding only in the amount of the sulphate of morphia shown to be present, namely, 3.2%. A teaspoonful (a dose frequently prescribed by the proprietor), would contain almost two grains of morphia—nearly 12 times the ordinary medicinal dose.

## DOMESTIC ECONOMY.

## How to Cook Asparagus.

**DRESSING ASPARAGUS.**—Cut off as much of the white end of the sprouts as is necessary to enable them to be conveniently handled; wash lightly. The English carefully scrape each separate stem, but what is to be gained by it they do not say.

**STEWMING ASPARAGUS.**—Tie asparagus in bundles, when dressed, of six each, and drop them into boiling water sufficient to cover them; boil gently for 18 or 20 minutes, or until the green portion is quite tender—though it should not fall to pieces when handled. Cut and remove the strings and carefully place them lengthwise on a warm platter, and tilt it slightly for a few minutes to drain. Serve, by placing a few on each plate, and eat the green and soft portions. It is considered quite the thing to take the sprout in the fingers by its hard, white portion and lift it to the mouth to be eaten and to have its juice extracted. This has a fresh, pleasant taste, and though we cannot recommend the practice on account of its delicacy of appearance, yet if any one wishes to take advantage of it to get a pleasant mouthful, society manners will allow him to do so.

**ASPARGUS PEASE.**—Cut off the green portions of the sprouts, or as much of them as are tender, and cook them in as little water as will answer; then skin them out and cover them with a sauce made of milk, thickened with a little sifted graham flour, or with oatmeal milk, made by boiling coarse oatmeal gently a long time in six parts water, and straining it carefully through a fine wire sieve.

**ASPARGUS TOAST.**—Split some fresh and tender gems, toast them slightly, dip them quickly into the water in which the asparagus has been boiled, lay them on a hot platter, and dish the asparagus upon them. Or take stale gems, split and simmer gently in milk until quite soft, lay them on the platter and dish the asparagus upon them. The asparagus for this purpose may be prepared in any one of the ways above mentioned.

**ASPARGUS STEW.**—About one part of asparagus, cut into short pieces, may be added to two parts pared potatoes, a few minutes after the latter begin to boil; let them stew gently with but a little water, which should be nearly out, and just before they are done add oatmeal milk barely sufficient to cover them; cook all together for five minutes, being careful not to stir it into a mush. Asparagus may also be stewed with beans, and with beans and potatoes, being careful to give each only the cooking which it requires.

## Dried Beef for Family Use.

A lady says in the *Western Live Stock Journal*: Take of the best portion of the hind-quarter of beef as many pounds as you desire to cure. We have the butcher cut from the quarter a portion from 10 to 12 inches long; take out the bone, and divide it lengthwise into pieces about six inches thick, following the layers of muscle as closely as possible. Then it is in such form that when it is shaved for use one can always cut across the grain, which makes half the difference in the enjoyment of it. Prepare a brine of salt and water in sufficient quantity to cover the beef; let the brine contain as much salt as the water will dissolve. For every 25 pounds of beef take three pounds of white sugar and one-half ounce of saltpeter, dissolved in hot water, also dissolve the sugar in hot water, then add both to the brine. Put in the meat, and place sufficient weight upon it to keep it under the brine. When it has been in the brine nine or ten days, take it out, drain it well, fasten strings through the smallest and poorest ends of each piece, and suspend them from hooks in the ceiling over the kitchen stove. Do not let the pieces hang near enough to each other to touch. Pin a piece of newspaper around each one to keep off the dust. In eight or ten days the smallest pieces will be dried enough. Do not dry it quite as much as you like it to be when eaten, for it will dry out some after coming from the hooks. When taken down sew each piece in stout cloth and paint it all over thoroughly with the same preparation that is used for painting cheese. If these directions are followed, we will warrant the beef to keep, providing you do not eat it all, which you will be strongly tempted to do, for it is very palatable. If you like it smoked, it can be hung in a barrel and smoked with clean cobs placed in an old tin pan. Be sure not to let the cobs blaze; keep the barrel well covered. The smoking dries it at the same time, so you have only to drain it after taking from the brine before placing in the smoke. Beef tongues can be prepared in the same way as the dried beef, if one likes them dried; but a very nice plan is to have a jar of brine, prepared as above, and put the tongues in it, weighting them down. Keep them there until wanted for use; then take out as many as needed, soak in fresh water over night, and boil four hours. Pickle the beef and tongues while the weather is cold. It is difficult to keep them from spoiling if pickled in hot weather.

**FRIED EGG SANDWICHES.**—Beat some eggs well; fry them in butter as a pancake. When cold, cut in small square pieces, and lay them between brown bread and butter.





A. T. DEWEY, W. B. EWER,  
Publishers.  
Office, 224 Sansome St., S. E. Cor. California St.

Subscriptions, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
Advertising Rates. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 80 2.00 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00  
Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

#### DEWEY & CO.

A. T. DEWEY. W. B. EWER. O. D. STRONG. J. L. BOONE

The Original Articles in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

Address all letters to the firm, and not to individual members, or others, who may at any time be absent from our office.

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

#### SAN FRANCISCO:

Saturday, May 5, 1877.

#### TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Agriculture in Oregon; The Red-Tailed Buzzard; Desert Lands, 273. The Week; Coffee Growing; Men of Straw; A Pretty Californian; Departed, 280. Kill Those Thistles; Dr. Gray and the Huckleberries; Bottling Asparagus; The Lesson in the Summer-Fallow; A Simple Honey Extractor; Cinechona, 281. "Soil Improvement and the Main Tenance of Fertility," 281-84. New Style of Portable Engine; Notices of Recent Patents, 284.  
**ILLUSTRATIONS.**—The Red-Tailed Buzzard, 273. Arrangement for Clod Crushing; A Cheap Honey Extractor, 281.  
**CORRESPONDENCE.**—Paradise Valley, Humboldt County, Nevada; Agriculture in Mexico; Santa Barbara County; Los Alamos Valley, 274. Tuolumne County; Bear Valley, Kern County, 275.  
**THE APIARY.**—Not a "Moth Protector," 275.  
**HORTICULTURE.**—The Rival Driers, 275.  
**THE VINEYARD.**—The Huasco Raisin in Chile, 275.  
**PATRONS OF HUSBANDRY.**—Worthy Lecturer's Visits; Women in the Grange; Lompoc Grange, 276.  
**AGRICULTURAL NOTES** from the various counties in California, 277.  
**HOME CIRCLE.**—Red Riding-Hood (Poetry); The Origin of the Cigar (Poetry); Popping it "Gravely"; To Get Even with Him; Woodside Papers.—No. 10; Color of Dresses; Children's Questions; Failure to Credit the Farm, 278. Village Improvement; A Musical Story; Vicious Literature; Fashions that Speak for Themselves, 279.  
**YOUNG FOLKS' COLUMN.**—If I Were a Sun-beam; The Pretty Coral, 279.  
**GOOD HEALTH.**—Diseases Spread by Tailors; Cold Feet; Franks in Opium Antidotes, 279.  
**DOMESTIC ECONOMY.**—How to Cook Asparagus; Dried Beef for Family Use; Fried Egg Sandwiches, 279.  
**QUERIES AND REPLIES.**—Growing Oranges from Seed; Washing Butter; Hard Butter in Warm Weather, 280.  
**GENERAL NEWS ITEMS** on page 284 and other pages.  
**MISCELLANEOUS.**—Dried Potatoes; Climatic Changes from Coal Burning, 275. Remedies for Phosphorus Poison; Preventing Corrosion of Iron; An Electric Bit, 282.

#### NEW ADVERTISEMENTS.

Magnetic Elastic Truss Company, 609 Sacramento street, S. F.; Real Estate, E. Grotkask, Colima, Mexico; Fancy Cards, J. B. Husted, Nassau, N. Y.

#### The Week.

The week brings forecasts of the harvest. Ripe grain has been shown in several counties. Soon the thresher and his crew will empty the farmer's pantry and fill his sacks. There is not an easy task, these threshers; we know their labor from driving off an obstinate pinion to the dusty hessing from the straw carrier. When their work is well done they earn their money well. They are a power both for good and evil, and their work must be somewhat in accordance with the reward they receive. We know that cheap threshing is apt to be the most expensive kind to the farmers. The capacity of a machine is limited, and overfed it wastes like a pampered animal. Crowding a machine to make up for a low contract price is likely to send more money over the heel of the shoe than is saved on settlement day. Work which is too cheap is apt to prove poor in many ways. As the harvest approaches we would advise our friends not to drive too close bargains on price, but drive them close home on the cleanness of the work; insist that grain shall not be wasted; contract that it shall not be cracked. If these two points can be gained in a bargain and in the execution of the work, far greater saving will result than from a fraction of a cent per cent in the thresher's rate.

The days have again been bright and glorious, and aside from our wide area of water-wanting counties, the outlook throughout our State is bright and promising for the future.

The Turks and Russians are rushing for good points for the coming struggle.

#### Coffee Growing.

Our little coffee tree is growing vigorously, notwithstanding the fact that our baby applied her theory of leaf pruning to it with considerable diligence. We have not discovered anything on it yet which looks like roasting and grinding, but we have hopes as large as coffee grains that the tree may yet grow to fruition and the birds of the air may lodge in its branches. There have been several movements of which we are informed, to set the coffee trees a growing in this State and we hear nothing but success so far. The experiments are being tried in many parts of the State and we have high hopes of some of them.

We are getting a start in this coffee growing just at the right time. We start out in the race with several competitors. The English are making strenuous efforts to make their Indian plantations fill the gap which will result from the decadence in Brazil. A joint stock undertaking has recently been projected in London, having for its object the acquirement of land in India suitable for coffee cultivation. The capital of the "Oriental Coffee Company" is fixed at £100,000, and half of this sum we believe is in process of issue, in £10 shares. We append an extract from the company's prospectus:

"The great rise in the value of coffee within the past five years has caused a corresponding advance in the value of land in the best coffee-growing countries. In Ceylon, particularly, recent sales of forest have taken place at from £15 to £25 per acre, while in Western India, which has escaped severe competition, the directors have secured for £8,000 a valuable tract of 2,100 acres of fine forest land conveniently situated, upon which to commence operations. This has been specially inspected on behalf of the company by a planter of great experience, and his report is in every way favorable. One hundred acres have been cleared and planted this season, and the requisite preparations made for larger operations during the current year.

"Until recently the cultivation of coffee has been carried on in a loose and unscientific manner, particularly with regard to manuring, but with the present improved means of communication, fertilizers of the requisite description for mixing with cattle manure can be shipped from England and placed on the estates at a less cost for conveyance than was formerly incurred from the nearest port; while it is a well-ascertained fact that coffee trees properly manured from the beginning will continue to bear profitably for more than double the time formerly supposed."

There has been, during the last few weeks, an effort to introduce in this State the famous Liberia coffee, through the efforts of Horace J. Smith, Esq., Secretary of the National Agricultural Congress, who has been visiting in southern California during the winter. Edward S. Morris, Esq., of Philadelphia, Librarian Commissioner at the Centennial, who is largely interested in coffee growing in Liberia, has sent out some seed to Mr. Smith and to Mr. S. C. Evans, of Riverside. In his letter, which we have before us, Mr. Morris writes: "I am glad to hear the cry of 'plant coffee' in all places where coffee will grow. The noise I have made about Liberia for 19 years past is now being heard in every country where coffee grows. Words cannot tell you of the extent of the fever in Liberia. About the first of July next we will have about 100 live Liberia coffee trees growing around our department at the permanent exhibition at Fairmount park. By this mail we send you a small box of unhulled Liberia coffee; they may produce a tree; I cannot tell positively. Try them and report."

We trust our friends at Riverside may get some trees from the seed which they have received, for if they do, the introduction of a most desirable kind of coffee is assured, and we should think that beautiful Riverside promises as well for coffee groves as for orange groves. As Riverside starts with the Liberia variety it is timely to state, as we learn from correspondence from Ceylon, India, "that Liberian coffee grown in the Peradeniya garden has been sold at 10 rupees per berry. This, if true, shows the high expectations that this plant must have inspired in some quarters, but it would not be hard to prove that the bargain is a much better one for the seller than the buyer, whether the plant be, or be not, a great success in the island ultimately. If the agency that has been established for the introduction of seed by the most direct existing means from Liberia should prove tolerably successful, and there is no good reason why it should not succeed, Liberian coffee plants will, in the course of three years, come to a price at which intending planters can venture to commence operations, which they certainly cannot do with plants at 10 rupees, or even one rupee each."

From the above it will appear that we are starting with the same variety which now so excites the Indian growers, and for plants of which they are willing to pay fabulous prices. The markets of the world will reward the successful producers.

Since the above was in type we have received some notes on coffee growing from our esteemed contributor, C. H. Shinn, of Alameda county, which we shall take pleasure in presenting next week.

LARGE sales of horses for French light cavalry have been made in New York.

#### Men of Straw.

The men of straw are pretty solid fellows this year. Men of solid wisdom who are going through the season with solid cattle and solid cash as the result of the forethought and economy which led them to save the straw at the last threshing. We hear of sales of straw stacks in many parts at prices which give splendid returns for the labor required to do the saving. During a short run into San Joaquin county last week we found that Mr. W. L. Overhiser, whom all who know him regard as sound and solid, him we found to be a man of straw. In fact his stacks were so large and so rich looking in this time of scanty vegetation, that we leaned in the shadow of one of them and interviewed our host on the subject of straw.

Mr. Overhiser has a threshing field. It may be rightly regarded as a California outgrowth from the threshing floor of the ancients, for it has the immensity which is characteristic of California agricultural practice. The field contains 10 acres, more or less, and is located near his barns, though far enough away to have them out of reach of fire from steam threshers. On this field all the grain is drawn as fast as cut and stacked for future threshing. This keeps the owner from being in haste to thresh, for the stubble in the different fields is available for stock as soon as the last swath is cut. Most farmers, for lack of a threshing field on which to draw the grain have to wait the thresher's pleasure before they can give their stock the benefit of the stubble. Of course the little convenience of a threshing field will be only of service to those of our farmers who adopt the wisdom of a mixed system of husbandry. Men whose grain fields are measured by miles need not take our suggestions unless they see fit.

Mr. Overhiser adopted the plan last year of mowing the stubble left by the header with a mowing machine and drawing the cutting to stacks on his threshing field. He finds that this mowing and raking takes up all the fine leaves which escape the header, and these the cattle eat with relish. This cutting also serves as a gleaming process, and many heads are seen with the other coarser material. As we pulled out some handfuls from the stack it appeared quite fine and rich colored, and serves as the basis for a very good cattle food. This work with the stubble gets it out of the way just as effectually as burning and gives a feed which Mr. Overhiser thinks will be worth \$10 a ton to him this year.

We found that Mr. Overhiser had a practice of feeding straw which may serve as a hint to some of our readers. He draws the straw to his cow barn and packs a long trough with it and then soaks it thoroughly with the hose. He then pours over it a pailful of strong brine, which serves to give it a relishable flavor. Over the whole he then spreads bran at the rate of two quarts to the cow and the mixture is ready to be put in the feed boxes of the milch cows. The cows eat up everything but the coarse stalks. When the cows go out the yearlings are let in and they worry down the coarse straw. A little hand of sheep then have a chance to clean up after the yearlings and by the time they get through, the feed boxes are as polished as the platter of Mr. and Mrs. Spratt, of which the poet writes. Who says that the economies are not being introduced into California agriculture? Who can say that the spread of such economies will not be the measure of our success in farming.

**DR. GRAY AND THE HUCKLEBERRIES.**—We recently printed a note from Mr. Mavity, of St. Helena, claiming that Dr. Gray was mistaken when he stated that California was devoid of huckleberries. It now appears that the discord between the eminent botanist and our correspondent, is owing to the fact that popular and local names were used instead of the exact botanical terms which would have admitted no misunderstanding. A friend of the RURAL PRESS in whose botanical accuracy we have all confidence, writes us the following note:

"When Dr. Gray says that California has 'no huckleberries and hardly any blueberries,' it should be clear that he was using the name of huckleberry in its genuine Yankee sense. A huckleberry, with its numerous small seeds, is one thing; a huckleberry with its ten larger seeds is quite a different thing, to the genuine Yankee. It is true that in New York and Pennsylvania this distinction is commonly disregarded and they are all indiscriminately called huckleberries. But when Dr. Gray used the two names, it is evident that he stuck to the New England terms. Now, no 'huckleberry' (*Gaylussacia*) has yet been found in California, or even so far west as the Rocky mountains."

**BOTTLING ASPARAGUS.**—Mr. H. Champney calls our attention to an item in the New York Express, to the effect that "a French horticulturist forces the growth of asparagus by placing an ordinary wine bottle, well corked, with the bottom cut off, over the asparagus head just as it makes its appearance above the ground. The asparagus thus protected grows rapidly, and, since the air has no access to it, the development of the woody fiber is kept back, and the plant becomes so tender that the whole of it may be eaten, while the lessened amount of light that passes through the colored glass produces in the vegetable a rosy tint, decidedly improving its appearance." The above is worth trying at any rate. Perhaps a fancy price can be obtained for such forced shoots.

#### QUERIES AND REPLIES.

##### Growing Oranges from Seed.

**EDITORS PRESS:**—I would like to know how the orange is propagated in southern California from the seed; i. e., how the seed is best sowed in a climate such as ours, where irrigation must be resorted to. Also what time of the year is most favorable for the process. I wish to sow some seed as soon as I know the best way to do so, and this I cannot find out by inquiry in the immediate neighborhood.—EDWARD KRAUTZ, Kingsburg, Fresno Co. Cal.

We are quite willing to aid our correspondent as he desires, as the task which he proposes is one which we have in prosecution on our own grounds. He may begin the work as soon as he gets this week's Press, for this is just the season. We are laying out our work on the plan pursued at Riverside, Los Angeles county, and the following detailed description from the *News* has been our guide: "To produce an orange tree from the seed three things are necessary—sufficient warmth, a pulverized soil and sufficient moisture. Consequently the following things are to be guarded against: The drying out of the soil, keeping it too cold by too much shade or too much water, the hardening or baking of the surface, the burning or withering of the young shoots, which are very tender, by the direct heat of the sun or scorching winds. Plant in May, June or July, to get the necessary warmth and sufficient growth to bear the light frosts of winter. Plant the seeds immediately after they are taken out of the orange; if allowed to become dry the germ will be killed. Pure sand is the best soil. Surround with boards and shade with a screen. Any arrangement will do that conforms to these principles, whether planted in a hot-house, in boxes, or in the open ground; whether moisture is supplied by allowing the water to run over the bed from the ditch or by sprinkling, and by whatever contrivance they are protected from the sun and wind. Different arrangements will have different advantages. The following, as an example, will better explain our meaning: Supposing there are 500 seeds to be planted and from choice or necessity water is to be applied by sprinkling. Take four boards, from six to 16 inches wide, and make a frame, say four feet wide and 14 long. Of course these dimensions are immaterial. Make a bed the dimensions of the frame, cover it with three or four inches of pure sand and put your frame around it. Mark off four little furrows, and plant your seeds in the sand about an inch apart, covering them to the depth of two inches. If planted too deep they will not get sufficient warmth; if too shallow they will find opportunity to dry. After planting wet thoroughly, then cover by stretching an awning of light muslin across the frame. Other cloth will answer, but we think something that will admit considerable light and warmth is to be preferred to heavier material. Now sprinkle every day—evening is the proper time—or at least every other day. A little and often is best. In about five or six weeks, if thus cared for, the yellowish, tiny shoots will begin to appear above the sand, and if from that time forward the care of his baby orchard is not a pleasure to the owner, he had better withdraw from an agricultural avocation. After they have formed leaves they will no longer need such great care; they should still, however be, watered twice a week. When strong enough to bear sun and wind the screens and boards should be removed. In six months they will have attained a size of from 12 to 15 inches, and be sufficiently hardy to outlive the troubles of the winter season, but judgment must be used. If a young tree is tenderly nursed up, as in a hot-house, it always will be tender, and will die when those more hardy survive. If the leaves of the young tree appear gnawed, the deprecatory insect should be looked for and destroyed. If ants should threaten trouble, there is nothing more efficacious than a kettle of boiling hot water applied to their nest.

##### Washing Butter.

**EDITORS PRESS:**—In looking over a file of your paper, I find several articles on butter making, in which they caution us against working it too much, but do not tell how to avoid it, which by the old method of working twice is almost impossible. It is now generally conceded that the less it can be worked and the milk all got out and salt evenly mixed, the better. I am making butter by the process given below, than which there is no better put into the San Francisco market I think: With cream enough for 100 pounds of butter, I put in about three pails of water before commencing to churn; this causes it to separate better, and in damp or foggy weather prevents its being oily. As soon as it is put on the break I salt it one ounce to the pound, and after the salt is pretty well mixed it is washed, and is then ready to mold, which should be done immediately. By this method of handling, much less working is required than by the usual way.—BUTTER MAKER.

##### Hard Butter in Warm Weather.

**EDITORS PRESS:**—I find one of the best dairy-men in Marin county uses the old English recipe given below for making butter come solid in hot weather; he also says it will remove the taste of the tar and other bad weeds which trouble in some places late in the season. For cream enough for 20 pounds of butter, put one teaspoonful of carbonate of soda and same of powdered alum, mixed, into the cream when commencing to churn. The alum and soda should not be mixed before using.—COR.



## Kill Those Thistles.

## To Road Overseers and Land Owners.

We last summer had something to say in regard to the noxious weeds, which are in some parts of the State taking possession of much good land. The Scotch thistle is one of the worst of these, and, if neglected, will gradually choke out all useful vegetation. It may be recognized by its large mottled, green and white leaves. Fortunately, the seeds are too heavy to be carried far by the wind, but they are being disseminated widely by other means.

About Oakland, San Leandro, Martinez, San Rafael and other places, it has a strong foothold, and we are sorry to see that very little effort is made to fight it. Besides crowding out a better growth, it presents a very unsightly appearance in the latter part of the year when dead.

We reprint the law relating to this matter, and hope that it will be regarded in those places which it covers. Everywhere, land owners and associations of farmers should take immediate action in the matter and try to produce a public sentiment in favor of clean fields and roadsides. The thistle should be cut, before it blossoms, with a heavy hoe, low enough to destroy the crown of the root. The ground should be gone over a second time, a week or two after the first cutting, to make clean work:

## Thistle Law.

An act to prevent the propagation of the Scotch or Canada thistle in the counties of Humboldt, Siskiyou, Klamath, Del Norte and Alameda. (Approved March 2d, 1872.)

Sec. 1. It shall be unlawful for any person owning or possessing land in the counties of Humboldt, Siskiyou, Klamath, Del Norte and Alameda to permit the Scotch or Canada thistle to mature and disseminate its seed on land so owned or possessed by such persons.

Sec. 2. It shall be unlawful for any person to knowingly sow or disseminate any seed of the Scotch or Canada thistle upon land owned or possessed by another.

Sec. 3. Any person, upon being duly convicted of a violation of either of the preceding sections of this act, shall be deemed guilty of a misdemeanor, and may be fined in any sum not exceeding \$100, or by imprisonment in the county jail for a term not exceeding three months.

Sec. 4. Any person who shall sell, or in any way dispose of any seed of the Scotch or Canada thistle to another, whether in the packing of goods or in grain, or grass seeds, or otherwise, shall be liable to such person for all damages which may accrue to him by reason thereof, to be recovered by action in any court of competent jurisdiction.

Sec. 5. Any road overseer in the counties of Humboldt, Siskiyou, Klamath, Del Norte and Alameda who shall permit any seed of the Scotch or Canada thistle to mature within the boundary of any highway within his district, shall be deemed guilty of a misdemeanor, and upon conviction thereof may be fined in any sum not exceeding \$100. All fines collected under this act shall be paid into the county treasury for the benefit of the common school fund.

Sec. 6. The provisions of this act shall apply only to the counties of Humboldt, Siskiyou, Klamath, Del Norte and Alameda.

A PRETTY CALIFORNIAN.—The *Botanical Magazine*, an English periodical, figures a very handsome Californian plant, the *Laurentia carnosula*. This charming little annual, it says, is a native of muddy places in Sierra and Indian valleys in California, and thence, northeastward to Wyoming Territory. It is remarkable as being the only American example of the genus *Laurentia*, of which ten species are known, the rest being natives of South Africa and the Mediterranean region. The cultivated specimens differ widely from the native in habit in appearance, the native ones being shorter, with very succulent and, indeed thickened stems, and having flowers not one-quarter the size of the cultivated ones. *Laurentia carnosula* was raised from Californian seed by Mr. Thompson, of Ipswich, England, who, in July, 1875, obtained flowers from the plant.

A SATISFIED CUSTOMER.—A subscriber in Merced county writes us a letter to the effect that she bought turnip seed of Wm. Rennie, of Toronto, Canada, seeing his advertisement in the *RURAL PRESS*, getting fine seed at 30 cents a pound, which she regards as a great saving to her. We are glad to hear that Mr. Rennie has obtained and pleased a customer through his advertising in the *RURAL*, and that a subscriber has gained more than the cost of a year's subscription by reading the advertisement. This is the true mission of an honest advertisement, and we hope many others, both advertisers and subscribers, may have similar experience.

DEPARTED.—John Newstead, who died of consumption, near Fruitvale, April 26th, commenced the printing trade in this office at the age of 12 years, in 1867. He was an intelligent, active and faithful lad. Employers and fellow-workmen universally esteemed him for his good conduct, and all sincerely regret his early demise. His kind and manly virtues will long remain in our memory.

TIMBER CULTURE A SUCCESS.—About seven years ago Mr. Stratton began to plant eucalyptus trees near Hayward, Alameda county. He is now selling railroad ties, telegraph poles and firewood at handsome figures. One-fifth of the trees are left standing for future use.

ON FILE.—“The Check or Gag Rein,” D. L.; “The Coffee Tree,” C. H. S.; “Kings River Country,” J. N. P. and E. K.; “Cattle Raising,” etc., E. B.

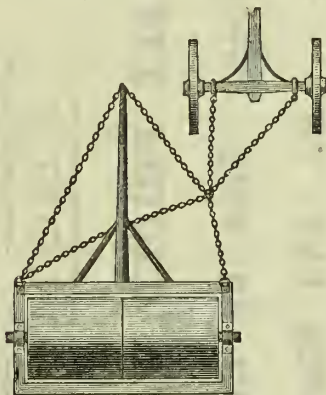
THE result of the election on the West Side of the San Joaquin is not yet announced.

## The Lesson in the Summer-Fallow.

Some of Nature's lessons are drawn with exceeding fine lines and the student must search for them with constant care. Others are thrown out in characters as broad as townships, and none but the blind can escape them. Of the latter kind is the lesson in the summer-fallow which is this year more than ever apparent. This lesson is no discovery of ours although we have enforced it upon every decent occasion since the *RURAL PRESS* first found a voice. We are not alone in calling attention to the subject this year, for every one who has read the crop reports in the newspapers from almost every grain growing county of our State finds but one verdict, viz: Grain on summer-fallowed ground, “good,” “excellent,” “fair” or “promising” as the case may be; grain on winter-worked and seeded ground, “failure.”

We have seen it again and again in the fields of our State, but never more plainly than this year, and never more painfully evident than last week near Stockton. We made a flying trip to this fair city of the interior to see some fine dairy stock belonging to W. L. Overhiser, Esq., of which we shall speak at another time. Mr. Overhiser gave us some forcible illustrations of the lesson in the summer-fallow. He drove us through fields on his beautiful ranch where the barley on summer-fallow was even with the wagonbox, and everywhere around was a sea of vigorous and well-filling heads. From this the wheels struck out upon the hard waste of the winter sown, where the little poverty-stricken plants were trying to head at six inches from the surface. At another place, just across a fence, was wheat on summer-fallow thickly stooled and vigorous in culm and color; and wheat, on winter plowed land, sickly as a high school mustache. These manifestations are not few nor far between, they are too near many of our farmers for their comfort. Too many need but go to their fields for the fullest instruction in the line we have marked out.

But we did not take up this subject merely to point again a moral which is old, and yet sharp to impress itself upon the practice of our grain growers. We would rather allude to the fact that many of our farmers are learning the lesson for themselves and are turning the days of leisure which the season enforces upon many of them, into profitable service to their lands by turning their idle teams into the work of



Arrangement for Clod Crushing.

active fallowing. Working the soil dry is hard work, we grant, in many cases, and yet the reward which years of practical experience has shown within reach should compensate the effort. It is work which sometimes is very hard on teams, but devices can often be rigged which will smooth many difficulties. For instance, in breaking up a piece of pasture land this spring, to give it the benefit of a good fallowing before putting down in alfalfa this fall, Mr. Overhiser found the first plowing threw up large, rough clods, some as wide as the head of a barrel. Anyone who has worked the same kind of land dry knows what we mean. It was almost ruin to horses' feet to travel over these clods, in addition to the slowness with which they must work on such a footing. To break up the clods with a roller was the first thought of course. But it would be just as hard on the team to drag a heavy roller over the clods as to drag a plow over them. Mr. Overhiser met the difficulty with a very simple and yet a very effective device. He took a heavy pair of wagon wheels and placed them in front of his iron roller and rigged up a chain connection between the wheels and the roller in such a way that the draft fell at one side of the center and consequently the horses traveled on ground smoothed by the former track of the roller. The roller being quite heavy (about 3,000 pounds), the clods are effectually crushed and the land is in good shape for cross plowing.

The simple tackling which the arrangement requires can be seen from the hasty sketch which we took on the spot, and which, if not absolutely true in detail, will serve as a hint to anyone who thinks the arrangement may be of service to him. Mr. Overhiser says the device has been of great value to him, and he recommends it to others. The roller runs quite true and there is but little evidence of the side draft on the wheels.

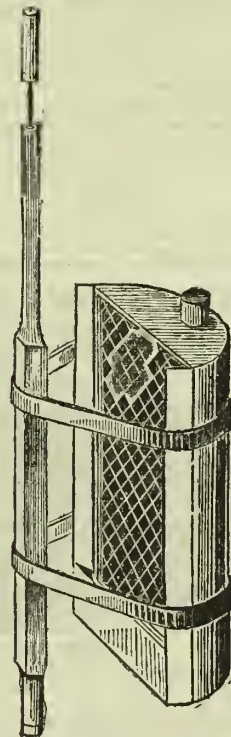
RATES of fourth-class freight between Chicago and New York have been advanced.

## A Simple Honey Extractor.

Some time since we printed some directions for making a home-made extractor for use in small apiaries. While it was easily made it was thought by some of our bee-keeping readers to be too clumsy for easy working. On this subject Mr. John G. Corey, of Santa Paula, Ventura county, writes us as follows:

“I enclose the following cut and description of ‘Abbott's Little Wonder,’ which, if you could reproduce and publish in the *PRESS*, would in my opinion be of service to parties keeping a few colonies of bees for their own amusement. The successful bee-keeper of the present day must, if profit is expected to be made, devote more time to bees than a few colonies could justify. The argument often made by persons who know very little of bee-keeping is that every one should keep a few bees without regard to location or their knowledge of the business, is about as sensible as it would be to recommend every man who carries a watch to repair and clean it himself. We do quite an extensive business in this county in bee culture, and the interest is rapidly increasing in importance every year. Accept my best wishes for the success of the *RURAL PRESS*.”

The following brief description will make plain the simple contrivance which is illustrated herewith: The cage and can, as may be inferred, revolve on a shaft, the bottom of which is furnished with a short spike, and the top with a long iron pin which turns in a loose wooden handle. The operator places the unsealed comb against the wire work in the can, and presses the short spike perpendicularly into the floor. If he now grasp the loose handle with both hands and give it a slight circular motion, the



A Cheap Honey Extractor.

machine will begin to revolve, and with a little practice may easily be made to attain a speed of from 150 to 200 revolutions per minute, causing the liquid honey immediately to leave the cells and fly into the can.

CINCHONA.—Have any of our readers any experience to relate with cinchona? The plant is now commanding the attention of thoughtful agriculturists because of the remarkable success which the English plantations in India are attaining. There have been plants sent out for trial from Washington and some of them have come into this State. Who can tell us about them? We have received a letter from Horace J. Smith, Esq., Secretary of the National Agricultural Congress, who is now sojourning in this State, enclosing a reply to some queries which were submitted by him to the department at Washington. Commissioner Watts writes as follows: “As to your inquiries about cinchona and its cultivation in the United States, we have to reply that although during the last ten years this department has sent out plants into the Southern States and into California, we have in many cases had no reports and in no cases any report of successful culture of such plants. It is highly probable, at least, that no locality furnishes the conditions necessary for the growth of the plant. We have but few specimen plants in our green-houses, and have no seeds. We presume they cannot be obtained in this country.” We print the above to draw out information as to the experiments with the plants which were sent to this State, and whether reasons can be given for such failures as may have occurred.

THERE is not a single vessel at this port receiving wheat at present—a circumstance that has not happened before since 1875.

## “Soil Improvement and the Maintenance of Fertility.”

## Lecture by Prof. Hilgard.

We are pleased to print the following synopsis of a very interesting address, delivered by Prof. Hilgard before an audience of farmers at Temescal, Alameda county:

It seems almost a truism to say that in an agricultural community the fundamental requirement for continued prosperity is the maintenance of the productiveness of the soil. Yet in our daily practice we so habitually disregard the most ordinary precautions in that direction that a serious discussion of the subject seems called for.

Whenever this fundamental condition fails, wholly or partially, of fulfillment, agriculture must, to a corresponding extent, cease to be the occupation of the inhabitants of a country, especially if other countries compete with them in the same pursuit, under more favorable circumstances. The population must in that case turn to other pursuits, if the natural conditions of their country permit them to do so while purchasing their supplies abroad. But when there is no such choice of pursuits, the inevitable result of soil exhaustion is, first, bankruptcy, and then depopulation, the inhabitants seeking in emigration (or as in ancient times, in conquest) the means of subsistence denied them at home.

## The Lessons of History.

History, both ancient and contemporary, furnishes abundant evidence of the working of these causes. The decline of empires and the decay of nations have so often gone hand in hand with the decline of the soil's fertility, that the coincidence cannot escape the eye of any student of history. It was so in Greece and Rome, and neither Greece nor Italy have recovered from the depopulation resulting from the emigration of the most vigorous portion of their once teeming population to regions possessing soils unexhausted, and offering a larger reward for toil. What were once the most fertile portions of ancient Latium, are now wastes of grass and thistles, supporting but a sparse pastoral population, and the now dreaded Pontine swamps were, at that time, the site of numerous thriving villages. The treatises of Columella and the *Georgics* of Virgil show that the same difficulties which we are now beginning to experience were seriously felt in their times. The desolation of the once fertile Roman Campagna has its parallel in the gullied commons, waving with broom sedge and dog fennel, that surround so many of the older country towns in the Eastern States.

Spain is another case in point, and as we are much in the habit of sneering at the “decline and fall” of the once potent empire, let us be sure to profit by the teachings of its history. Spain was esteemed the most fertile province of the Roman empire, and in A. D. 961, Mahometan Spain alone counted some 30,000,000 of inhabitants. Six centuries later, the Spanish writer, Herrera, says, in his treatise on agriculture:

“What may be the cause that nowadays the deficiency of food makes itself felt in the whole land, and now, in times of peace, a pound of meat costs as much as, not long ago, a whole mutton in the midst of war? Over-population cannot be the cause, for where a thousand Moors found employment once, there is now scarcely room for five hundred Christians. Neither can it be the importation of gold from India. *Is it perhaps the soil which lies dormant?* But the soil does not need any other rest than the winter's sleep; and there was no lack of winter rains to refresh it, and to provide it with force for the sprouting of seeds. What then is the cause that the soil will not nourish us any more?” And like some of our modern believers in quack nostrums and panaceas, he answers: “The mule is the cause. In the 13th century it gained ground, since which time dates the desolation of Spain. It has not strength to plow deep enough.”

Doubtless, with deeper tillage, productiveness might have been longer maintained; even as, with us, subsoiling is the first step towards the reclamation of worn soils. But the real fault lay in the idea that “the winter's sleep” was sufficient to restore the soil's loss from cropping. It is perhaps to these mistakes that we owe the early discovery of America, and of the sea route to India; for, failing to make their fortunes at home, the enterprising part of the population sought them in the discovery and conquest of distant lands.

## How We Repeat History.

And our own population is once more repeating history, under the influence of the same causes. Armed with better implements of tillage, it takes us but a short time to “tire” the soil first taken into cultivation, which is then turned out, while the fence is transferred to another tract, newly cleared. This in its turn is exhausted by continual cropping, year after year, with the same wheat, corn or cotton. By this time perhaps our backwoodsman finds the neighbors getting too close to him for comfort; his land and “improvements” are for sale at whatever price he can get for them; and the next winter finds him on his way to Texas, Kansas, Nebraska, or the Territories, where in time he will repeat the same cycle of operations. It is to the roving propensities of these hardy pioneers that we owe the rapid development of

Continued on page 284.



Remedies for Phosphorus Poison.

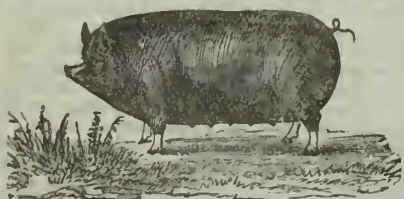
So great use is made of phosphorus in the different industries of this coast that we have thought a list of remedies, in case anyone should take the poison into his system, would be valuable for all to preserve for reference. The Doctor says: The treatment of cases of phosphorus-poisoning is not very satisfactory. The stomach should be thoroughly evacuated. The best emetic appears to be sulphate of copper, inasmuch as Eulenberg, Guttman, and Bamberger have shown that phosphorus quickly combines with the copper to form the less active phosphides. The minute particles of phosphorus adhere very closely to the mucous membrane, and can only be dislodged by chemical means. Hydrated magnesia, lime-water, liquor chlori, and chloride of lime have been recommended as oxidizers, but their action is too slow to be of any use. Turpentine appears to be the best antidote. It unites with the phosphorus to form a spermaceti-like, crystalline mass, which is soluble in either, alcohol, and alkaline solutions, and can be eliminated unchanged by the kidneys, without injuring them. Perhaps it also promotes the oxidation of a portion.

It seems that the common commercial turpentine is the most effective, probably because it is richest in ozone from having been exposed to the air. Turpentine appears also to prevent fatty degeneration of the tissues. To repair the damage to the blood Jurgensen has employed with success transfusion, and Dr. Roussel's improved apparatus makes this operation more available than before. Schonschard and Dybowski attribute the poisonous effects of phosphorus to its depriving the tissues of oxygen by being converted into phosphineted hydrogen, and this into phosphoric acid at the expense of the blood, and then the tissues it feeds. The readiness with which phosphorus combines with all fatty matters renders it imperative that animal fats should be wholly excluded from the food of patients recovering from poisoning by solid phosphorus.

PREVENTING CORROSION OF IRON.—Prof. Barff recently delivered a lecture on a treatment of iron for the prevention of corrosion, which promises to greatly extend the usefulness of the most useful of all metals. The temperature of the articles to be protected is raised to about 500° Fah. in a suitable chamber or muffler, to which steam is admitted. The articles having thus been exposed at a high temperature in an atmosphere of superheated steam, the black or magnetic oxide is formed on the surface. This oxide is credited with the quality of putting a stop to further oxidation, whereas the ordinary form of oxidation or "rusting" grows on what it feeds, serving as a carrier for atmospheric oxygen to the iron to almost any depth. The black or magnetic oxide produced as above described forms a coherent and adherent coating which is not subject to change in the presence of moisture and atmospheric oxygen, and which is not decomposed in any temperature to which iron is exposed in its ordinary uses. Hence this treatment may be used for the protection of iron used for street mains, for iron instead of lead service pipes, for household utensils of all kinds as a substitute for tinning, and for all kinds of architectural ornaments. Prof. Barff makes no estimate of the cost of such treatment, but it is claimed, to be less than the cost of galvanizing or tinning kitchen articles. The oxidized surface is said to be much harder than the surface of iron not thus treated, so that the durability of the articles would be as great or greater than that of similar untreated articles.—Philadelphia Ledger.

AN ELECTRIC BIT.—The French papers describe an invention for driving a horse by electricity. The coachman is to have under his seat an electro-magnetic apparatus, which he works by a little handle. One wire is carried through the rein to the bit and carried to the crupper, so that a current once set up goes the entire length of the animal along the spine. A sudden shock will, we are gravely assured, stop the most violent runaway or the most obstinate jibber. The creature, however strong and vicious, is "transformed into a sort of inoffensive horse of wood, with the feet firmly nailed to the ground." Curiously enough, the opposite effect may be produced by a succession of small shocks. Under the influence of these the veriest "scrub" can be endowed with a vigor and fire indescribable, and even the Rosinante of Don Quixote would gallop like a Derby winner.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.



R. S. THOMPSON,

IMPORTER AND BREEDER IN

PURE BERKSHIRE SWINE,  
NAPA, CAL.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Bred Angora Goats.

POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Pure Berkshire Swine.

CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA.  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

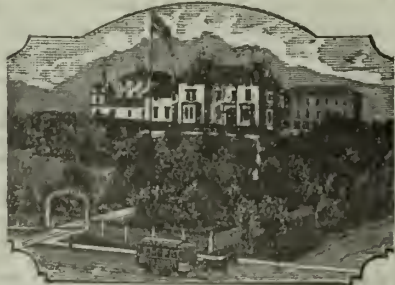
The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

CALIFORNIA



MILITARY ACADEMY.

For circulars, address

Rev. DAVID McCLURE, Principal,  
OAKLAND, CAL.

35 stamp.

FASHIONABLE VISITING CARDS,  
15 VARIETIES, in an elegant case, with your name handsomely printed in the latest style of type, for 25 cents. Agent's outfit, 20 cents. Samples for D. F. COOLEY, BROCKTON, MASS.

Call and See them or Send for Description and Prices. Sent by Express to any part of the Pacific Coast.

DEWEY & JORDAN,

No. 433 Montgomery Street, San Francisco.

NEW YORK WATCH CO'S

FIRST CLASS AMERICAN WATCHES,  
FROM SPRINGFIELD, MASS.

Poultry.

RENO, I. P. LORD, NEVADA.

BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. State where you saw this.



WHITE LEGHORNS.

Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.

Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,

C. P. STONE,  
Healdsburg, Cal.

Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few settings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

LOOK!



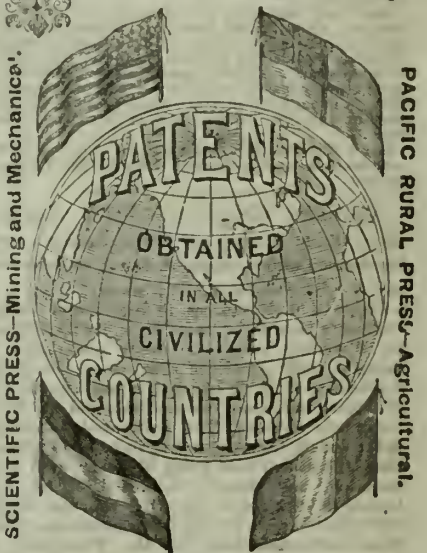
ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

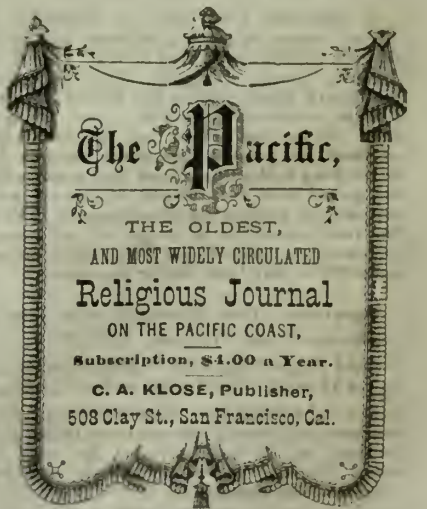
DEWEY & CO'S

SCIENTIFIC PRESS

Patent Agency.



Publishers, Patent Agents and Engraver,  
224 SANSOME STREET, SAN FRANCISCO.



We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.

Farmers, write for your paper.



## LEVI STRAUSS &amp; CO.,



Patent Riveted  
Clothing,  
14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

GREAT  
IMPROVEMENTS  
ARE NOW  
BEING INTRODUCED  
IN ENGRAVING

BY THE  
Scientific Press  
ENGRAVING CO.,  
AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at  
REDUCED RATES.

E. SCHULTZ, Manager.

**H. H. H.**

**HORSE MEDICINE,**

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

**Fraud! Fraud!!**

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

**COLLINS & CO., HARTFORD.**

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.

Don't waste your time in reading cheap trash.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

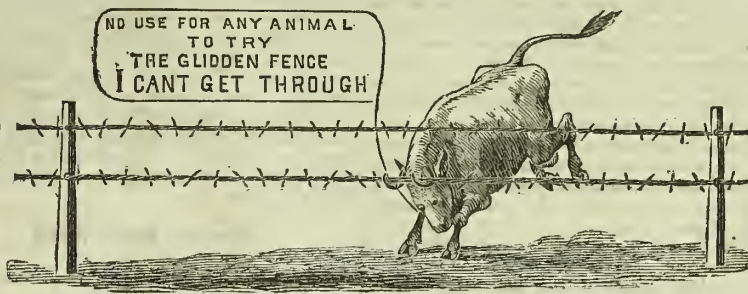
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

**PALMER BROS.**

726, 728, 730, 732, 734 Market Street,

San Francisco.

**OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING**

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00.

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

**HEALD'S**

BUSINESS COLLEGE,  
No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.  
TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.  
For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

**London Assurance Corporation,**

OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - - \$14,993,466

**Western Assurance Company,**

OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

**ARITHMETIC MADE EASY.**

ROPP'S

**EASY CALCULATOR**

Is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can instantaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months.

The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Cribbs; a Time, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightning calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided.

The work is nicely printed on fine tinted paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY & CO., San Francisco.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

Get the best. Take the RURAL.

**Superior Pianos for the  
People at Popular  
Cash Prices.**

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

The Brilliant and Durable

**GOLDEN PIANO**

Which we now offer the readers of this paper

At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

Prices of the Golden Piano:

The Usual Install-Our Reductionment Plan Prices. ed Cash Price.

The Golden Piano, \$300 \$350  
(UPRIGHT—C.)

The Golden Piano, \$375 \$300  
(SQUARE—No. 1.)

The Golden Piano, \$500 \$350  
(SQUARE—No. 2.)

The Golden Piano, \$600 \$400  
(SQUARE—No. 3.)

The Golden Piano, \$800 \$450  
(SQUARE—No. 4.)

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.



Continued from page 281.

the "Far West," to whose conquest they are steadily advancing.

But this is only the first, rough state of civilization. There is in the plan of existence just referred to a degree of recklessness of consequences, a sort of "devil-take-the-hindmost" principle, which cannot but be destructive of all home feeling, and of all tendency to the establishment of a permanent home, with all its concomitant improvements, and its powerful influence for good (or evil) on the young especially. It has been well and truly said by a distinguished philosopher, that after all, our progress and civilization has no more important result to show, nor any more faithful exponent, than the improvement of our home and home life in all its branches.

But apart from this higher standpoint, there is one that comes home most directly to that sensitive organ, "the pocket nerve." This is the steadily advancing decrease of productiveness, which has been steadily advancing Westward and Southward from the older colonies. In the prairies of the West, where 80 bushels of corn per acre were a common crop 20 years ago, 25 to 30 is now the average. Where 25 bushels of wheat per acre were raised without difficulty, 10 or 12 are now thankfully received. Where a bale of cotton per acre grew with little care, the land will now barely pay taxes; and melancholy old fields and deserted homesteads mark the track where this system of improvident culture has swept over the land, some of which, in the States of Mississippi and Alabama, will be beyond the reach of profitable reclamation for many years to come. The depopulation of Virginia from the same cause, in connection with the exhaustive culture of tobacco, is a matter of history.

Now, with all this experience before us, shall we of California go and do likewise? If we enjoy great advantages in the possession of a magnificent country and climate, and with none of the remnants of past ages handed down to trammel us in working out the civilization of the 19th century, we have also corresponding responsibilities for the use we make of our advantages. There are few who want to leave California after a few years' residence; and I doubt that you can find on this continent, at least, any region so lately settled in which people are, on the whole, so much inclined to remain where they are, and to improve their homes. Our reason is, perhaps, that we cannot possibly move farther West in quest of the "soil that never gives out," and do not like to take the back track. Yet if we should cross the Pacific, we should find that fabled soil in the possession of our neighbors, the Japanese and Chinese.

#### Japanese Agriculture.

The teeming populations of those countries have cultivated their soil for a thousand years without a material change in its productiveness. They do not raise extraordinary crops, but they are the same, year after year; and famines are rare, and occur only in consequence of wars, or very extreme seasons.

How is this accomplished? The reply is so momentarily simple that it somewhat jars our occidental price to realize the facts. It is done by simply returning to the soil, regularly and continuously, all that offal which, having been originally derived from the soil and containing the soil ingredients withdrawn by crops, will, when restored, enable the latter to reproduce it in the form of crops.

When the Japanese peasant takes his produce to market, he brings back with him, in part payment, a load of that city sewage which is the source of so much trouble, expense and ill health to us. Having no cattle he has no other source of manure; and none is imported. He can with this limited supply maintain the productiveness of his soil, because he has not "skinned" it before beginning to improve it. When that has once been done, the outlay required to restore profitable fertility is often too great to afford for a long time to come.

#### "Keep up Your Land."

"To keep up your land!"—That is really the great problem, before which questions of detail in culture sink into comparative insignificance. A generous soil will produce almost anywhere, under ordinary circumstances, any crop adapted to the climate. It will repay your labor bountifully even when not bestowed to the best advantage, because of the wide margin it leaves for profit and loss. It will carry your crops safely over a season of drouth which will singe out of existence those growing on poor land; and this comparative certainty with which the farmer cultivating a fertile soil can count upon remunerative crops, enables him to forecast his resources to great advantage, with steady profit and little risk. There will always be fat years and lean years, but rarely, total failures.

Nor need we, in order to accomplish this end, at once go to the full length of Chinese and Japanese practice, though we should seek to approach it as near as we can. The first fundamental rule by which all can and should now work is briefly this:

"Return to the soil faithfully and continuously (whether directly or through cattle fed with them) all those portions of crops whose selling price would not enable you to buy back the soil ingredients they contain, besides yielding you a fair remuneration for the labor of production."

To understand the importance of this rule, look at the table before you which shows the amounts of soil ingredients withdrawn by crops of cotton, wheat, and corn, respectively. You

see that the manurial value of cotton seed is equal to that of ten crops of lint, so that he who wastes one crop of cotton seed wastes ten crops of cotton wool. The straw of a crop of wheat withdraws from the soil the full equivalent of another crop of grain; and the same holds true of corn stalks, with regard to maize.

Let the return of these materials to the soil, preparation of manure, and the improvement of the soil generally, be considered the business of every farmer, as much as the pitching and harvesting of crops, and he will at once find a thousand ways leading in that direction, if only by the stoppage of unnecessary leaks. Of the ways and means I will mention some of the most available.

#### Means of Improvement.

1. Deep Tillage.—A deep soil affords the roots of plants a wider range for nourishment, and secures them against damage from either drouth or wet, barring very extreme seasons. Much land now supposed to need irrigation, will be found to require only deeper tillage; and irrigation loses half of its value without it. But indiscriminate turning up of the sub-soil may do much harm.

2. Rotation of crops.—The continued planting of one and the same crop on the same soil in consecutive years, is a fearful waste of the soil's powers. Culture must be diversified, not only for the purpose of securing a chance for proper rotation, but also to secure the farmer against bankruptcy from the accidental failure of one particular crop, to prove remunerative.

3. Green Manuring.—Whenever a crop produced on a field is plowed in, instead of being harvested, the land is thereby enriched to a certain extent, and for the time being rendered capable of producing heavier crops. But this operation cannot be continued indefinitely.

4. Fallowing.—In its proper sense of thorough tillage without cropping, the beneficial effects of the summer-fallow are pretty well understood in California; but this excellent improvement should be in more general use.

5. Thorough drainage.—A costly improvement, but one of the most permanent and profitable, and the only solution of the problem of invariably successful cultivation of our adobe soils. It is doubly important in connection with

6. Irrigation, which needs no commendation at my hands to a California audience.

7. Use of natural fertilizers where found.—Marls and greensands are doubtless of more frequent occurrence in this State than now supposed. I have lately shown that a large region around Stockton is underlain by a valuable marl. Cheap lime for agricultural purposes can be obtained in many localities.

8. Use of manures and composts prepared at home, in connection with the imperative rule of returning all offal of crops to the soil.

9. Use of commercial fertilizers, especially superphosphates and bone meal, which are now shipped by the manufacturers at San Francisco to Australia and New Zealand, for want of a home market.

But in order that these means of improvement may be really available to our farmers, we need two things:

First, An agricultural and industrial survey of the State, for the examination and mapping out of the agricultural features and resources of the State, for the benefit of all.

Second, and third, and always, a thorough professional education to be given to as many farmers as possible, that they may serve as guiding lights wherever they may be located, in the rational, judicious, and successful application of such means of improvement of the soil, and of the modes of culture, as may be most practicable for the time being.

Much can be done in this way, even though we may be far from the successful imitation of our neighbors across the Pacific, in the matter of the indefinite circulation of the soil ingredients, for the indefinite maintenance of the soil's fertility.

#### New Style of Portable Engine.

One of the new things in the way of machine making, which our readers will be interested to hear of, has been brought about by Mr. H. W. Rice, who is well-known as a manufacturer of portable engines. Not long ago Mr. Rice moved his works from Haywards, Alameda county, to this city and erected a commodious shop on Bluxome street, near the freight depot of the C. P. R. R., corner Fourth and Townsend. During a recent visit to the shop we saw upwards of 25 engines, straw-burners, wood and coal-burning, portable and stationary engines in various stages of construction. The most attractive looking engine we saw was a small-sized portable threshing engine with an entirely new form of boiler. Mr. Michenor, foreman, says that this boiler has more heating surface according to its weight than any other portable engine of its size. The boiler is 36 inches in diameter, and has 28 tubes two and a half inches in diameter and six feet long, which would give 140 feet heating surface. There is a large ash pan underneath the fire. In the large size straw-burning engine the ashes fall on the bottom of the main flue, which allows a limited space, but in this new style of boiler about one-fourth of the lower side of the main flue is cut away its whole length, also about one-third of the length of the shell of boiler under the fire end. The ash pan is riveted under this portion of the boiler. This cutting away of the

main flue allows it to come down so as to leave room for an additional row of tubes on top of the flue. This makes the boiler much lighter and equally as strong. These engines are all fitted with Michenor's hollow valve, which Mr. Rice claims to be very valuable and economical. Steam is admitted to the cylinder at the end. The steam chest is very long. The space from the valve seat into the cylinder is only seven-eighths of an inch, and the length of port is the same as the diameter of the cylinder, which is (six inches). The cylinder stroke is 12 inches. The engine is on a bed plate.

The manufacturer tells us that great care is taken to make the boiler as strong as possible. It may be believed that the less holes in a steam boiler the better. Working on this idea, the glass water gauge, safety valve, spring balance, whistle, blower and steam gauge are put into the boiler and connected to one pipe. This requires only two holes to be made in the boiler. Both sides of the water space are connected by a pipe under the boiler, in which is placed the blow-off cock and a union connection. The fly-wheels of the engine are 36 inches in diameter and seven inches face, and made crowning, so that the belt will not blow off in windy weather. The engine is fitted with a Gardner governor. The wheels and pole are painted a very appropriate straw color, with black stripes; the boiler and smoke-stack black, and the engine is a bright red. The total weight is about 4,500 pounds. It is claimed to be excellently adapted for hill work. It sets low on wheels, with wide tires, and will ride well on side-hills without danger of upsetting. It will run a 36-inch separator, and burn any kind of fuel desired by changing grate bars.

#### General News Items.

THE river Dneiper overflowed, and 20,000 people are homeless.

THE German Parliament refuses to impose compulsory duties on iron and iron goods.

THE story that the Benders were killed by a party which pursued them from Kansas is revived.

AN extensive conflagration occurred in Constantinople on Saturday. Six hundred houses were destroyed.

IT is reported that England is negotiating with the Porte for the cession of the Suez canal.

EX-SENATOR WM. G. BROWNLOW, better known as "Parson" Brownlow, died on Monday at Knoxville, Tenn.

COLONEL H. B. SANFORD, R. A., Chief British Commissioner to the Centennial has been knighted by Queen Victoria.

THE Internal Revenue receipts to the 30th of April shows a gain of \$2,600,000 over the corresponding 10 months of last year.

THE plasterers have at last acceded to the terms of the Real Estate Associates, \$4 per day for 10 hours, and work is again going on at the company's new building on Montgomery street.

SAN FRANCISCO, with a larger paid-in banking capital than St. Louis, Cincinnati and Chicago combined, has only about a quarter as large a debt as the smallest sum of liabilities in the trio.

IT is said that a bill will be introduced in the coming Congress reducing the army to 10,000. The Indian war is ended, and neither Sherman nor Sheridan believe it will be resumed.

HENRY WATTERSON has accepted an invitation to deliver the memorial address on Decoration Day over the graves of Union soldiers buried in the National cemetery at Nashville.

MORE Cheyenne warriors have surrendered at Red Cloud agency, and 40 other lodges are reported as at the mouth of Tongue river, coming in. Crazy Horse's band are on the way to the agency.

THE Controller of the Currency reports the amount of United States bonds on deposit as security for the circulation of National banks, on the 1st of May, at \$340,732,000, an increase of \$3,000,000 since the publication of his report of November 1st, 1876.

CHIEF JUSTICE SCHAEFFER, in the Third District Court in Utah, has rendered a decision on the merits of the case of Ann Eliza Young against Brigham Young. The Judge held that Brigham's marriage with his first wife, Mary Ann Angell, was a legal contract under the statutes of Ohio, where they were married, and that, therefore, Young was incapable of contracting a legal marriage with Ann Eliza.

THE Times' Philadelphia special says: Proceedings are about to be commenced for the recovery of over \$150,000,000 worth of city property by the heirs of Col. Henry Becker who died in 1801. Quite a sensation is created by the story. The property claimed in Philadelphia includes three churches, a dozen large manufactories, one of them an immense sugar refinery, and five blocks of dwellings.

WINDMILLS in Holland are about as high as an average church steeple. The arms or fans are of an enormous length, and carry 3,000 feet of canvas. And this is the machine that literally makes Holland. It pumps out the ocean when the ocean gets in. It saws and grinds. It does the lifting and the lowering. A family lives in the mill. In Holland there are full 10,000 of these mammoth structures. Some are built of brick, others of stone, many of wood. They turn slowly, but with great power; and there is seldom a serious or long continued lack of wind.

#### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

WATER CLOSET.—Fred. R. Pohley, S. F. This comprises certain improvements on a closet patented by the same inventor, Oct. 31st, 1876.

In that patent is shown a valve closing against the end of the pipe and retained in place by springs, which act upon it so as to resist a certain amount of pressure, and when the water within the pipe has accumulated to a certain extent its weight will overcome the tension of the springs and thus allow the surplus to escape. This device is susceptible of being applied to water closets in its present form, but in order to make it practical and entirely successful, Mr. Pohley has invented an improved construction which is especially adapted to water closets, and in this patent he has shown a peculiar adaptation and arrangement of the valve, which is placed at an angle so that all of the contents of the bowl will be allowed to escape without any danger of clogging and preventing the closing of the valve. The valve is supported upon a single stem, so guided as to move at an angle with the face of the valve-seat, and thus carry the valve to one side of the discharge passage, and entirely out of the way, and the closing spring surrounds or acts upon this stem or valve. The stem is constructed with a suitable lever which opens the valve, and, at the same time, admits a flow of water to cleanse the bowl; and a trap of peculiar construction is formed to receive any overflow and prevent any return of odor.

WASHING CALENDER.—Mrs. H. E. Israel, Stockton. This is a novel device, called a "Washing Calender," which consists of a circular convex form made with columns of figures radiating from a centre to the circumference, where, at the head of each column is placed the name of some article of wearing apparel. The numbers in each column run as high as may be desired, and pins are employed to mark the numbers of each article sent to the laundry; while around the circumference a space is left in which to place the total amount.

FLUXES.—Chas. F. Secor. This patent covers improvements in a combination of native fluxes for smelting "dry ores." Mr. Secor has been using these fluxes for a long time and has brought them to perfection for work on a large scale.

#### Notice to Farmers.

D. M. Osborne & Co., of Auburn, N. Y., manufacturers of Wheeler, Kirby & Burdick mowers and reapers, and whose Pacific coast branch is at 254 and 256 Market street, San Francisco, wish us to say to all owners of old Kirby machines that if they want extras for their machines the surest way to get them is to send direct to the manufacturers, box 1818, San Francisco. There is no certainty of getting them in any other way. Sending orders to other parties may cause a delay and parties may not get what they want. Farmers had better note this, as the Company wish to know where the old machines are and who owns them, in order to be ready with extras. Again they say, pay no attention to false reports sent out by "sole agents." You can reach the manufacturers by addressing D. M. OSBORNE & CO., box 1818, San Francisco.

#### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte, Sutter and Yuba counties.  
G. W. MCGREW—Santa Clara county.  
A. C. KNOX—Nevada, Montana and Utah Territories.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERLAIN—Sonoma and Marin counties.  
A. U. STROSC—Lake, Napa and Solano counties.  
W. D. WHITE—San Bernardino and Los Angeles counties.  
E. G. GAEBLER—Arizona Territory.  
ED. T. PLANK—Dakota Territory (Black Hills.)

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

WHEN so many poor watches are being sold, it is not too much for us to say that those who buy the New York Watch Company's movements will be sure of a good article at fair prices.

"CASH PAID PROMPTLY."—May Bros., Galeburg, Ill., want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 2d, 1877.

The sensational activity which was beginning as we went to press a week ago, ruled for three or four days thereafter, but now there is a quieter tone to the trade. The advance carried Wheat beyond 3c, the point we named as possible; indeed, there have been sales reported as high as \$3.25, but for this we have nothing more than rumor. Although trade in all lines is now quieter, the advances which have been gained have been generally retained, and the expectation of high rates for all exportable produce remains.

During the week the Liverpool market has shown some disposition to react from its highest spurts, and closes a few points lower than on Saturday, although a good shilling per cwt higher than at our last report, as may be seen from the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	12s 6d@12s 10d	13s —@13s 4d
Friday.....	13s 1d@13s 4d	13s 5d@14s —
Saturday.....	13s 3d@13s 6d	13s 6d@14s 2d
Monday.....	13s 3d@13s 6d	13s 6d@14s 2d
Tuesday.....	13s 2d@13s 6d	13s 6d@14s —
Wednesday.....	13s 2d@13s 6d	13s 6d@14s —

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	9s 1d@9s 3d	9s 3d@9s 8d
1876.....	9s 7d@9s 11d	9s 10d@10s 5d
1877.....	13s 2d@13s 6d	13s 6d@14s —

## The Foreign Review.

LONDON, May 1st.—The *Mark Lane Express*, in its weekly review, says: Advice from the rural districts continue to express satisfaction with the aspect of the winter sown cereals, except that on some heavy lands. The Wheat plant has recently changed from a healthy green to a sickly yellow. In the north of Scotland farm work is still backward. The high price of fodder and the disheartening appearance of the pastures render the present a critical period, especially for stock farmers. Our supplies of home Wheat at Mark Lane and the country markets have been unusually light, as the farmers are naturally unwilling to sell in the present excited state of affairs. Imports into London have been slow. Owing to the non-arrival of several steamers and some overdue vessels from Calcutta, granary stocks are unusually light. Fine Russian Wheat from its scarcity commands exceptional value, which, however, would be exceeded should anything occur to limit the shipments when navigation in the Baltic and at St. Petersburg reopens. A large business has been done in foreign Wheat at 70s per quarter advance. There has been eager competition for cargoes on passage or for shipment.

## Freights and Charters.

From the fact that the price of Grain is now above shippers' views, there is little inquiry for ships and rates are nominal. The *Commercial News* says: "The opening of hostilities between Russia and Turkey have made the views of ship-owners firmer, though it is difficult to see how it can affect freights from this port in view of the short crop the coming cereal year, and the amount of tonnage in port and on the way. At the close we have 2,822 tons in port loading Wheat, 19,331 tons miscellaneous and 31,947 tons disengaged."

## Wheat in United States and England.

WASHINGTON, April 20th.—The following statement regarding Wheat production and the export trade in that cereal is furnished by Mr. Dodge, Statistician of the Department of Agriculture: Great Britain is the only European country that uniformly looks to other nations for the material portion of its bread supply. Russia and the United States are the main sources of that supply. The amount required in addition to home production is increasing, in part as the result of a larger bread ration consumed by British workmen. The imports of Wheat and Flour for 15 years, including 1862, was equivalent to 65,724,319 bushels of Wheat, of 60 lbs each, per annum. In the past four years the average has risen to 101,758,270 bushels. In the five years prior to 1872 it was 78,338,980, and in the 10 years ending in 1867 it was 55,417,456. Such has been its increase modified by fluctuations of home production, though the imports of 1862 exceeded those of any other year up to 1873. In this period of 15 years the United States contributed 27%; Russia, 24%; Germany, 17%; France, 9%; and other countries 23%. In the last four years the proportion supplied by the United States has increased to 45%, that of Russia has fallen to 16%, and the remaining countries have furnished but 39%, instead of 49%. British receipts for the first quarter of 1877 were but 8,557,208 cwt of Wheat against 11,158,312 for the same period of 1876, and 1,526,510 cwt of Flour against 1,773,291. Of the Wheat, 4,999,377 cwt came from this country—nearly three-fourths of it from the Pacific coast; but 1,343,184 cwt came from Russia. The Wheat production of this country has twice exceeded 300,000,000 bushels, but the average since 1869 is scarcely 270,000,000. Two hundred millions are required for bread and seed, and more than 60,000,000 are annually exported. Our present Grain supply is short. A European war will doubtless curtail production in Southern Europe, while it will increase consumption. The California crop of 1877 will be short, and an increased area of spring Wheat will be required to supply the world.

## Eastern Grain Markets.

NEW YORK, April 29th.—Breadstuffs have taken the lead among commodities that feel the war stimulus, and almost every day during the week has witnessed an advance in Wheat and Flour. Spring Wheat has gone up 30 to 40 cents per bushel during the week, No. 2 having sold up to \$2, and other kinds in proportion. The volume of business has been large, for the reason that our market has kept in advance of that of Liverpool, while holders have been quite indifferent about realizing, even at full prices current, the stock being very light here and at all interior shipping points, the visible supply in store and in transit to the seaboard being but 7,000,000 bushels, or only about one-half the quantity at the same period last year. The stock in store here is reduced to a little over 1,000,000 bushels, and mostly controlled by a single firm, who appear to be sanguine of still higher prices. Flour has also materially advanced, shipping grades having sold at \$3.20@3.50, and choicest kinds as high as \$12@14. Corn closes fully 5 cents dearer for the week, with large transactions on the spot, and for future delivery, at 67¢ 72 cents. The supply of Corn in the country is large, but of all other cereals it is light. Prices are now so high for all bread material, that supplies will be drawn in considerable quantity from sources that have hitherto been deemed of little account. Thus we learn that something like a hundred tons of new Wheat have already been contracted for May and June shipment to England, at the rate of freight current. Most other articles of farmaceous food have advanced, and animal food is also dearer.

Chicago, April 28th.—The past six days have been the most exciting that have marked the grain trade since the

war. Rapid, violent and exciting fluctuations have characterized each day's dealings, especially in the Wheat market during the earlier part of the week, and in Corn during the latter part. Taking the June option as a basis, fluctuations during the week have been as follows: On Wheat—Monday, 152 to 157; Tuesday, 161 to 167½; Wednesday, 168 to 180; Thursday, 167 to 177; Friday, 169 to 173½; Saturday, 172 to 174½. In Corn—Monday, 48½ to 49½; Tuesday, 49½ to 51½; Wednesday, 57½ to 60½; Thursday, 56 to 63; Friday, 57½ to 59½; Saturday, 57½ to 60. The closing price for cash Wheat was 168, or three cents lower than June. Corn, 54½; Oats, 40½; Rye, 92; Barley, 70. Receipts for the week: Wheat, 570,000; Corn, 896,000; Oats, 225,000. Shipments—Wheat, 416,000; Corn, 1,430,000; Oats, 347,000. Receipts same time last year: Wheat, 198,000; Corn, 592,000; Oats, 330,000. Shipments—Wheat, 674,000; Corn, 836,000; Oats, 365,000.

The Pork market has been less excited, but not much less. Prices have fluctuated as follows: Monday, June Pork 15.7½ to 15.95; Tuesday, 16 to 16.40; Wednesday, 16.65 to 17.20; Thursday, 16.12½ to 16.84; Friday, 15.90 to 16.20; Saturday, 15.97½ to 16.36. Lard has sympathized with Pork and followed its movements closely.

## Eastern Wool Markets.

NEW YORK, April 29.—The Russian manifesto made public yesterday, has had the effect of strengthening all coarse grades of Wool, especially Donskoi, and prices of this description have advanced fully 5 to 15 per cent, closing strong at 30@35c gold, for clothing of fine grades. There has been rather more inquiry, but prices have not gathered strength, owing to anticipated heavy receipts of Domestic in the near future. For California there has been rather more inquiry, but manufacturers are still somewhat backward. Sales of new Spring California have been made during the week at prices ranging from 13 to 26c; the outside price, however, was for something fancy. Western Texas, coming under the head of coarse, has taken a somewhat firmer stand, though prices are not quotably higher.

Sales for the week are: 1,080 bales Donskoi, previous to the advance, at 29c, currency; 400 do, since, 30@35c, gold; 30,000 lbs Mexican, 15c; 130,000 lbs Fall California, 15@16c; 17,000 lbs choice do, 21c; 7,000 lbs Oregon, 27@28c; 5,000 lbs Spring Colorado, 20c; 71,000 lbs Western Texas, 15@17c; 4,000 lbs mixed, 20c; 10,000 lbs X Ohio, 38c; and 5,000 lbs Australian, 25,000 lbs Fall California, 88,000 lbs new Spring do, 10,000 lbs pulled do, 10,000 lbs Western Texas, 4,000 lbs Eastern do, 10 bags coming pulled, 170 do fine superior do, 65 do X do, 5 do new Lambs do, 30,000 lbs Ohio, 50,000 lbs Pennsylvania and Michigan, 40,000 lbs unwashed combed and delaine, 8,000 lbs and 60,000 lbs heavy fleece, on private terms.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. April 11.	WEEK. April 18.	WEEK. April 25.	WEEK. May 2.
Flour, quarter sacks.....	15,873	31,805	37,987	56,251
Wheat, cents.....	47,677	96,465	29,139	23,137
Barley, cents.....	12,428	10,225	6,918	12,783
Beans, sacks.....	350	480	330	483
Corn, cents.....	1,683	757	2,189	1,919
Oats, cents.....	3,857	6,492	5,557	3,775
Potatoes, sacks.....	7,220	11,862	9,318	13,150
Onions, sacks.....	855	894	433	1,105
Wool, bales.....	7,095	8,957	8,363	6,863
Hops, bales.....	563	—	—	—
Hay, bales.....	—	881	1,387	1,329

Bags—There is no change in the jobbing rates for Bags, although a weaker feeling is reported in the trade. It is rumored that some brokers are trying to sell both Burlaps and Bags in spite of the combining and concentrating schemes which they have been entertaining. The expectation of limited requirements for this harvest, coupled with the inability of many holders to carry over the stock, tends towards a rather weaker feeling.

Barley—Barley receipts have been larger than last week, and this has held the market from appreciation. Sales have been generally within former quotations. We note sales: 300 sds dark Coast Feed, \$1.80; 1,800 sds choice Bay Brewing, \$1.90; 325 do good Bay Feed, \$1.85; 4,500 sds Bay Feed, \$1.85; 300 do Coast do, \$1.85; 5,000 do Bay Chevalier, \$1.85; 500 sds fair Bay, \$1.87½; 200 do bald, \$2; 1,800 cts good Bay Brewing, \$1.00.

Beans—Beans are now in very small supply, and receipts are light. There has been a general advance in prices for all kinds, which may be seen in our table below.

Buckwheat—The price remains nominal at \$1.75.

Corn—Corn has achieved another advance of about 10¢ per cwt. We note sales during the week as follows: 500 sds large Yellow, \$2; 200 do do, \$2.06½; 200 sds large Yellow, \$2; 200 do do, \$1.97½; 200 sds at \$2.05; 200 sds large Yellow, \$1.05; 50 do do, \$1.07½ per cwt.

Dairy Produce—Dealers report butter a little weaker in the face of increased receipts. Although our quotations still cover the range of prices obtained, most sales of choice butter are made at 28¢@29c; with fancy brands gaining the extremes.

Eggs—Eggs are lower, quotable at 23¢@25c.

Feed—Ground Feeds are content to hold last week's advances, except Corn Meal, which claims an outside rate of \$46.50 per ton. Hay has fluctuated somewhat during the week, but sales have been within last week's range. We note sales: 8 tons choice Wild Oat, \$10.50; 20 do poor do, \$16.50; 16 tons poor, \$12.50; 20 do fair Oat and Wheat, \$17.50; 20 do fair Barley, \$18; 12 do choice Barley, \$20; 4 do good Wheat, \$22.50; 38 tons common Stock, \$13.50; 41 do fair Cow, \$16; 25 do good Wild Oat, \$20; 42 do good Wheat and Wild Oat, \$21.50; 25 tons Cow, \$16; 64 do do, \$16; 25 do good Volunteer Wheat and Wild Oat, \$19; 30 do choice do, \$22; 18 tons good Wild Oat at \$19.

Fruit.—The first Black Tartarian Cherries of the season were received during the week by H. K. Cummings & Co., from H. A. Bassford, of Vacaville, Solano county. They are held at 50c per lb. Mr. Cummings informs us that he has sold some "Early Purple Guigne" (a cherry new to our markets) at 50c per lb. Strawberries have been received in very large amount and range from \$3.50 to \$5.00 per chest. The canner's price is \$3.50. There have been importations of 300,000 Tahiti Oranges and 334 boxes of Mexican Limes. The first lot of ripe Currants of the season was received this morning from E. S. Millichap, of Haywards, Alameda county.

Hops—Dealers report the feeling better, and some business has been done for overland. A city agent's circular says: "The tone of the market is better for all kinds under continued favorable advices from Eastern markets. Sales have been effected to the extent of 180 bales, principally of medium grades, for shipment overland, en route to foreign markets. Prices are not quotably higher, but we are coming out of the depressed condition so long apparent. Stocks here, of all kinds, are pretty well reduced."

Emmet Wells reports the New York market for the week ending April 20th, as follows:

Trade continues rather quiet, business being restricted

by the scarcity of desirable stock. The clearances for export are less than 800 bales, which is the smallest week's shipment of the season. Brewers, who have been working on old stock, are now beginning to run short of supplies, and are taking more freely of new. Many say they would lay in a large stock at the present moderate price, but the trouble is the keeping qualities of the Hops are too poor to run the risk. None but really choice Hops are safe to keep over as Yearlings. There is a lively inquiry for choice Californians, but there is no stock here. Quotations: New Yorks, choice, 15¢@17c; New Yorks, common to prime, 10¢@13c; Eastern, 10¢@13c; Wisconsin, 8¢@12c; Yearlings, 6¢@10c; Olds, all growths, 4¢@6c; Californians, nominal, 12¢@17c; Oregon, nominal, 12¢@17c.

Oats—Oats are unchanged in price. We note sales: 435 sds choice Oregon, \$2.32½; 900 sds choice Oregon Feed, \$2.25; 300 sds choice Oregon, \$2.30.

Onions—Onions have had the ups and downs; 300 sds Stockton, under sharp competition, sold for \$3.90@4.10 per cwt. Other sales during the week were as follows: 108 sds Union City, \$4; 200 do do, \$3.87½; 40 sds good Bay, \$3; 130 sds Union City, \$3.50; 25 do do, \$3.62½ per cwt. Since these sales the market has been weaker and the best price quotable to-day is \$3 per cwt for choice of any kind.

Potatoes—Old Potatoes have ruled about as well as last week. There have been sales of choice Bay as high as 80c, but the top price quotable now is 75c. New Potatoes are more plentiful and cheaper.

Poultry and Game—Roosters, Broilers, Ducks, Geese and Turkeys are all lower than a week ago, as may be seen by our table of prices.

Provisions—Beef is quotably lower for all kinds. Mutton is very abundant and unchanged. Lamb declines 2¢@3¢ per lb. Pork shows signs of improvement as the sharp advance at the East makes packers feel more liberal. There is no change as yet in prices for cured meats, although the feeling is improved in sympathy with Eastern excitement and elevation of prices.

Rye—Rye is reported higher, and small sales are noted at \$2@2.25.

Vegetables—There has been a reduction all around in prices for fresh Vegetables, as may be seen in our table below. Marrowfat Squash is now out of market.

Wheat—The disposition in the Wheat market has been noted above. We instance the following sales during the week: 2,400 sds good, \$3; 5,000 do good Shipping, \$3.02½@3.05; 300 tons good Milling at \$3; 3,000 sds choice at \$2.90; 300 sds fair Milling, \$3; 3,000 do good Coast, \$3; 5,000 do choice, in lots, \$3.05; 2,500 do choice Milling at \$3.15 per cwt.

Wool—Receipts and sales of Wool have been large. Transactions have been within last week's range of prices, with 20c as the top for choice northern Wools. We note sales of 222,000 lbs various at 13¢@25c; 330,000 lbs do, 14¢@26c. Mr. Costigan, of the Grangers' Business Association, reports the following sales for the week: 15,356 lbs, 26c; 16,519 lbs, 25c; 5,958 lbs, 23c; 3,000 lbs, 22½c; 6,837 lbs, 21c; 2,209 lbs, 20c; 9,000 lbs, 10c; 12,295 lbs, 18c; 3,559 lbs, 18½c; 10,147 lbs, 16½c; 19,733 lbs, 16c; 18,138 lbs, 15c; 61,725 lbs, 14c.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

FRUIT MARKET.	WEDNESDAY M., May 2, 1877.
Apples, h. x.....	1 00 @ 3 00
Crab, lb.....	2 @ 3
Bananas, bunch.....	2 00 @ 3 50
Cherries, h. lb.....	50 @ 60
do, Red, lb.....	15 @ 25
Cocoanuts, 100.....	5 00 @ 6 00
Limes, Mex.....	3 00 @ 12 50
Cal.....	1 00 @ 15 00
Lemons, Cal M.....	10 00 @ 20 00
Sicily, b. x.....	10 00 @ 11 00
Oranges, Mex.....	— @ —
M.....	— @ —
Tahiti.....	20 00 @ 25 00
Cal.....	15 00 @ 25 00
Pineapples, doz.....	6 00 @ 8 00
Strawberries, chst.....	3 50 @ 5 00
Apples, lb.....	4 @ 6
Apricots.....	10 @ 12
Citron.....	28 @ 30
Figs, Black.....	5 @ 7
White.....	6 @ 8
Peaches.....	7 @ 10
Pears.....	7 @ 8
Plums.....	3 @ 4
Pitted.....	12 @ 13
Raisins, Cal, bx.....	12 @ 17
Malaga.....	3 00 @ —
Zante Currants.....	9 @ 10
Artichokes, doz.....	— @ —
Asparagus, b. x.....	75 @ 1 25
Brussels, doz.....	1 20 @ 1 50
Cabbage, 100 lbs.....	50 @ —
Carrots.....	70 @ 75
Cauliflower, doz.....	50 @ 60
Celery.....	50 @ 60
Cucumbers, doz.....	60 @ 75
Garlic, lb.....	1 @ 2
Spinach, doz.....	1 20 @ 1 50
Straw, doz.....	10 @ —
New Potatoes.....	1 @ —
Pumpkins, lb.....	1 @ —
Rhubarb.....	2 @ 3
Horse radish.....	6 @ —
Squash, Marrowfat.....	— @ —
fat, tn.....	6 @ 8
Summer, doz.....	2 @ 3
String Beans.....	15 @ 20
Tomatoes, lb.....	50 @ —
Turnips, cwt.....	75 @ —
White.....	50 @ —

[WHOLESALE.]

CARGO PRICES	WEDNESDAY M., May 2, 1877.
REDWOOD.	OFFICET SOUND PINE.
Rough, M.....	22 50
Refuse.....	18 00
Clear.....	30 00
Clear Refuse.....	20 00
Rustic.....	32 50
Refuse.....	22 50
Surfaced.....	30 00
Refuse.....	20 00
Flooring.....	18 00
Refuse.....	18 00
Beaded Flooring.....	30 00
Refuse.....	20 00
Half-inch Siding.....	20 00
Refuse.....	15 00
Half-inch Surfaced.....	25 00
Refuse.....	20 00
Half-inch Batens.....	25 00
Pickets, Rough.....	1 00
Rough, Pointed.....	13 00
Fancy, Pointed.....	25 00
Shingles.....	35 00
Rough, M.....	22 50
Refuse.....	18 00
Clear.....	30 00
Clear Refuse.....	20 00
Rustic.....	32 50
Refuse.....	22 50
Surfaced.....	30 00
Refuse.....	20 00
Flooring.....	18 00
Refuse.....	18 00
Beaded Flooring.....	30 00
Refuse.....	20 00
Half-inch Siding.....	20 00
Refuse.....	15 00
Half-inch Surfaced.....	25 00
Refuse.....	20 00
Half-inch Batens.....	25 00
Pickets, Rough.....	1 00
Rough, Pointed.....	13 00
Fancy, Pointed.....	25 00
Shingles.....	35 00

## RETAIL GROCERIES, ETC.

WEDNESDAY M., May 2, 1877.

Butter, California	Choice, lb.....	35 @ 40
Cheese.....	15 @ 20	20 @ 25
Eastern.....	15 @ 20	20 @ 25
Lard, Cal.....	18 @ 20	20 @ 25
Eastern.....	20 @ 25	25 @ 30
Flour, ex. fam, hbl.....	20 @ 25	25 @ 30
Corn Meal, lb.....	21 @ 25	25 @ 30
Sugar, wh. crshd.....	12 @ 13	13 @ 14
Light Brown.....	8 @ 9	9 @ 10
Coffee, Green.....	23 @ 25	25 @ 27
Tea, Fine Black.....	50 @ 60	60 @ 70
Finest Japan.....	55 @ 60	60 @ 70
Candles, Adm't.....	15 @ 25	25 @ 30
Soap, Cal.....	7 @ 10	10 @ 12
Rice.....	8 @ 12	12 @ 15
Yeast Pwdr, doz.....	1 50 @ 2 00	2 00 @ 2 50
Canal Oysters, doz.....	2 00 @ 2 50	2 50 @ 3 00
Strap, S F Gold'n.....	75 @ 100	100 @ 125
Dried Apple, lb.....	10 @ 12	12 @ 15
Ger. Prunes.....	12 @ 14	14 @ 16
Figs, Cal.....	9 @ 10	10 @ 12
Peaches.....	11 @ 15	15 @ 20
Oils, Kerosene.....	50 @ 60	60 @ 70
Whites, Oil Port.....	3 50 @ 4 00	4 00 @ 4 50
French Claret.....	1 00 @ 1 20	1 20 @ 1 50
Cal, doz bot.....	3 00 @ 4 50	4 50 @ 6 00
Whisky, O K, gal.....	3 50 @ 4 00	4 00 @ 4 50
French Brandy.....	4 00 @ 5 00	5 00 @ 6 00

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; Co.]

LEGAL TENDERS IN S. F., 11 A. M., 34½¢. SILVER, 54¢@55¢.

GOLD IN NEW YORK, 107.

GOLD BARS, 880@890. SILVER BARS, 10¢@15¢ per cent. discount.

EXCHANGE ON NEW YORK, 80¢@55¢-100¢ per cent. premium for gold; on London bankers, 49¢; Commercial, 49¢; Paris, five francs \$1 dollar; Mexican dollar, 84¢@85¢.

LONDON CONSOLS, 96½. Bonds, 102½.

QUICKSILVER IN S. F., by the flask, 7½ lb, 41¢@42¢.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., May 2, 1877.

Bayo, ct.....	4 50 @ —	Strained.....	6 @
Butter.....	2 00 @ —	<b>HOFS.</b>	
Pea.....	2 75 @ 3 00	California.....	15 @ 2
Red.....	2 00 @ 2 25	<b>NITS-Jobbing.</b>	
Pink.....	50 @ 60	Cal. annuts.....	9 @ 1
Sm'l White.....	2 75 @ 3 00	Almonds.....	15 @ 1
Lima.....	3 25 @ —	Soft shell.....	9 @ 1
		Brazil.....	14 @ 1
<b>BROOM CORN.</b>		Pecans.....	17 @ 1
Common, lb.....	2 @ 2 1/2	Peanuts.....	4 @ 1
Choice.....	3 @ 4	Filberts.....	15 @ 1
<b>CHICORY.</b>		<b>ONIONS.</b>	
California.....	4 @ 4 1/2	Union City, ct.....	3 00 @
German.....	6 1/2 @ 7	Stockton.....	3 00 @
<b>COTTON.</b>		<b>POTATOES.</b>	
Cotton, lb.....	15 @ 18	Petaluma, ct.....	75 @
<b>DAIRY PRODUCE, ETC.</b>		Salt Lake.....	1 50 @
<b>BUTTER.</b>		Humboldt.....	75 @
Cal. Fresh Roll, lb.....	23 @ 25	Cuffey Cove.....	— @
Point Reyes.....	30 @ 32 1/2	Early Rose, new.....	15 @ 2
Pickle Roll, Old.....	22 1/2 @ 25	Swiss.....	70 @
Do, New.....	25 @ 27	<b>POLTRY &amp; GAME.</b>	
Firkin.....	25 @ 30	Hens, doz.....	6 00 @ 7
Western Reserve.....	16 @ 20	Roosters.....	6 00 @ 10
New York.....	— @	Broilers.....	3 00 @ 6
<b>CHEESE.</b>		Ducks, tame.....	5 00 @ 6
Cheese, Cal., lb.....	12 1/2 @ 15	Geese, pair.....	1 25 @ 3
Old.....	8 @ 12	Wild.....	50 @ 2
Eastern.....	— @	White.....	15 @ 2
N. Y. State.....	— @	Turkeys, Live, lb.....	18 @
<b>EGGS.</b>		Dressed.....	18 @
Cal. fresh, doz.....	23 @ 25	Snipe, Eng.....	2 50 @
Ducks.....	20 @ 22 1/2	Do, Common.....	1 00 @
Oregon.....	22 1/2 @	Rabbits.....	1 00 @ 1 1/2
Eastern.....	19 @ 20	Hare.....	1 50 @ 2
<b>FEED.</b>		<b>POULTRY.</b>	
Bran, ton.....	27 50 @	Cal. Bacon.....	13 @
Corn Meal.....	50 @ 46 50	Medium.....	13 @
Hay.....	15 @ 25 00	Heavy.....	13 @
Middlings.....	37 50 @	Lard.....	12 @
Oil Cake Meal.....	40 @ —	Cal. Smoked Beef.....	91 @
Straw, hale.....	75 @ —	Eastern.....	— @
		Eastern Shoulders.....	— @
<b>FLOUR.</b>		Armour.....	13 @
Extra, hhl.....	9 37 @ 10 00	Hens.....	14 @
Superfine.....	7 @ 7 75	Dupe's.....	15 @
Graham.....	8 00 @ 8 50	Davis Bros.....	15 @
		Magnolia.....	15 @
<b>FRESH MEAT.</b>		<b>SEEDS.</b>	
Beef, 1st q'aly, lb.....	6 @ 6 1/2	Alfalfa, Cal.....	27 @
Second.....	5 @ 5 1/2	Canary.....	25 @
Third.....	2 1/2 @ 3	Clover, Red.....	26 @
Mutton.....	5 @ 5 1/2	White.....	25 @
Spring Lamb.....	6 @ 7	Cotton.....	6 @
Pork, undressed.....	4 1/2 @ 6 1/2	Flaxseed.....	34 @
Dressed.....	7 1/2 @ 8 1/2	Hemp.....	5 @
Veal.....	7 @ 9	Italian Rye Grass.....	35 @
Milk Calves.....	7 @ 8	Perennial.....	35 @
<b>GRAIN, ETC.</b>		Millet.....	10 @
Barley, feed, ct.....	8 @ 8 50	Mustard, White.....	10 @
Brewing.....	90 @ 95	Brown.....	31 @
Chevalier.....	1 90 @ 1 95	Rape.....	3 @
Buckwheat.....	1 75 @	Ky. Blue Grass.....	30 @
Corn, White.....	1 90 @ 2 05	2d quality.....	29 @
Yellow.....	1 99 @ 2 05	Sweet V Grass.....	30 @
Small Round.....	2 00 @ 2 10	Orchard.....	30 @
Oats.....	1 70 @ 1 80	Red Top.....	25 @
Milling.....	2 25 @ 2 40	Hungary.....	8 @
Rye.....	2 00 @ 2 25	Lawn.....	20 @
Wheat, shipping.....	3 00 @ 3 15	Mezquite.....	20 @
Milling.....	3 05 @ 3 15	Timothy.....	10 @
<b>HIDES.</b>		<b>TALLOW.</b>	
Hides, dry.....	18 @ 18 1/2	Crude, lb.....	6 @
Wet salted.....	7 @ 9	Refined.....	7 1/2 @
<b>HOSE, ETC.</b>		<b>WOLF, ETC.</b>	
Beeswax, lb.....	25 @ 27 1/2	SPRING.	
Money in comb.....	13 @ 13 1/2	Short Fur, dusty.....	15 @
Honey, do No.....	10 1/2 @ 11	Good Southern.....	13 @
Dark.....	8 @ 9	Choice Northern.....	22 @
		Burry.....	12 @



## Seedsman.

## BULBS SEEDS TREES

## SEVIN VINCENT &amp; CO.,

Wholesale and retail dealers in and

## Growers of Seeds,

Keep constantly on hand a complete stock of

Vegetable, Field, Grass, Flower and Tree Seeds,

Also Flowering Plants, Bulbs, Fruit and Ornamental Trees, etc.

We call the attention of farmers and country merchants to our unusually low prices. All Seeds warranted fresh, pure and reliable. Trade price list on application.

.. We have just issued the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is Handsomely Illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,  
607 Sansome street, S. F.

P. O. Box 1023.]

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED, together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA  
SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants. Spring Lists free. F. K. PUGH, 819, Bloomington Nursery, Illinois.

## Nurserymen.

## LOS GATOS NURSERIES,

S. NEWHALL, Prop'r, - - - San Jose, Cal.

A large and general assortment of

## Fruit and Ornamental Trees,

Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a well assorted stock. Low-topped, stately fruit trees a specialty. Address,

S. NEWHALL, - - - San Jose, Cal.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.

Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, - - - Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

## HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.,

Wholesale Grower of

## ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

SQUILLS, Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Petaluma, Cal.

ROWELL & CHESMAN  
Advertising Agents,

THIRD &amp; CHESTNUT STS., ST. LOUIS, MO.

Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulations, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.

## DAVIS &amp; SUTTON,

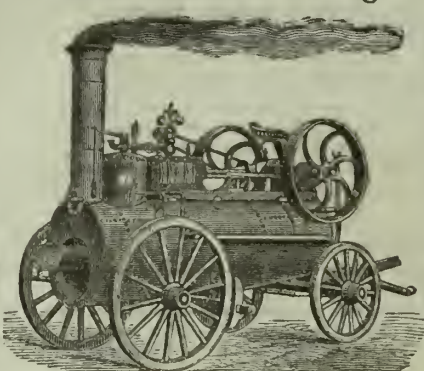
75 Warren St., New York,

## Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## Agricultural Articles.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 &amp; 309 Market St.

SAN FRANCISCO.

43, 45 &amp; 47 J Street,

SACRAMENTO.

## IRRIGATION and PLACER MINING



## THE SLUTHOUR PUMP

Has been thoroughly tested for irrigating purposes, and for economy in power, durability and simplicity of parts, and large results, it really has no equal, and our orders show that the farmers are at last fully convinced of this important fact. Send for circulars to

## J. M. KEELER, AGENT,

(Late of 330 Sansome Street.)

Now with MESSRS. M. C. HAWLEY &amp; CO.,

301, 303, 305, 307 &amp; 309 Market St.,

SAN FRANCISCO.

## MATTESON &amp; WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

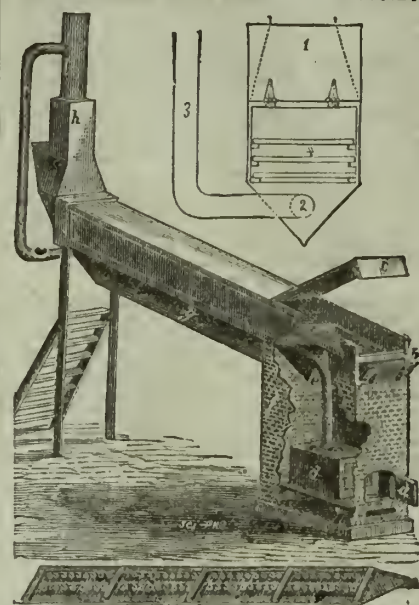
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out of the machine, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, a, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address, WHESTER & CO.,  
17 New Montgomery St., San Francisco.KEELER'S IMPROVED  
AMERICAN FRUIT DRIER

## AND SOLAR HEATING ATTACHMENT.

We have abundant testimony to prove that this is the best Family and Farm Drier on the Pacific Coast. Its merits and working are fully set forth in an illustrated circular which will be sent to every inquirer by

J. M. KEELER, Patentee and Agent,

(Late 330 Sansome Street.)

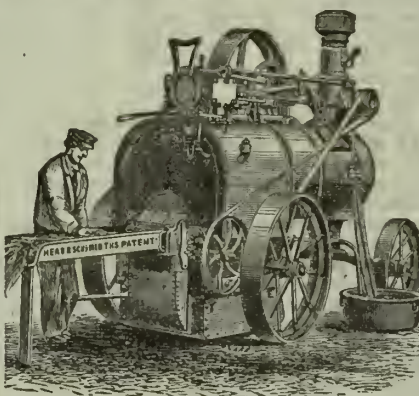
Office with Messrs. M. C. Hawley &amp; Co.,

No. 307 Market Street,

SAN FRANCISCO.

## HEAD &amp; SCHEMOTH'S

## STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

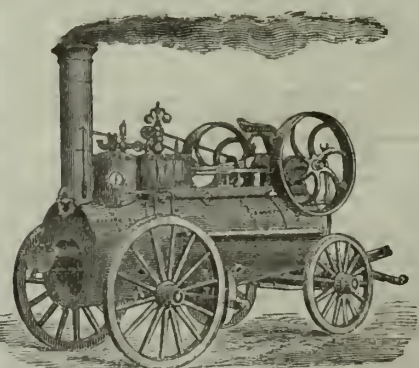
ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## H. W. RICE,

Manufacturer of

The Rice Patent Straw-Burning Engines.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood-Burning Engines changed to Straw-Burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

Look out for a man calling himself J. Livingston. Last whereabouts in Yuba county.

## MUSIC BOOKS

-FOR-

## Schools, Academies &amp; Seminaries.

THE HIGH SCHOOL CHOIR, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book 1, (35 cents), Book 11 (50 cents), Book 111 (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents.) SHINING RIVER, (35 cents.) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail prices.

OLIVER DITSON &amp; CO., Boston.

C. H. DITSON &amp; Co.,

J. E. DITSON &amp; Co.,

711 Broadway, New York.

Successors to Lee & Walker,  
Philadelphia.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER... C. J. CRESSEY.

VICE-PRESIDENT... JOHN LEWELLING.

TREASURER... J. V. WEBSTER.

CASHIER... ALBERT MONTELLIER.

SECRETARY... FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12 50.

## GOLDEN GATE PLASTER MILLS,

LUCAS &amp; CO.,

Nos. 215 and 217 Main Street, San Francisco.



## H. F. ROCKEY,

Dealer in

AMATEUR PRINTING

Presses,

Small Fonts of Type,

Printing Materials,

Plain &amp; Fancy Cards, &amp;c

22 Kearny St.

Bet. Market &amp; Post, S. F.

(Up Stairs.)

Send for Illustrated Circular.

CALVERT'S CARBOLIC  
SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.

T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

## ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch WM HARKINS, Collinsville.

## MOUSTACHE PROTECTOR.

Will fit any Cup.



Gentle's Delight. Loss of hair. Gentlemen must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent toe, Willimantic, Conn.

We can recommend the New York watch, of Springfield, Mass., as A 1.



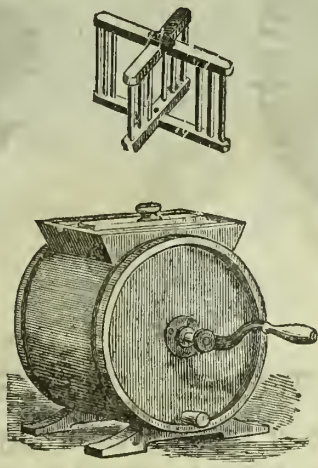
**E. K. HOWES & CO.,**

Nos. 118, 120 and 122 Front Street,

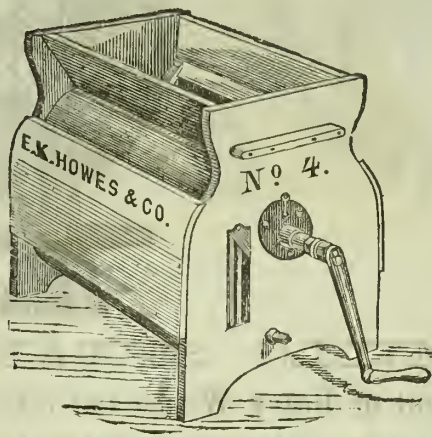
San Francisco.



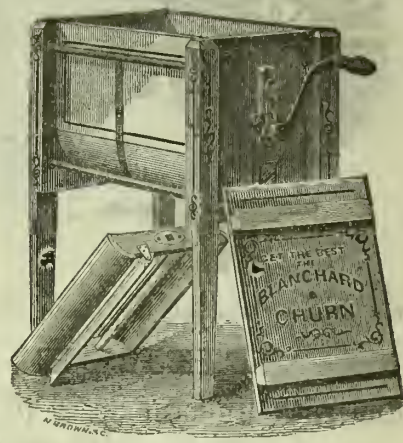
Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

**PACIFIC CORDAGE COMPANY,**

MANUFACTURERS OF

**MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.**

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES &amp; CO., Sole Agents for this Coast,

118 and 120 Front Street, San Francisco.

**Winchester Repeating Rifle.**

MODEL 1873.



One-third size, by Dr. E. H. Pardee.



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**  
SOLE AGENT FOR THE PACIFIC COAST.

**FALKNER, BELL & CO.'S****WOOL AND LIVE STOCK AGENCY.**

Office—430 CALIFORNIA STREET.

Warehouse, Corner of 6th and Townsend Streets.

**FIRE INSURANCE AT SPECIALLY REDUCED RATES.**

Stock Yards, Butchertown, Corner of 14th Avenue and Second St.

Live Stock of All Descriptions Received for Sale.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

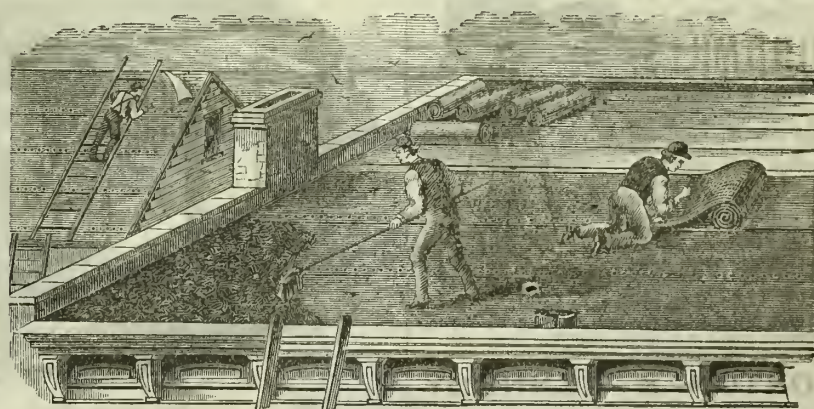
**\$55 & \$77** a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine.

TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

H. W. JOHNS' PATENT

**ASBESTOS ROOFING AND ASBESTOS PAINTS,**  
**ASBESTOS CEMENT FOR LEAKY ROOFS**  
Asbestos Roof Paints for Leaky Roofs,  
**ASBESTOS BOILER AND PIPE COVERINGS**



FOR SALE BY ALL COUNTRY MERCHANTS.

**Thompson & Upson, 5 First Street, near Market, S. F.,**

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine. Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE &amp; CO., San Francisco.

**LANDSCAPE GARDENING.**

CHAS. A. REED,

Experienced Landscape Gardener,  
SANTA BARBARA, CAL.

Correspondence solicited.

**INTERNATIONAL HOTEL,**

ALL NEWLY FURNISHED.

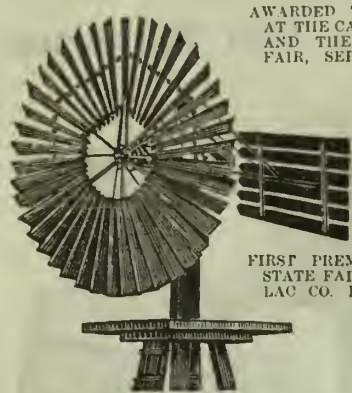
824 &amp; 826 Kearny Street, - San Francisco

\$1.50 and \$2.00 per day. Free Coach to the House.

H. G. PATRIDGE, Proprietor.



# ALTHOUSE AND RAYMOND WINDMILLS.



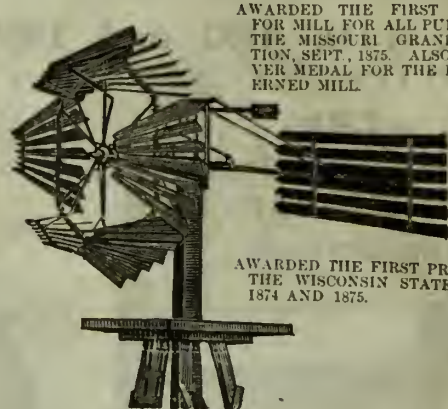
AWARDED THE FIRST PREMIUM AT THE CALIFORNIA STATE FAIR, AND THE STOCKTON DISTRICT FAIR, SEPT., 1875.

FIRST PREMIUM AT THE IOWA STATE FAIR, 1875, AND FOND DU LAC CO. FAIR, WIS., 1874.

The Althouse Windmill in a Light Wind.



RAYMOND'S PAT. WINDMILL



AWARDED THE FIRST PREMIUM FOR MILL FOR ALL PURPOSES AT THE MISSOURI GRAND EXPOSITION, SEPT., 1875. ALSO, THE SILVER MEDAL FOR THE BEST GOVERNED MILL.

AWARDED THE FIRST PREMIUM AT THE WISCONSIN STATE FAIR IN 1874 AND 1875.

The Althouse Windmill in a Heavy Wind.

## THESE MILLS SPEAK FOR THEMSELVES.

Run with Uniform Speed in Light or Heavy Winds and take care of themselves in any Gale.

Perfectly Self-Regulating and Self-Protecting, Reliable, Durable and Ornamental, Cheapest and Best.

For the Reason that they Run in Very Light Wind, work Quietly and Steadily in a Gale, and, unlike Solid Wheel Mills, when properly set up.

### THEY NEVER BLOW DOWN.

L. H. WOODIN, Esq., Sacramento, Cal.—Dear Sir:—Regarding the Althouse Windmill purchased from you, would beg to say that it is all that was recommended. The one in use on our road is 16 feet diameter, placed 55 feet above the grade line, driving a three and a half inch Hooker pump, lifting water 22 feet and discharging 47 feet above the pump; has been in service over six months, giving no trouble or expense. It is perfectly automatic in its motions and is entirely storm proof. The workmanship in its construction is excellent, especially in the large bearings and turn-table, and attachment of fans to automatic lever, and it gives me pleasure in saying that I think it the best constructed and most economical mill for Railroad purposes in use on this coast. Very truly yours,  
J. W. NESBITT, Superintendent.  
Office San Luis Obispo and Santa Maria Valley R. R. Co., San Luis Obispo, Cal., April 27, '77.

L. H. WOODIN, Sacramento, Cal.—Dear Sir:—The Althouse Windmill bought of you March 18th, 1876, by the Order of Odd Fellows, was set up on their cemetery grounds and has

been running over one year without any expense whatever, except oil. It has stood the heavy winds of the past winter, and has given entire satisfaction. We think there is no better mill in the State.  
J. B. HAZEN, HACKMAN & SMITH,  
Trustees Lodge No. 168, I. O. of O. F.  
San Luis Obispo, April 23d, 1877.

L. H. WOODIN, Esq., San Francisco.  
The Althouse Windmill is the best I have ever seen in use. It gives satisfaction in every respect.  
Eureka, Nevada, Jan. 16th, 1877. EVERETT, Gen. Supt. Eureka & Palisade R. R.

Mine, though of smallest size, raises water 85 feet, enough for seven families and their stock, and as much more for irrigation.  
San Buenaventura, Aug. 20th, 1876. S. BRISTOL

N. B. We sell the Best Self-Regulating Mill in the World. Ten-foot Wheel for \$90.

ORDERS PROMPTLY ATTENDED TO.

SEND FOR PRICE LIST TO

L. H. WOODIN, San Francisco, Cal., Proprietor.

BAKER & HAMILTON, Sacramento or San Francisco, Gen'l Agents.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm Pumping, Railroad and Power

### WINDMILLS,

Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,

HORTON & KENNEDY,

Managers for California and Pacific Coast,

ALSO BEST FEED MILLS FOR SALE.

General Office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## Buy N. Y. Watch Co's Superior Watches.

C. H. DEWEY. GEO. JORDAN.

DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware, Etc., Etc.,

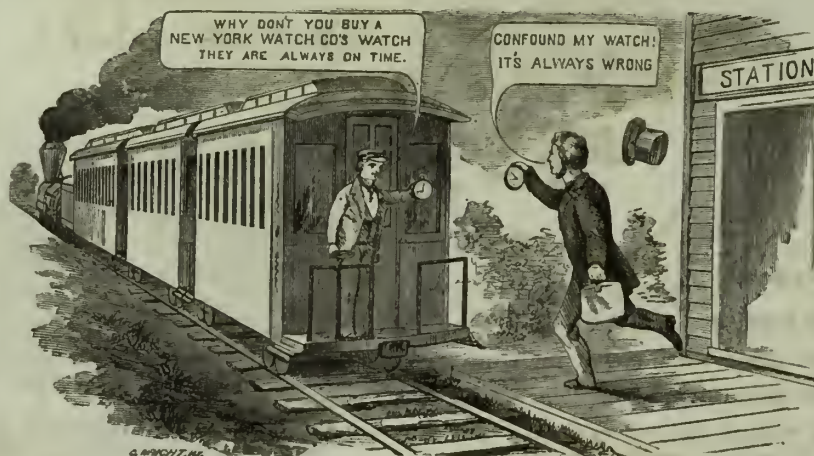
No. 433 Montgomery St., near Sacramento, SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

## American Watches a Specialty.

Choose a good companion only—one of Dewey & Jordan's "New York watches."

## The Value of a Correct Time Piece.



[Scene on the S. F. & Oakland (C. P.) R. R.]

"Be sure you are right, then go ahead."—Davy Crockett.

But with an ordinary watch how can you ever be sure you are right? Well then buy only reliable watches. It costs but a trifle more to get one of the true time keepers made at Springfield, Mass., by the N. Y. Watch Co. They never fail. Prices reasonable and every watch guaranteed, by the reliable firm of DEWEY & JORDAN, No. 433 Montgomery St., S. F. Send for price list.

## THOROUGHbred FOWLS,

BRONZE TURKEYS, Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz

BRAHMAS } \$5.00

LEGHORNS }

Eggs Shipped to Any part of the Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address, M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown

Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal

25 FANCY CARDS, all styles, with name, 10 cents; 30 Bon-Ton cards, for ladies, with name, 20 cents; 10 Shadow cards, all fun, 10 styles, no name, 10 cents, post paid. J. B. HUSTED, Nassau, N. Y.

## SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

Early Canada } Yellow Flint Corn.

Long Red Mangel Wurtzel } Beet Seed.

Yellow Globe }  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317, Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

E. GROTKASS,

COLIMA, - - - MEXICO.

DEALER IN REAL ESTATE.

Information given free of charge. Lands procured for sale or for rents on easy terms.





Volume XIII.]

SAN FRANCISCO, SATURDAY, MAY 12, 1877.

[Number 19.]

### Check Reins or Gag Reins.

[Written for the RURAL PRESS by DIO LEWIS.]

"The horse has to work very hard for his living, and he has a right to be so harnessed as to do his work in the way most easy to himself. It is heartless to set a poor beast to work his hardest and then tie him up into a cramped position that he may look handsome whilst doing it."

It is doubtless true that all the overwork, starving and beating inflicted upon horses involve less suffering than the check rein. I hear it often said, that "I don't use a tight check when he is going, the cheek is always loose."

I have suggested to such persons that they drive without a check and observe. They generally find that the horse will, when he finds the check absent, carry his head six inches lower than his wont when obliged to look out for the jerk upon his mouth. Let us suppose that your horse does carry his head in its natural place while moving, how is it when he is standing? Is he not then constantly at work, turning his head this way and that, throwing it up and in every way trying to get relief from his sufferings? Think of an animal as highly organized as the horse, compelled to hold his head even six inches higher than its natural place, for hours. It would produce but little pain, comparatively, if the head were held down six inches lower than its natural place, but to compel the creature to hold its head six inches higher than its natural place by the muscles running along the top of the neck, just under the collar, not only produces a constant strain and pain, but soon reduces the muscles in that part of the neck in their size and strength, and thus leads to stumbling.

The engravings on this page show the bearing of the animal with and without the appliance. The first cut represents the average natural position of the head and neck, and the second cut shows the distortion of a tight check rein.

I don't see how any man can stand by with indifference and see the poor animal turning his head this way and that, then throwing it up, then turning it this way and that again, vainly seeking relief from his pain. How can one look in his eyes and not see his torture? Just unfasten the check and watch the change in the expression of the eyes and ears.

I hear people say, "but the bearing rein holds the head up." I find a great many people who think so. Does anybody suppose that the head and neck of a horse can be suspended by its lips, or by that most cruel of all these torturing appliances, which is worked by a strap running between the creature's ears? The check rein holds the head up just as a sharp instrument held under a man's extended arm, to hurt it if the arm be allowed to drop, holds the arm up. The check compels the animal to hold his own head up, and does not hold it up for him.

When in Paris many years ago, as a medical student, I attended the *cliniques* in a horse hospital. The professors often referred to an old man, whom we saw quietly walking about, as their encyclopedia of practical knowledge. He knew more, they said, than any other man of the nature, wants and diseases of the horse. I sought opportunities to converse with him.

One day he pointed to a horse with sore, stiff shoulders and asked me what I supposed was the trouble with that animal?

"Foundered," I suggested.

"No," he replied, "that is a rare thing in a city."

"Sore shoulders from traveling on the hard pavements?" I added.

"No, that is not the cause," he replied; "it is that check rein. That stupid, cruel barbarity is the cause of a large proportion of the stiff shoulders among our horses. The muscles of a horse's neck are elaborately interlocked and interwoven with those of his shoulders. Now, if you lift the head of the animal out of its natural place, and interfere with the interwoven movements of the muscles of the neck, with the

muscles of the shoulders, you are sure sooner or later to stiffen the muscles of the shoulders. If you will carefully observe the movements of a horse when trotting with a tight check rein, you will see that the natural harmony between the movements of his head and shoulders is broken up. That stupid check rein stiffens thousands of our city horses. The largest livery in our city is owned by a gentleman who has never permitted the use of the check rein among his stock, and in 30 years I have not seen but one stiff horse in his stable. If it is

remains is exerted at a great expenditure of the horse's powers and health, to say nothing of his comfort. The consequence is, that his limbs and muscles become strained and distorted. His knees are bowed forward and his hocks backward. If a man pulls a load by a strap across his shoulders, he bends his head and chest forward, and relieves his legs; a horse does the same when he can, and ought always.

"It injures the horse not only in the way described, but the confinement of the head in a constrained position, whilst the heart and lungs

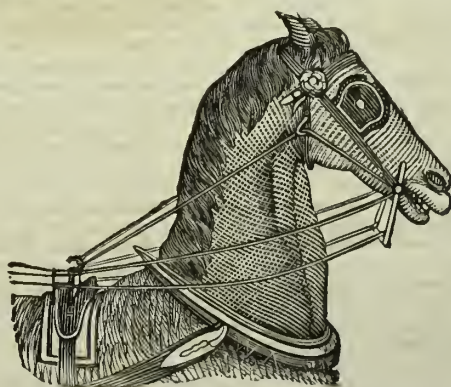
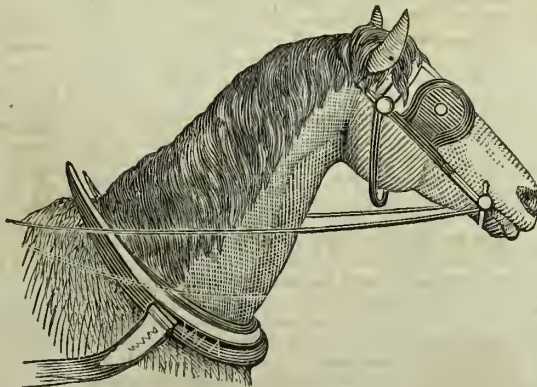


ON THE WAY TO THE CAMP GROUND.

the hard pavements, then why do not our omnibus horses that work constantly on the pavements get stiff shoulders? They escape it, because they do not wear the check rein."

Prof. Pritchard, of the Royal Veterinary College at London, says, September, 1869: "I would therefore say that, instead of preventing horses from falling, the check rein is calculated to render falling more frequent. Other not uncommon results of its use are, distortion of the

are excited by work, hinders the breathing and the circulation of the blood in the head. These effects make the horse uncomfortable, and he becomes restless and irritable; in fact, his head aches and pains him, and he gets many a violent jag and blow just because his driver cannot understand the cause of his restlessness. I have seen many horses standing at public-house doors and other places in this uneasy state, and by-and-by set off in their desire to get home and



THE HORSE WITHOUT AND WITH THE CHECK REIN.

windpipe to such a degree as to impede the respiration ever afterwards, excoriation of the mouth and lips, paralysis of the muscles of the face, etc. It is a useless appendage, supported only by fashion. I feel that if this were more generally understood, numbers of excellent persons who now drive their favorites with check reins would discontinue to do so."

Dr. Kitching, of York, another eminent English writer on the subject says: "If a horse pulling a load has his head held in by a check rein, he cannot throw his weight into his collar, and is hindered from giving his body that position which is the most natural and effective. He has to pull by the strength of his muscles only; the weight of his body is lost, and so much pulling strength thrown away. What

be unharnessed, when the driver has rushed out and punished the horse for his own error."

Mr. Fleming, Veterinary Surgeon of the Royal Engineers (London), says: "I think nothing can be more absurd than check reins. They are against reason altogether. They place the animal in a false position. The horse stands with a check rein exactly as a man would stand with a stick under his arms behind his back when told to write. It is extremely cruel also. I have no doubt, if the public could only realize the fact that it throws away a large portion of the horse's power altogether, and is very cruel besides, this rein would be discontinued. It is not only the head that suffers, but from his head to his tail, from his shoulder to his hoof, and over his whole body, he suffers more or less."

### The Camping Season.

The time of the year is just at hand for the joys and freedom of the camping grounds. Already we hear of family parties setting out in their own wagons for the great Yosemite valley, and other points of interest and resort. There is no method of holiday taking which can be compared with the pleasures of the excursion party which travels not by the dusty cars and stages, but, mastering their own conveyance, go here and there, following their own sweet will in the pursuit of nature's beauties. If one has the time, and to the farmers there are always times when work does not press with its accustomed severity, there can be no doubt that a week or two of pleasure travel is productive of good in many ways. The tired mind and frame need the relaxation of changing scenes. The pure air of unfrequented localities, the warmth of the sheltered valleys, the bracing atmosphere of the mountain roadways and camp grounds often win back vigor and strength to the worn physical structure, while the sublimity of nature's masterpieces of mountain, rock, river and cataract, fill the mind with ennobling ideas, and inspire the thought of nobler lives and more disinterested actions.

The little scene which appears upon this page will suggest memories to many readers. We remember when we have mounted the driver's scat full of the joy of escape from the routine of daily toil, and full of anticipations of delight in a week's freedom, not only for ourselves but for those who were dear to us. The many little incidents of such an experience serve for a year's pleasant relation. Incidents which were ludicrous and those which were mildly dangerous are alike charming to remember and discourse to friends. In the engraving the wagon has been stopped and the marksman of the party has alighted to load his gun for a shot at something which appears in advance of them. Perhaps it is a small bear, and if so, will the ladies ever forget to tell of the escape from destruction which they experienced? We rather think, however, that it is some less dangerous game which intercepts their path, for no signs of fright are visible in the party. We will not wait for the man to shoot, but we doubt not his aim will be true, and that the camping party will soon be in motion again through the wild country which they are visiting.

HOW THE "RURAL PRESS" IS READ.—We notice in a letter from southern California to the Philadelphia Press the following allusion to our journal: "At the home of Mr. C. C. Hutchinson I saw two genuine cork oak trees, planted 17 years ago, about 40 feet high, and the one I measured was 21 inches in diameter and the cork four inches thick. The acorns were obtained from the Patent Office and the trees have fruited and Mr. H. has now a thriving nursery of young plants. Mr. H. wrote a short account of them to the PACIFIC RURAL PRESS, the best agricultural paper on this coast. The result was that he was so inundated with letters that he says he will never write for that paper again." We sympathize with Mr. Hutchinson, but we cannot help it if people will read the PRESS, and show their appreciation of a good thing when they read it.

LOS ANGELES FRUIT GROWERS' ASSOCIATION.—We have received from L. M. Holt, of Pomona, a very interesting report of a meeting of the above named organization. The report comes too late for this week's issue but will appear in due time. The discussion was chiefly on points in orange growing, and was partaken in by men who are known throughout the State for their skill and experience in this specialty. As orange growing is now engaging the attention of a wide range of readers, we shall not hesitate to give the Los Angeles meeting the space which a full report will require.



## CORRESPONDENCE.

### Our Industrial Condition.

EDITORS PRESS:—In my letter published in your issue, 10th of February last, reasons were given for the loose and careless manner of doing business, as well as disregard of economy, manifested throughout California. (The whole Pacific coast might be included in this particular.) This characteristic of our people is notorious.

#### Ignoring Small Things

Has become a by-word—at home and abroad—until prodigality is coupled with Californians as thrift is with the Scotch, or wit and blarney with the Irish. Possessed with the idea that greatness attends a notoriety gained by extravagance and carelessness for fractional parts of integers, however great, has been the cause of much mortification to the flesh, and sorrow to the spirit of old-time, as also the present, dwellers in California. From conditions we would judge it high time for absurdities to be laid aside; to be replaced by the common sense ideas of those older and wiser than we have been—but not wiser than we hope to be. It was suggested that changes should be made whereby our citizens could be relieved from debt, from the usurer's grasp, from unequal and excessive taxation, from the present apparently hopeless servitude, and from the infinity of ills consequent upon speculation. Desirable as these conditions are, and easy of attainment, they are not enjoyed simply because we have stupidly accepted the dogmas of the past, and have tamely submitted to the dictation of those determined on enriching themselves regardless of consequences; who controlled by appealing to prejudices; that have filled their coffers while the people have been beggared. This is not a flattering presentation, nor is it a fancy sketch, but literally true—sustained by facts and figures. It is not my purpose to enter into a dissertation upon political economy, or the ethics of self-government, or to discuss finance, save only as it relates to our immediate well-being.

The following

#### Propositions

Will be regarded as texts to work to or from, as the case may be:

1. That labor is the outgrowth of necessity, and determined by it. Reason teaches that its avoidance is desired by all.

2. That man is gregarious by nature; by association he exists, becomes powerful, demands tribute from creation, animate and inanimate. Justice indicates that it is incumbent upon each member to bear a due proportion of the burdens imposed by such association, as by the unity power is conferred and protection ensured.

Our position is, that the surpluse, or profits of labor, is wealth; represented in a thousand forms, but most readily understood as capital; to measure which an acknowledged unit of value is required. This unit, among the civilized commercial nations of the world, is money—gold, silver, and paper tokens, representing fixed local values, and the sovereignty to which they owe existence.

California, as one of the United States, in repudiating the national currency or paper token, and adopting one of gold and silver in lieu thereof, has suffered immeasurably. Debtor as she has been, and is, to the Eastern States; dependent upon Government for protection and aid; for harbor improvements, light-houses, railroads, postal facilities, and the donation of millions of acres of land for schools and other purposes; besides being obligated with the balance to the fullest extent, for the payment of every dollar in greenbacks and bonds—issued by Government—our folly has no parallel.

Reformation in finance should begin as soon as possible, by repealing the iniquitous special contract law that was framed in the interest of capitalists, as a clever way of evading the Legal Tender Act of Congress. Through the agency of this special contract law, golden harvests have been gathered by English, Hebrew and native born task masters who are reaping what others have sown, and, as the grave, are steadily and surely gathering us in. The unequal and excessive taxation imposed upon the agricultural and productive interests of our State, should have attention, tending as it does to paralyze all development of our resources, which, if cherished and sustained by wise enactments, would insure prosperity and happiness. That taxation is necessary for governmental purposes is obvious. It is not so clearly understood, however, by the toiling farmers and mechanics. Why it is that they alone should pay for the music, while foreign capitalists are gaily heel and toeing to the tune of over 50,000,000 exempt from taxation, yet jealously guarded and protected at the expense solely of those who never participate in the jug hault dance.

The question naturally suggests itself as to the mode of correction. Our reply is: "By a united and immediate action on the part of all desirous of relief, nominating and supporting for office such men only as are competent and honest, non-partisan, yet truly loyal to their constituents (the people). Men who recognize the necessity of guarding safely the elective fran-

chise, by surrounding it with safeguards which will render its exercise impossible by those not directly interested in the results they are called upon to decide.

Theoretically our government is republican, one in which the supreme power is vested in the people—who can manifest their wishes through representatives that legislate (make laws) for them. Where, then, ought the blame lie for what is complained of? With the people only; who, by indifference and neglect in maintaining and supporting such men as will serve them best, allow themselves to be controlled by partisans and demagogues, who invariably serve themselves first, last and always.

Common sense declares for the employment of the means possessed, and against the folly of wasting time and opportunities in regrets and lamentations. When the people think and act independently, are less selfish and more patriotic, the victory will be theirs—and never without.

G. C. PEARSON.

South Vallejo, May 4th, 1877.

### Description of Kings River.

The Development of Its Border by the Use of Its Waters.

EDITORS PRESS:—As but a few, outside of this immediate vicinity in this broad State of ours and the Pacific Coast, are at all acquainted with this portion of country of which we propose to treat, we desire to make statements that cannot be questioned. To do this we will deviate but little from our personal knowledge.

With the exception of the San Joaquin and Sacramento, Kings river is the largest in the State. It has its source at the foot of the eternally snow-capped mountains—Whitney, the father of the Sierras, Williamson, Tyndall and others of the highest mountains on the Pacific coast. The scenery on the river down through the mountain gorges is of the grandest type. Large groves of the very finest redwood and sugar pine convenient to the river and easy of access are quietly awaiting the time—which is in the near future—when they will largely aid in the development of the resources of this fertile portion of the valley. According to accurate calculations by scientific men, this timber can be sawed and placed on the railroad near Kingsburg at a cost, probably not exceeding ten dollars per thousand feet.

Kings river is a clear and rapid stream, and it contains lake trout and other fish in abundance. From Kingsburg to the lake it has a border of heavy oak—the best of firewood—of one to three miles in breadth. The soil in this portion of the country outside the timber is a rich sandy loam—a sediment placed in its present position by the briny waves that once predominated over this valley.

About five years since a small ditch on the south side of the river near the lake was made, which conducted water from the river out on the plains, and it was found that wherever it touched the almost barren, and seemingly worthless soil, it was thoroughly reclaimed and vegetation of all descriptions grew most luxuriantly. Thus the first experiments in utilizing the waters of Kings river proved so marvelously successful that many expensive ditches have since been constructed which divert large quantities of water from the main channel out to where it serves to restore the barren waste to a garden of luxury.

Owing to the previous season being a remarkably wet one, the farmers were tardy the winter just past, about throwing in checks in the main channel and filling their ditches, in consequence of which their wheat and barley crops have in the main seriously suffered, but the alfalfa is excellent and the ground is now being thoroughly saturated so that the summer and fall crops will not lack for moisture. This land saturates simply by seepage or percolation, consequently it does not require to be flooded. A stream of water passing through a farm sends out its moisture hundreds of yards away in sufficient force to make vegetation most exuberant. This nature of soil is mostly found on the south side of the river.

A little spot here of about 150 square miles, a little of Kern island and a few of the east-end islands are pre-eminently favored for their adaptability to irrigation. We, if we mistake not, have no account of any other lands on earth that saturate by seepage or percolation to the extent that these lands do, and we have no account of any other lands that retain moisture for such a fabulous period to meet the requirements of vegetation.

The prodigious size to which almost all the different species of vegetation grow is marvelous. The editors of the *Tulare Times* will inform you that 10 pumpkins, from one vine, were brought to their notice that aggregated 1,500 pounds, and one pumpkin that weighed 232 pounds; a sweet potato, 17½ pounds, and many specimens of like proportions were brought to their notice. I wish to mention that alfalfa is not behind other vegetation, four to six tons is produced the first year and eight to 12 the second.

Last winter was the coldest that has been experienced for several years, but the young orange trees were not in the least hurt, while in the boasted orange fields of other parts of the State they materially suffered. Erc long oranges, lemons, strawberries and alfalfa will supersede all other crops, and this God-favored

spot will become one of the gardens of California.

Many of the settlers have entirely exhausted their means getting out the water and are anxious to sell a portion of their land, to better enable them to improve a smaller portion; just now it can be bought on easy terms from \$15 to \$20 per acre, in lots of from 40 to 160 acres. I am also informed that wet land may be rented for the season on easy terms. Parties wishing to visit this country should purchase tickets to Hanford, a town on the S. P. R. R. This road was recently constructed from Goshen 46 miles toward the sea, and ere long will be completed through to Hollister and Tres Pinos. Hanford, in the midst of the Mussel slough country, was laid off and started by the S. P. R. R. Co., about three months since; it now consists principally of a neat depot, telegraph and express offices, three handsome hotels, three well-filled stores of general merchandise, one neat drug store, one large livery stable, meat market, blacksmith shop, and lumber yard, and as usual, its quota of saloons, all in active operation. The town is permanently located and ere long we expect to see it one of the prettiest towns in the valley. J. N. P. Visalia, April 28th.

### Thin Seeding and Good Cultivation.

EDITORS PRESS:—The editorial in the *RURAL PRESS* of December 16th, headed "Thin Seeding of Wheat," touches on matters of the greatest importance to grain growers everywhere. Though the heavy seeding practiced in England is not in vogue in California, there is hardly a doubt that in many cases a great deal of grain is wasted.

You mention several notable instances of men who have, from a light sowing, reaped a heavy crop. Perhaps a few more examples may not be unacceptable, even though accompanied by friendly criticism on some of your conclusions. In most, if not all, of the examples which you give, thorough cultivation was evidently the secret of the success attained.

#### Horse-Hoe Culture.

You mention Jethro Tull, who followed each year one-half of his land, in strips three feet wide, alternating with strips carrying three drills a foot apart. He cultivated between the drills with a horse-hoe, and turned over the fallow land several times during the growth of the crop. It was he, or the Mr. Smith whom you mention, who got an idea that the roots of wheat had mouths, by which they ate the soil, and that it should be finely divided on that account. The theory was absurd, but the practice was excellent, as far as thorough cultivation was concerned. The objection to Tull's system was, that he neglected manures; and this proved a fatal omission. In the end his land became exhausted and he was financially ruined. Tradition says that he died in a debtor's prison after having "skinned" his land to death. Let California take note of the fate of the farmer who did not use manure! We will wager also, that Hallett's fine crop on a poor soil resulted from his celebrated "pedigree wheat," and that it was also drilled in and cultivated.

#### Shuffling In.

Mr. Piper's good results were, you say, obtained without plowing, simply shuffling in the seed with a hoe, and using no manure but soot. If he shuffled his hoe as our Italian gardeners do theirs, a plow would have been superfluous, and there are doubtless soils on which soot would be the only manure needed for a time.

#### Colonel Linden's Barley.

Some years ago the late Colonel Linden tried a curious experiment on a rich piece of land about two miles north of Oakland, Alameda county. He planted potatoes for an early crop, and, as he feared frosts, sowed barley in every third or fourth furrow alternately with the potatoes, thinking that by thus shading them from the first rays of the sun they might escape injury. All went on well until the crop had been cultivated once or twice, and both potatoes and grain grew finely. Then a severe frost killed the potatoes, but did not hurt the barley, which stood out so that the heads were as close together as in a field sown broadcast. The actual yield per acre was never determined, but samples shown at the county fair secured the first prize, and the neighbors who saw it on the ground speak of it as a most remarkable result. Of course thin seeding gives its best results when the grain is put in early so that it has time to stool out.

On the tule lands also, very large returns have been received from light seeding, particularly where the grain was sown early in the season and fed off once or twice with sheep before it was allowed to head. As high as 80 bushels per acre are reported from such treatment, but of course this was exceptional.

We have often wondered that the farmers of this State did not take a lesson from the corn and vegetable raisers. The latter plow and cultivate early and late, and generally have good crops, when neighboring grain, sown broadcast, is perishing.

Cultivation kills weeds, promotes stooling and accumulates and retains moisture. Heavy Seeding no Protection against Dry Wind.

We must beg leave to dissent from the doctrine that a heavy crop, by shading the ground,

prevents drying out when a dry wind is blowing. The rate at which land exposed to dry wind parts with its moisture depends mainly upon the leaf surface of the crop growing on it. If the crop is heavy, this surface is many times that of the land itself, and the crop is likely to wither, while a lighter one would hold its own. On the other hand, when the air is loaded with moisture, vegetation condenses it, as may often be seen on corn, where the curl of the base of the leaf is filled with moisture which has run down from above.

We trust the farmers of California will make a study of the difficulties which they encounter in their business, and give the results of their cogitations in the *RURAL* for the benefit of others.

C. H. DWINELLE.

San Francisco, May, 1877.

### Kingsburg, Fresno County.

EDITORS PRESS:—This section of the Kings River valley has only just come to notice, and seems to contain a naturally fertile soil and genial climate. With the means of irrigation, now for the first time made available to our settlement, I can see no reason why our farms should not be as productive in all respects as those still further south, where "ditching" has already produced results which seem almost miraculous to a stranger.

I am now experimenting in various ways, and may hereafter write to you on the resources of our lands as soon as their capabilities are known, provided, however, you think such information admissible in your paper.

The articles on the cultivation of the peanut, castor bean and the transplanting of the orange tree, came to hand most opportunely. This, I presume, is one of the many instances in which your paper is most invaluable to all settlers in this new and beautiful State.

EDWARD KAUNTZE.

Kingsburg, Fresno County.

[We shall be glad to hear the results of our correspondent's experimenting. We are glad he finds the *RURAL* valuable. No effort of ours shall be lacking to make it thus to all readers. —EDS. PRESS.]

## THE STOCK YARD.

### Cost of Production and Marketing Cattle and Sheep.

EDITORS PRESS:—I have received a letter from J. P. Sheldon, Sheen, Ashbourne, England, saying: I am instructed to write, for the Journal of the Royal Agricultural Society of England, a report on the aspects of the trade from America to England, in live and dead meat, and desire reliable information on the following points:

What is the cost of raising and fattening cattle and sheep, and of fattening the same in your section?

What are good beef and mutton worth with you per pound or 100 pounds?

What are the means, methods and cost of transit from the interior to the ports where such animals are slaughtered and whence the meat is shipped to England?

What are the costs and conveniences of housing such animals at the ports, commissions, etc.?

What is the cost of slaughtering, packing and shipping and of ocean transit? Information on the foregoing and on any other points which may suggest themselves to you will be of great service to me and will place me under obligations.

Either you, sir, or some of your correspondents may be able to answer the above queries, and it may suggest some opening for the disposal of the surplus of this coast, now that the door is open for the shipment of American meat to foreign countries. It seems a pity that so much of the mutton to be slaughtered this season should be wasted. —H. J. S., Los Angeles.

EDITORS PRESS:—In reply to yours requesting information as to the cost of raising and fattening cattle, I send the following.

I presume that the quality of the beef is to be something extra and not under four years old. There is very little such beef raised in this county; most of the steers are sold at two and three years old to local butchers. As a rule it is butchered before it is really fat, there being little demand for such prime beef as the English market demands. I fattened twelve head one year (contracted at nine cents per pound, dressed) and the local butcher's only fault with the beef was that it was "too good for this market." Beef usually is raised here on the same principle on which the Irishman raised his streaky bacon; well-fed one day, starved the next. During the months of March, April, May, June and July, stock in an ordinary season fatten; August and September they may hold their flesh; the balance of the year they mostly scratch for a living, sometimes unavailingly. Any stock that fattens sufficiently for presentable meat is usually sold "off the grass." Prices range for three year old steers of 500 pounds, net weight, from \$18 to \$40 according to the season. I have sold two year olds as high as \$35.50 per head.

The cost of growing such beef is about \$5 per annum, plus the value of the weaned calf. Thus, premising that a three month's calf in good order be worth \$7 (some seasons they have fetched \$15) a three year old would have cost the producer \$22; so that the last few years graziers have made a bare subsistence, if they have not sustained an actual loss. The best sale made in this section for some years was that of 600 steers (three years old and upwards, but mostly four and five years), at \$40 per head, made last year by A. J. Ongheltree of Los Tularcitos. These cattle were taken off pasture and placed on a barley stubble of John Abbott's, at Salinas, for some weeks prior to the sale. Grass fed



cattle will harden on a good stubble, and cost on an average \$1 per head monthly. After stubble is used up recourse must be had for fattening cattle to such farm products as hay, corn, potatoes, beets, or squashes. These two last have proved valuable to me, but the quantity a fattening beast will consume is enormous. I reckon 150 pounds of squash and five pounds of hay an average day's ration; valuing squashes at \$2 per ton, the cost of feeding soon becomes considerable, and with beef selling below nine cents there is nothing to be made in the business.

Nevada cattle have fully supplied the San Francisco winter market the last few years, and the quantity of ordinary meat coming thence has kept better quality meat at an unprofitable price. Four and a half cents per pound *gross* was the best price I was offered in San Francisco for cattle fed on squashes and hay two months after stubble. Last winter three and three-quarters cents was the highest notch. Five and a half cents net was offered in July or August last year in our valley by a large Oakland firm.

This year prices are nominal. I have been glad to let out my small store of stock cattle to have the half of the survivors returned to me next spring, so that the cost of my cattle will be doubled to me. Whether prices will be doubled then remains to be seen. It is to be hoped that the large export of beef to England will produce a revolution not only in prices, but in our ways of raising stock. In reading Mansfield's "Paraguay," some years ago, I was struck with his remark that the Spanish method of cattle-raising was a "sham of an industry;" but so long as this method exists, and cattle can be raised in remote regions for a mere song, so long must beef-growing and fattening remain to such small farmers as myself an unprofitable and consequently impracticable industry.

EDWARD BERWICK.

Carmel Valley, Monterey Co., Cal.

### Rinderpest in Europe.

I view of the renewed and alarming appearance of this fearful malady in Europe, the Treasury Department has lately issued the following instructions to collectors and other officers of the customs:

The prevalence of rinderpest in Germany, and of that malady and the foot and mouth disease in England, has led this Department to prohibit the importation of neat cattle and the hides of such from those countries into the United States. By reason of the proximity of Holland and Belgium to Germany, and of Ireland to England, the prohibition is hereby extended to embrace such importations from those countries.

The Department is informed that the rinderpest is infectious as well as contagious, and that sheep, horses and swine may be media for its communication. It is also understood that the litter upon which these animals sleep spreads the disease. While the Department has no authority under the law to prohibit the importation of horses, sheep and swine, it desires that all measures practicable be taken on the arrival of such animals from the countries named to prevent the possibility of contagious diseases being communicated thereby to stock in the United States.

It is suggested that horses, sheep and swine, coming from any of the countries named, be examined by experts, and, if necessary, quarantined for a reasonable time; to which it is apprehended that importers, as a rule, will offer no special objection, as it is to the interest of all concerned to prevent the spread of this disease in the United States. Blooded stock coming from the countries named may be admitted when accompanied by a consular certificate of non-infection, as authorized by Department's letter of the 16th of March last, it being presumed that such stock is selected with care, and that it would not be taken from herds which are infected with the diseases mentioned.

## THE APIARY.

### Pioneer Bee-Keepers of California.

EDITORS PRESS.—Our friend, Mr. Jewett has written some interesting articles of late, and given sketches of some of the early bee-keepers of this State. As the *RURAL PRESS* has become the medium through which we can communicate with each other freely and early, bee-keepers speak out and let yourselves and your adventures in extending our favorite pursuit be known to the fraternity, in not only this State, but the world in general. I send in my mite.

In December, 1859, I bought of a man in Oakland, a colony of black bees in a 12 by 12 hive, containing eight movable comb frames, paying \$100 for it. At the same time buying Langstroth on the "Hive and Honey-bee," first edition. This colony of bees I took with me by Sacramento boat to Sacramento; then by boat to Marysville; by stage to Bidwell's bar; on a mule to Buckeye house. From there to Quincy, the county seat of Plumas county, I carried them on my back, landing safely in January, 1860. This colony of bees was the first one introduced into the mountain counties of this State, so far as I am able to ascertain. It was visited by hundreds of people and welcomed to their new abode. They were placed in a corner room in the court-house, and prospered equal to my most sanguine expectations. They

used one of the window sills for their alighting board, with a mouth piece under the lower sash. From this colony all the bees of Plumas county sprang.

This adventure proved a success both in introduction to high latitudes and financially. I am now engaged in bee-keeping in the Sespe mountains, near the flourishing town of Santa Paula, in Ventura county, and if anything I can write would, in your opinion, further the interests of bee-keeping in this State, I will favor you occasionally with items from our section of the county.

JOHN G. COREY.

[We shall be much pleased to hear from Mr. Corey on bee topics at all times. We know of his position as an apiarian, and shall esteem his favors for this interesting and valuable department of our paper.—EDS. PRESS.]

## HORTICULTURE.

### Cause of Disease in Fruit Trees.

EDITORS PRESS.—This indiscriminate ingrafting of the different varieties of fruit trees is, no doubt, one of the greatest causes for the now lengthy catalogue of their diseases; for by this means a hardy variety, such, for instance, as the Seckle pear, being grafted upon that of a variety more liable to disease, such as the Flemish Beauty, partakes of the natural diseases of the stock, the cion of the Seckle absorbing the diseased sap from the stock of the Flemish Beauty. Thus it is with all the different varieties. Hence the great number of diseases now existing among our cultivated fruit trees.

Now, admitting this to be so, and it looks reasonable, would it not be well to establish a sort of quarantine, ignoring all cross-grafting, and confining each disease to its own particular tree by grafting each variety within itself. The principle of "improving the stock by crossing the breed" does very well for cattle, and even they are improved at the expense of health, but grafting and budding is another matter, for as the cion and the stock does not change its fibrous structure, no benefit from this union can be derived.

The nearer, therefore, that the fiber of the cion or bud is like the fiber of the stock, the better and more perfect will be the tree. Let the seedling stocks be raised by planting the seeds of the fairest fruit, selecting only the most thrifty stocks, and cions from the strongest and healthiest trees. Then graft the Seckle cion into Seckle stock, the Baldwin cion into Baldwin stock, and so on with all varieties. This will favor a free and healthy growth, and at the same time secure hardy trees against the diseases of the weaker ones.

CHAS. A. REED.

Santa Barbara, Cal.

CURE FOR RABBIT GNAWING.—A Belgian gardener states that his apple trees suffered severely during hard winters from hares and rabbits eating the bark. M. Walbergy tried tar; but this injured the circulation of the sap in the bark. He prepared a solution with dog's excrements; washed the trees with it, and since no "puss" has ever troubled him or his neighbors.

## THE VINEYARD.

### The French Wine Crop.

The French wine crop of last year is estimated at 920,656,000 gallons, or as nearly as possible half of what it was in 1875 (1,839,904,000 gallons). During the last 20 years the total has varied between the minimum of 842,843,000 gallons in 1856, and the maximum as given above for the crop of 1875. The average of the last 10 years (1867-1876) has been 1,198,958,000 gallons. The particulars given as to the quantity of wine made in the different departments show how extensive are the ravages caused by the phylloxera. Thus, in the department of the Vaucluse, the average product of which is about 9,800,000 gallons, only 1,100,000 gallons were made last year. The same is the case in the adjacent department of the Gard, the average production being 44,000,000 gallons, while last year it was less than 5,400,000 gallons. Though the year 1875 was so extraordinarily an abundant one, the department of the Herault made only 198,000,000 gallons, whereas in 1869, which was not nearly so abundant a year, the total of the crop exceeded 320,000,000 gallons. There is a marked decrease, too, in the other wine-growing departments in the basin of the Rhone, though to a less degree, in the departments of the Charente, the Charente-Inferieure and the Gironde. These departments which produced the most wine in 1876 were the Herault, 144,230,000 gallons; the Charente-Inferieure, 63,240,000 gallons; the Aude, 55,720,000 gallons; the Gironde, 43,142,000 gallons; the Charente, 28,060,000 gallons; the Yonne, 27,412,000 gallons; the Saone-et-Loire, 25,620,000 gallons; the Loire-Inferieure, 22,102,000 gallons; the Puy-de-Dome, 22,100,000 gallons; the Vienne, 22,028,000 gallons; the Pyrenees Orientales, 20,516,000 gallons, and the Cote d'Or, 20,592,000 gallons. The quantity of cider made in 1876 is estimated at 154,772,000 gallons, or

246,862,000 gallons less than in 1875, when it attained 401,654,000 gallons, and much below the average of the last 10 years (240,046,000 gallons).

ON BONDING GRAPE BRANDY.—A letter from the Commissioner of Internal Revenue, dated April 16th, 1877, to Wm. Higby, Collector of this District, on the subject of bonding grape brandy, says: Regulations under the act of March 3d, 1877, are in course of preparation, and as soon as the same are issued, such number of warehouses will be established as may be deemed necessary to facilitate the sale and exportation of grape brandy. In the meantime, any distillers having grape brandy on hand, produced, but not gauged at the time of the passage of the act of March 3d, 1877, or produced since the passage of the act, and not yet gauged and tax paid, may be permitted to hold the same at the designated place of deposit, on the distillery premises, until warehouses are established, if it is their intention to deposit such brandy in warehouse.

PHYLLOXERA.—At a recent meeting of the French Academy of Sciences, M. Sacher related a mode he had discovered of destroying the phylloxera. He said that for the last two years he had been in the habit of sowing red Indian corn in the spaces between the vine plants. The latter were infested with the insects when first he planted the maize, but as soon as the latter went on growing the vines began to look healthier. He repeated the experiment under the most diversified circumstances and the result was the same; the vine next to the maize in every case was free from the phylloxera. On pulling out the Indian corn its roots were found to be covered with "vine lice," which had no doubt been attracted by the saccharine matter in that cereal.

## THE GARDEN.

### Forcing Asparagus.

We had a brief item last week on the French method of growing fine asparagus. We have now this farther information from an exchange:

A Paris correspondent sends to the *Garden* an account of a recent visit to an extensive asparagus-forcing establishment located near that city. In all about half an acre of glass is used, and a supply of the vegetable obtained from early in September to the end of April. It is forced in houses heated with hot water; in frames sunk in the ground and heated in the same way; and lastly, in frames plunged in warm stable manure. It appeared to be forced with equal success in each case, though the stable manure seemed to offer the simplest means. As usual here the frames are small—about four feet wide; the roots are placed directly on the manure, not flat as they would be in the open ground, but packed as closely as possible, from 500 to 2,000 roots—according to size—going under one light; a mere sprinkling of soil is placed over them. As a result, the shoots come up very thickly. The roots employed are strong and fine ones, three years from the seed; as many as five crops of roots follow each other throughout the autumn, winter, and spring in the same frame. The universal straw mat is used to cover the frames at night. A dozen persons were employed solely in gathering and "bundling" the asparagus for market, so that the quantities gathered for use are considerable. All is done in the simplest and rudest manner, the securing of good crops being the only thing considered. The same journal reports of the open-air cultivation of the plant at Argenteuil, where the business is so successfully carried on; where in fact the best asparagus in France is grown, and by one system mainly. The planting season lasts from the first week in March to about the 20th of April. One year seedlings (never more) are set in shallow trenches seven or eight inches deep, the plants a little over one yard apart, and the lines four feet apart; no manure is given at planting, no trenching, or any preparation of the ground (beyond digging the shallow trench) takes place. In subsequent years a little manure is given over the roots in autumn, the soil is thrown out of the trench, and forming a ridge between them, is planted with some crop in spring. In all subsequent years the soil is placed over the crowns in spring and removed in autumn. The culture is for the most part conducted by peasants who own their own ground; the size attained by the shoots is very remarkable. The soil varies a good deal, but not the system; good results are obtained in all soils by it. In planting on cold clay soils, the only difference made is that of planting a little shallower.

DISTRIBUTION OF PLANTS.—From a sketch of the tropical forest of Hampshire, England, by J. Starkie Gardner, we learn that tropical plants, like the palm, cactus, and aroids, grew in company with the beech, oak, elm, maple, and laurel in the eocene period. Heretofore the accepted theory has been that the temperate plants did not make their appearance before the miocene, having migrated from America by way of Siberia. These discoveries will weaken the credit of this theory of migration.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Difficulty in Turkey — Solution Wanted.

EDITORS PRESS.—A very singular ailment, and to many seeming a new difficulty, has befallen the young turkeys in Sutter and Yuba counties. Their toes are first tender and inflamed and then seem to twist so that the nails turn upward, and eventually the entire toes are dead and black, and can be cut off without any pain to the turkey. I saw at Rev. Chas. Luce's, in Sutter county, several of different ages, from three to six weeks old, crippled very badly by this ailment, and a few of them dying. It creates quite a panic in the turkey fields, and this week's *RURAL* will be searched, hoping to find something on cause, prevention and cure.—C. Nicolaus, April 27th, 1877.

This is, I judge, cramp. Cause, exposure to damp and cold. The first symptoms are generally an appearance of being *not quite right* in their walking; then there is an evident tendency to contract the toes; then the poor little sufferers, if the disease be not checked, have to walk on their knuckles, or on the outside of the foot, in a manner painful to behold. The bird squats often on its hocks, and the foot is often turned on its side.

Preventive, dryness. I have repeated in the *Press* and in my pamphlet, in writing of the treatment of young chicks or any young fowls: "A dry place is essential; dampness injures small fowls and causes many deaths. The hen should not be made to have her chicks at night on the damp ground, and in rainy weather a board floor should be used in the coop." The ground may be cold and even damp in weather not rainy. The turkeys must not be allowed to run in the wet grass nor be subjected to drafts. By all means, let them roam with the turkey mother when it is dry under foot, and do not house them at night, except when it is raining. Let them roost out of doors after they are three weeks old.

Cure.—If the disease be detected at an early stage, it can be cured by removing the brood to a dry boarded floor, well sanded and kept clean. A boarded floor is the worst of all for a permanent lodging; it must be used only to effect a cure or as a temporary resort in wet weather. A few days will effect a great change. If the toes are much contracted, the chicks must be put in cage or box, near the fire, the feet bathed in warm water and the toes expanded and rubbed, then dried with a warm cloth, a tonic given, stimulating food used, in fact, much more trouble taken than will be given to any but a very valuable bird. They should be placed under the mother every night and taken away in the morning, to be kept near the fire and treated as I have just directed.

In large birds, rheumatism produces much the same symptoms, and the toes even turn black and loose all feeling and the joints become enlarged. They may have both cramp and rheumatism.

I have stated the cause. Remove it; prevent the disease. Do not let your turkeys off the nest until 48 hours old. All they require for the first two days is warmth. After that keep them free from damp and provide a dry place at night. I have written in the *Press* full directions for hatching, feeding, etc., and the articles have been most of them repeated. They are embodied in my pamphlet. It is too soon to repeat them again in these columns.

### The Best Layers.

It pays to buy the best. The following letter (among many others) shows how Leghorns lay. The writer, though poor, finds it pays him to procure the best stock at any price:

M. EYRE, JR.:—Our half blood pullets (Leghorns) are doing splendid. They lay the best of any breed we ever owned. We had one pullet that layed steady until she layed over 100 eggs, and then commenced to set. We have others that have layed steady all winter and still show no disposition to set. Our boy bought two hens last winter that in color were Dominique and looked as though they were half Leghorns, and from them with those roosters you sent me I have raised some nice chickens as you ever saw. They are about one-fourth grown, and cannot be bought for \$1 a piece, in fact we would not part with any of the pullets.—D. E. R., Santa Cruz.

I inclose another letter concerning the laying qualities of Leghorns. I advise those seeking egg producers not to think of new breeds, but to obtain a good strain of Leghorns. They are the hardest fowl I know of, the most easily reared and the best layers. Where eggs are the object, they are far cheaper at \$10 each, to begin with, than common fowls at \$6 a dozen.

M. EYRE, JR.:—The Brown Leghorns and Light Brahmas raised from the eggs you sent last year have given very great satisfaction. The cock, I think you would say, is perfect; large, pure, white ear lobes, beautiful, glossy plumage, without a white feather. The pullets, though very late hatched (middle of June), began to lay in November, and have continued without ceasing since, and to-day made up an average in the six months of 123 eggs each, and show no signs of stopping yet. They have proved you quite within bounds in stating that "50 Leghorns are equal to 200 of the common fowl." The Light Brahmas are magnificent birds, immense size, pronounced by all who look at them as the finest ever seen here. The pullets, though somewhat backward in commencing to lay, have since proved excellent, steady layers. We shall never have a common hen around us again. I. M., Stockton.

IMPORTED GAMES.—We are informed that our correspondent, I. P. Lord, of Reno, Nevada, has just received from the East, two imported black breasted red game hens. They were imported from Mr. J. C. Cooper's yards, Limerick, Ireland. He also has a cock of the same breed from a pair of imported English hens. These fowls were procured at considerable expense, but Mr. Lord is a firm believer that the best is the cheapest in the end.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### Worthy Lecturer's Visits.

**EDITORS PRESS:**—My communication of last week left me at Cloverdale ready to leave for Healdsburg, where was to be a May-day, meeting, not only of Grangers, but of Masons, Odd Fellows, Good Templars, and all Orders and classes of citizens within the county, but under the auspices of the knight errantry of Healdsburg; which knighthood was governed in all things by its kings, who, having nothing in common with the Order of Grangers, left them so entirely out of the programme that from the daily reporters of the meeting it would never be known that even a Grange picnic, or public address had been any part of the order of that day. Not so of the Grange itself, for, with a few exceptions of those so engrossed with the knights and their programme, the Grangers, as a body, turned out in regalia, had their own picnic grounds, their own harvest feast, their own public speaking and their own enjoyments—yet open to the public, as were all others, but not of ostensible notoriety enough to attract any attention from the king of the knighthood. Notwithstanding all this want of courtesy on the part of the ruler of the knighthood, everything belonging to the Grange picnic, and May-day enjoyment of the same, as an Order, was complete and entered into just the same as if it had been for that Order alone.

Our meeting with Healdsburg Grange on this occasion will ever be held in pleasant remembrance.

#### Yountville.

Our appointment being the next day at Yountville, in Napa county, notwithstanding there was no public conveyance, our Healdsburg Grange in that practical way that we find all good Granges do, responded to our needs and sent us by the aid of a brother's good team of roadsters across the mountains to Calistoga in time to reach the morning train at Calistoga for Yountville by 7 o'clock, reaching Yountville at 8 A. M. In this particular we find the Grange ever ready and most willing to not only aid us in filling appointments, but to insure our ability in this direction independent of public conveyance—a true sign that our Grange is neither dying nor in any of the fatal stages of decay.

At Yountville we were met by the Worthy Master of Yountville Grange, and at the hour of 10 A. M. accompanied to their picnic grounds, where, at that very early hour, there were most active signs of a gala day, and a Grange feast, social interchange and dancing occupied the time till mid-day, when the chairman of the day, Bro. Mayfield, announced the hour of lunch, and in circles of from 10 to 20, or more, the picnic was thus enjoyed. After lunch Bro. Mayfield announced that the hour for public speaking had arrived. Bro. Eyre, Worthy Master of Napa Grange, occupied the stand, and addressing a very large audience of Grangers and farmers for some 40 minutes, when, in his most eloquent and facile style, he introduced the State Lecturer as the speaker they had assembled to hear. With such an introduction we felt called upon to respond faithfully to the discharge of our duty in ventilating, as best we could, the Grange work of the past, but more especially its work for the future, and such was the influence that a night meeting, to further listen to the State Lecturer, was called at early candle-lighting, to be held in the Grange hall at Yountville. Each again returning to the dance or their homes, as their inclinations directed.

At 7:30 P. M., promptly, the Grange hall was well lighted up and filled with a most intelligent and appreciative audience of brother and sister Grangers and farmers and others not Grangers. In a most plain and as forcible manner as we could we addressed them for one hour and a half on the questions of equal taxation, Grange education, and Grange co-operation, which address was greatly cheered and most attentively listened to. Being the guest of Bro. Sims we were most comfortably provided for for the night, and next day by 8 o'clock A. M. we were on our way by rail to Vallejo to meet our appointment at Rio Vista, in Solano county. We left the brothers and sisters of Yountville Grange with the full confidence that they are not only a well regulated and live Grange, but ready for good Grange work, when called upon to act. At Vallejo we were met by Bro. Demings, Worthy Master of Vallejo Grange, and by him taken, with part of his family, to join his whole family for the rest of the day at his peculiarly pleasant and most comfortable Grange

home, where, in social interchange we were made to feel especially at home. After the day's enjoyment of the hospitalities and good company of this double family of Grangers and Demings, we were conveyed by carriage in time for the evening boat passing by Benicia to Rio Vista, to meet our appointment of the following day. Who but a Lecturer of the State Grange, aided by Grangers at every turn, could so promptly fill every appointment made by the State Grange? Truly the work is fully organized and all difficulty superseded by our Grange ideas of co-operation.

At 7 P. M., at Benicia, we took the steamer *Cora* for

#### Rio Vista.

Arriving about 11 P. M. And being met and provided for by the noble Grange at Rio Vista in advance, we were comfortably accommodated at the hotel, and on the next day ready for a conference with the Rio Vista and other visiting Grangers. Early on the morning of the 4th we sauntered out to the comfortable and almost luxurious home of Bro. Gardner, Worthy Master of Rio Vista Grange, and learned that a closed meeting of the Grange had been called to meet us at 10 A. M. for private work, a feast at 12 M., (such as Grangers only give and enjoy) and at 2 P. M. the usual lecture. All of these, with social congratulations and acquaintance-making, occupied the time to 4 P. M., and a leave-taking had again to be gone through with.

Let me not forget to say here that Bro. Gardner, as an efficient presiding officer, and Rio Vista Grange as being well posted in our Grange work, deserves special mention from us; showing no signs of immediate decay, but already in the harvest ready for the new work. My next letter will speak of the meeting with Walnut Creek Grange.

B. PILKINGTON,  
State Lecturer.

### Co-Operative Association and Crops of the Sacramento District.

**EDITORS PRESS:**—Having completed for a time, at least, my brief duties in Sacramento county and my visits to its Granges—duties which are rapidly bringing to a close my nine years' experience in California—permit me to record in your columns a few things I have lately seen, in addition to some already recorded.

Tuesday, April 17th, in Pioneer hall, Sacramento, I attended the largest and most representative gathering of my fellow-Patrons, that I have ever seen assembled in Sacramento county. They met to take the necessary steps, after some preliminary meetings and planning, to form a

#### True Co-Operative Society.

Wholesale and retail, with future branches, as occasion may require, to meet the wants of the numerous and true Grange members of Sacramento, Placer and Sutter counties. Some 60 or 70 of the most representative farmers of that thrifty region of our State met in that convention. Several lady members attended, as it would be well to have more of them do on such occasions. Brother George W. Hancock was called to the chair, and considerable work was done for a session of only about four hours. Really, for the work of such important meetings to be best done, requires at least two days for thorough discussion and action. Still, for so short a time, results were very satisfactory. I can but deem the most important of all their acts, their vote, quite unanimous, I believe, that their organization should be formed as nearly, as our State laws permit, in accordance with the Rochdale plan, so often and emphatically recommended by the National Grange to our whole Order. Ten Granges were represented, the members of 15, in all, having subscribed for stock in the proposed Association.

They elected the following as their

#### First Nine Directors:

George W. Hancock, Sacramento Grange; P. S. Lowell, Enterprise Grange; W. S. Runyon, Franklin; E. G. Morton, American River; L. H. Fasset, Florin; Nicolas Myrtes, Roseville; A. J. Soule, Lincoln; W. G. Brown, South Sutter; D. H. Austrum, Wheatland.

They elected as their first three Auditors, William E. Bryan, L. C. Hindman and D. Rees. The shareholders and others interested, met again in convention, Thursday, May 17th, at the same place. Meanwhile, the Directors are to meet and take necessary steps to incorporate and to draft their laws according to the Rochdale plan given out at the National Grange. There is no reason why the farmers of this district should not have one of the strongest and most successful co-operative associations in the United States, if they only remain firm and work together for their common good, as harmoniously as they seem to have begun.

Within the last few weeks I have visited, for the first time, the noted tule lands and

#### Reclaimed Islands.

Andrus, Brannan, and Sherman. A dry season like this is emphatically their year. Their varied crops are generally in the finest condition. Usually their soil is still very moist, but where it is not sufficiently so, they have merely to open their sluice boxes in the levees and let in enough of the water of the Sacramento river and its numerous sloughs to irrigate well.

I enjoyed the hospitality of the Messrs. Pools, Hart Smith, Mr. Shafer, Limbaugh, Ferguson, Date, Upham, Edwards, Knott, and Hensley,

besides being kindly received in the homes of many others. In general, they have comfortable, neatly furnished homes, and many are making improvements.

Quite a number of them are planting the sugar beet for their new sugary near Isleton, which is fast approaching completion. About 600 acres in all will be planted. They have many favorable circumstances likely to secure success, and all engaged in it are very hopeful. I sincerely hope they will meet with no disappointment. It so greatly retards our manufacturing interests to have such an enterprise fail. I hope to be able to visit this valuable factory next fall when in operation, and to give our readers some account of its practical success. There is a large amount of fine wheat and barley on Sherman island. In a few spots mildew, like that in Sonoma, has visited them.

Near Emmaton, I enjoyed a chat which I could only wish had been longer, with

#### Mr. D. L. Perkins.

So well known in the history of horticulture in this State, and long a correspondent and subscriber of the *RURAL*. The old gentleman is in feeble health, but improving. I was interested in looking at his medals from the Mechanics' Institute, but especially one sent from the Paris Exposition of 1867 through our State government. The old gentleman still takes a lively interest in the agricultural and horticultural interests of our State.

On Mr. Hensley's place, on Andrus island, I saw the finest barley I have seen anywhere this year. It was standing over five feet high, heads long and plump, likely to yield 50 or 60 bushels per acre.

Large quantities of the finest sweet and Irish potatoes were raised on Andrus and Brannan islands last year, but they have found it far from profitable. One farmer assured me he had lost about \$1,000 on potatoes the past season. Just think of their getting only 50 cents per cental for the best of Irish potatoes in San Francisco, and that too, as I have recently found out, when consumers in Sacramento, 25 miles away from them, were paying retail dealers \$1.30 for them—an advance of 80 cents per cental. Ten chances to one some of these very potatoes were taken to San Francisco and then back to the town of Sacramento. How long will our farmers be in relieving themselves of such evils by the means which true co-operation in the Grange can afford them?

I meet with many instances in my rounds where

#### Farmers Lose Money

By never having joined a good Grange and been benefited by the information they can get through it, or, after joining the Grange, by not keeping posted and availing themselves of the benefits provided for them already through Grange sources.

For instance, lately some farmers who have five crops of barley on some of the tule lands, contracted to sell the barley, when threshed, at \$1.50. Within a few days after their agreement it was worth \$1.75, and very likely when they deliver their barley, if they stick to the contract, their neighbors will be getting \$2.50 or even \$3, when they are being robbed at \$1.50. Those who read the *RURAL* and *Patron* carefully, and keep in communication with our business associations, in other words, who keep posted in the work of the Grange, and of their fellow-farmers, are not caught in such traps.

I must not forget to mention that I attended a very pleasant little meeting of

#### Georgiana Grange, at Isleton.

Saturday, April 14th, their regular meeting. I was glad to learn that the members of this Grange generally keep up their interest in our good work. They should have double their present numbers. It is very unfortunate for the general interest of our farmers that so many of the best of them keep aloof from the Grange. It must be only because they do not properly understand its principles and the extreme importance of unity and co-operation among all farmers. There would be no successful opposition to our power if we would only work together properly. This Grange has built an excellent hall. One young lady member was initiated at this meeting. I wish them every success in their future work.

As our steamer passes Rio Vista and Benicia, I am reminded that we are in the midst of the salmon season. Hundreds of them over three feet in length now lie in a high pile on the lower deck for the San Francisco market.

Steamer *Cora*, April 25th. J. W. A. W.

**EDUCATION AT GOLDEN GATE GRANGE.**—The Grangers' Educational Convention met Tuesday night, at the hall of Golden Gate Grange, W. M. Blanchard in the chair. A. W. Thompson, from the committee appointed to prepare a report on the educational system of the State, submitted an elaborate and voluminous paper, which was read, accepted, and ordered printed. The report was signed by A. W. Thompson, O. P. Fitzgerald, J. C. Steele, Gen. A. M. Winn, Professor Hilgard, and J. W. A. Wright. The report was discussed by Dr. Williams, Messrs. Hallett, Wright, Earl, Pilkington, Casey, Pickett, General Winn and others.

**Petaluma Grange.**—F. Parker, Secretary, writes to the *Argus* as follows: "The morning hour of our last meeting on the 28th ultimo, was taken up with talking music, and resulted in purchasing an organ for our Grange. After a short recess, we conferred the first and second degree on two classes."

### Errors and Statements.

**EDITORS PRESS:**—Knowing your wish to avoid errors and to correct them when they occur, I hope you will allow space for the following official letter of Bro. Adams. Incorrect statements having found their way into some of our papers and among the people as regards the number of working Granges in the jurisdiction of California, this detailed statement of our Worthy State Secretary will settle the question beyond dispute. It will be seen that we have 204 live Granges in this jurisdiction instead of 130, as has been stated. It is also true that many of our Subordinate Granges are receiving monthly accessions to their numbers.

Again, permit me to correct a statement which inadvertently crept into your editorial reference in the *RURAL* of April 28th to the National Grange pamphlet, entitled, "Grange Co-operation." The extracts you give as coming from Worthy Master Jones. This is an error. Those given are extracts from the elaborate and valuable reports of the Committee on Co-operation: Bros. Allen, of Missouri, Osborn, of Wisconsin, Forsyth, of Illinois, Blanton, of Virginia, and Shankland, of Iowa. These reports were adopted and became the authoritative acts of the National Grange itself. The circular letter and address in the first part of the pamphlet are from Worthy Master Jones.

A sister asks for the address of sister Washburn, of Colorado. It is Mrs. J. E. Washburn, Big Thompson, Larimer county.

Below find Bro. Adams' letter which I publish by his consent. J. W. A. WRIGHT.

**Dear Sir and Brother:**—In reply to your inquiries, I will state that there are in California 192 live Granges, 45 dormant Granges, of which probably one-half will be resuscitated. Eight Granges have consolidated. Fifteen Granges have surrendered their charters.

In Nevada there are 10 live Granges, two dormant, and one surrendered its charter.

In Arizona there are two live Granges.

Fraternally Yours, AMOS ADAMS,  
Secretary State Grange.

### Assessing Growing Crops.

**EDITORS PRESS:**—The following resolutions were adopted at a meeting of Walnut Creek Grange, Contra Costa county:

**Resolved,** As the sense of this Grange that growing crops are not property, that they are not means by which property may perhaps be created, and have no present tangible value.

That they ought no more to be taxed, apart from the land, than the growing wool on sheep's backs, or unborn, but hoped for, progeny of domestic animals.

That taxes having been paid on the land, the seed sown, the money employed and tools used in bringing into life the plants from which a crop may result, everything which is actual property has borne its part of the burden imposed by law to raise public revenue.

That the hopes of farmers should no more be taxed than those of persons engaged in other pursuits, and especially than those who, having solvent debts fully secured, are justified in anticipating the receipts of money, which, when received will in their hands, be subject to taxation.

That the disposition to tax the hopes of the laboring classes and allow the millions loaned by capitalists to go untaxed, by the decision of the Supreme Court, is received with alarm by this Grange, as being unequal, unjust, ruinous to the prosperity of our State and subversive of the rights of labor, which alone creates wealth; and

**Resolved,** That we now pledge ourselves to use all lawful means to procure the repeal of laws which operate so unequally, and that we earnestly desire the co-operation of all lovers of justice, to enable us to put this resolution into effect.

**Resolved,** That these resolutions be sent to the *RURAL PRESS* for publication.—(Committee: N. Jones, T. Z. Wilten.

#### Pescadero Grange.

**EDITORS PRESS:**—At a meeting of Pescadero Grange, held Saturday, May 5th, the following resolutions were adopted:

**WHEREAS,** We believe the assessment of growing crops to be unjust and unfair, because it is asking farmers to pay taxes in anticipation of receiving property, a something of value which may never be any benefit to them; and further believing that the laws requiring Assessors to list such property for taxation to be unconstitutional, Therefore

**Resolved,** First, that we pledge ourselves as a Grange, and as individuals, to use all lawful means to procure the repeal of all laws and instructions requiring the assessment for taxation of growing crops in this State.

**Resolved,** Second, that we cordially invite the earnest co-operation of all Granges and friends of farmers to join in petitioning the Legislature to repeal all offensive laws, and to enact laws preventing all boards of equalization or others from issuing instructions requiring such assessments to be made.—E. LEIGHTON, Sec'y.

**GRANGE DISCUSSION OF CO-OPERATION POSTPONED.**—The meeting of Golden Gate Grange for the discussion of the principles of co-operation, has been postponed to Tuesday, 22d inst. Bro. Wright will be present and give the history of the English co-operative societies, founded on what is known as the "Rochdale plan." The meeting will be an open one and we hope to see it well attended. The Grange hall is at 40 California street, corner of Davis.

#### San Jose Grange.

**EDITORS PRESS.**—San Jose Grange will celebrate the fourth anniversary of its organization by a basket picnic at Alum rock, Thursday, May 17th. All Grangers who can, will of course attend this picnic and bring their friends. I have no hesitancy in saying that in the four years that our Grange has been in existence it has never been in better condition than at the present time. H. G. KEESLING, Secretary.

**LOMFOC GRANGE.**—Rev. J. Webb writes as follows: "I am glad to say our Grange is manifesting increased interest and life. Discussions on practical subjects are in order, and prove both attractive and useful. Something is being done, too, in the way of co-operation."



## AGRICULTURAL NOTES.

## California.

## COLUSA.

**CROPS.**—*Sun*, May 5: The crop prospects in this county have not changed materially since our last issue, when we put the yield at about one-sixth of a full crop. We have had a constant wind from the north for the last fortnight, which has had a bad effect on such crops as had been counted on for a fair yield. We need good weather now to make the grain fill well. We have heard some farmers say, however, that even where the grain is heading out within six inches of the ground they have found three grains in a mesh, which is one good indication.

**SUMMER-FALLOW.**—There will be an immense area of summer-fallowed lands put in this season in this county—more than at any other time since the settlement of the county. We notice that a number of farmers are now plowing up their winter sown grain that is entirely past redemption. This is an experiment and will depend for its success on the character of the coming season. Dry plowing is not good for the first crop following it, but, strange as it may appear, it is good for the second crop following it. The proper time for the first plowing of lands is as soon as possible after the first rains, and then it ought to be cross-plowed before the ground is entirely dry in the spring. Land so treated will make a fair crop such a season as this. We were out at John McCoy's, in the middle of the plains, and saw his garden in which was growing green corn, radishes, onions, and all sorts of vegetables as well as one could wish, and just outside the garden the wheat was dying and the land appeared as dry as though there had been no rain. The whole difference consisted in cultivation. We give this as one instance, but a large number of similar cases have come under our observation. Plow deep, plow often, put the ground in the best possible condition and it will produce.

## CONTRA COSTA.

**THE CROP PROSPECT.**—*Gazette*, May 5: All hope of yield from late sown grain has been pretty much abandoned for the month past. Still we hear now and then of a piece from which something is expected. The summer-fallowed and early sown fields hold out good promise, and, as a general thing, they show great improvement with the weather of the past week, notwithstanding we have had some rather warm days. Should we escape any scorching spell of weather during the coming four weeks many of our farmers will harvest grain enough to give them a handsome return at present rates for their season's labor.

## KERN.

**BARLEY.**—*Californian*, May 3: One of the finest fields of barley ever known in Kern county, is to be seen on the Souther farm. It is about three miles in length by three-quarters of a mile in breadth, and is one vast sea of grain. It is of a uniform height of four and a half feet, and remarkable for beauty of color. It is estimated it will yield 60 bushels to the acre.

## LAKE.

**CROP PROSPECTS.**—*Bee*, May 3: From all parts of Lake county the crop reports are excellent, and prospects for an enormous yield is better than it has been for many years. Our farmers are all in high spirits over the promised return for this year's labor.

## MONTEREY.

**IRRIGATION.**—*Argus*, May 5: M. W. Wiley, of Soledad, informs us that the irrigation project by which it is proposed to utilize the waters of the Arroyo Seco is progressing with activity, and that about 3,000 acres of the Arroyo Seco, Zabala and Poso ranches will at once receive its benefits. By this means, he thinks the stock remaining in that part of the valley will be saved.

**CARNEROS.**—*Index*, May 3: In the Carneros valley there will be some hay, as several fields have headed out. Potatoes are looking well, but the late frosts have somewhat retarded the growth of corn and beans.

**CARMEL.**—Carmel is, compared with Salinas, quite a Garden of Eden this season. Many of the dairies are producing almost their usual amount, though some are already dried up. Mr. Ougheltree expects 500 tons of hay, and his corn and pumpkin crop never fails, as the moisture is from below and perennial. Mr. John Albert Percy is showing by his crops the capabilities of the Indiguana country, and how persevering industry can evolve a comfortable and profitable home in a rough country in spite of many discouragements. Hatton & Ollason are turning out about 300 pounds of cheese daily. Snively Brothers, Joseph Gregg, J. Meadows, and Phil McDonald probably aggregate 200 pounds of butter daily. In your last issue you did my cows an injustice, and as I take professional pride in their performances, I'll give you this chance to re-instate them in the public estimation. Six cows and three heifers are giving 10 pounds of butter daily. You gave nine pounds from 10 cows, which would be quite ordinary. Last year four of the same cows gave 53 pounds of butter per week; but they were fed squashes and barley hay, besides all the green grass they would eat. —*Edward Berwick*.

## NAPA.

**SUCCESS WITH SMOKE.**—*Star*, May 4: Mr. G. Groezinger, the great wine manufacturer of

Yountville, informs us that he used smoke successfully to ward off from his vines the severe frost of Sunday night, April 23d. He has about 200 acres of vineyard, and had in advance preparations made for 200 fires—proper fumigating combustibles already piled up—and men on the watch ready to apply the torch whenever the thermometer indicated the necessity of so doing. The crisis came on the night in question, and the fires were duly touched off. The smoke was all that could be desired, and hung over the vineyard in so dense a volume that even after the sun came up it could not for a long time penetrate it. The vines were covered as with a mantle, and water dripped freely from them. The result was, not a vine was injured; they were saved from a frost that was severe enough to have destroyed the whole crop. Mr. Groezinger expects to make this year between two and three hundred thousand gallons of wine.

**CORN PLANTING.**—I hear some complain of their corn not coming up. People differ as to the method of covering, and what kind of seed to use. The Spanish, or California corn, matures in August, thus getting ahead of the drouth, while the large yellow, or white, will not mature until October or November and thus not only consumes the moisture, but is apt to get caught by the frost in the fall. Some advocate covering with the hoe. It will not compare with the plow, as the corn is put in deeper and will come up quicker, and get its roots down in the moist ground to stand a drouth better. Another great advantage is soaking. Some plant the seed dry, and a little wire-worm will work on the germ before it comes up, and kill the seed. If soaked in copperas and saltpeter—equal parts—one ounce to 56 pounds it will prevent the worms working, and the seed will come up in five or six days, while the dry planter will take 12 to 14 days and then his corn will come up yellow and sickly.

**GRAIN ON THE HUICHICA.**—*Register*, May 5: Thursday we spent a portion of the day amongst the grain fields that are watered by the Carneros and Huichica creeks, southwest of Napa. Between Napa and this place are many large and well-tilled farms, grain—either wheat, barley or oats—being the principal productions. The hillsides as well as the valleys are utilized, and waving fields of grain greet the eye at every turn, though we must admit that some pieces stand hardly high enough to make a very imposing wave. The finest wheat anywhere in the section visited is that of Mr. Duhig's. He has two hundred and forty acres on corn land, which will easily average forty bushels to the acre. It stands high; is heavy and clean. One reason why Mr. Duhig's grain looks so much better than that of some of his neighbors is, that he observes a regular system of rotation, and never attempts to raise wheat from the same ground two years in succession; he keeps his soil enriched and is thorough in his work. He has one of the most orderly farms we remember to have seen in the West, and is living to see and enjoy the fruits of twenty-four years' toil.

## SACRAMENTO.

**FARMERS' PICNIC.**—*Call*, May 1: It has been the custom of farmers in Sacramento county for seven years past to meet annually in a grand picnic. To-day the annual reunion for 1877 took place at Beach's grove, ten miles back of Sacramento, on the Sacramento river. It was the most interesting picnic of the season. As neither stage, steamer nor rail line ran to or near the grounds, all who attended had to go by private conveyances. There were 2,000 people present. There were 400 conveyances on the ground and over 900 horses. The grove is one of the handsomest spots in the county, and one of the few in which cattle can still find green grass. The day was delightful and the gathering most orderly and decorous. Not the slightest thing, from morning to night, occurred to mar the pleasure of the occasion. The farmers and fruit growers seemed to have all made a special effort to meet at this time for mutual consultation, exchange of notes and mutual advice. The result proved most satisfactory. Good music was provided for all who wished to dance, a very large floor being laid for the purpose. Games of skill were engaged in and prizes awarded. Great quantities of provisions were provided and every one supplied to the full. There was no charge for admission, everything being conducted on the most liberal scale. There was no drinking on the grounds and not a solitary case of intoxication or disorder. The management was excellent and marked by exceeding care for strangers and guests of the farmers. The picnic closed at five o'clock, having proved to be one of the most social, beneficial and thoroughly enjoyable reunions ever held in central California.

## SAN BENITO.

**SELLING STOCK.**—*Advance*, May 5: A cattle buyer, who had purchased a car-load of cows at \$15 a head, a few days since remarked to us: "Well, sir, I have passed through three or four counties lately, and I am satisfied that I have not met stockmen generally as indifferent to the dry prospects as they are in your county. These stockmen are wide-awake fellows; many of them are old Californians, and they keep their eyes peeled to their own interests. They have passed through dry seasons before. There is no panicky feeling among them, none whatever; they see the way to pull through without much loss, and they are prepared to take a few chances." The ranges have been relieved of much of the stock within the past few weeks. Many flocks of sheep and herds of cattle have

been removed, and are now grazing on the grass of the northern counties. It is probable that after some other large bands are driven away there will be found to be sufficient feed to keep the remaining animals alive. Such appears to be the hope of stock-raisers, and their stock in consequence is held at no extremely low price; at the same time when sales are made, the buyer rarely fails to secure better bargains than it would be possible to expect in a favorable year.

## SAN JOAQUIN.

**GRASS ON TULE LANDS.**—*Independent*, May 5: A traveler down the San Joaquin river by steamer at this time of year cannot fail to notice the large quantity of land on either side that is not only free from tules and flags, but is covered with a fine growth of green native grass. It would appear that the land must be rising or filling up with sediment very rapidly to have made this change within a few years. Messrs. Miller & Lux have rented thousands of acres and have vast herds of cattle roaming over it in all directions. Water is abundant, and good, the feed is excellent and the cattle doing well. A number of vaqueros are with the cattle to keep a watchful care over them.

**ARTESIAN WELL.**—J. W. Johnson commenced the boring of an artesian well on Monday on the farm of Geo. S. Ladd, near the Nightingale house, two miles east of the city. The contract calls for a well 600 feet deep, if flowing water is not sooner obtained, and the contractor is to receive \$2,500 if he succeeds in obtaining flowing water. If he bores that distance without finding water he is to receive but \$200 from Mr. Ladd, and various other amounts that have been contributed by different parties interested in making a thorough test of the possibilities of obtaining water. We visited the spot yesterday and inspected the premises. The tools in use are of the latest improved pattern, and were recently purchased by Mr. Johnson in the East. One of the main improvements is in the coupling of the joints of the rod, which consists of a casting containing a spring that engages the end of the rod thrust into the casting. The coupling is made instantly, and could be made in the well as easily as elsewhere. The augur is of cast steel attached to a tube the size of the well that fills the place of a sand pump in ordinarily stiff and solid material. Inside this tube is a small gas pipe that serves to conduct air below the augur to relieve the troublesome suction usually experienced in drawing out the augur. The main rods are one and three-fourth inches square. The boring will be done by hand, as far as possible, after which horse or steam power will be applied. The first half day's boring reached a depth of 30 feet, and they were down about 40 feet yesterday afternoon, working in a stratum of coarse indurated quartz sand. The progress of this well will be watched with much interest.

## SANTA CLARA.

**SUMAC.**—*Echo*: The successful introduction of sumac into California soil promises to open up a heavy source of revenue, and is worthy the attention of land owners, particularly of owners of barren or hilly land which cannot be utilized at present to any great advantage. Experts are of the opinion that sumac grown in this State would be nearly if not quite as valuable as the article which is at present so largely imported from Sicily, and commands from \$120 to \$200 a ton. Our climate is somewhat similar to that of Sicily, and has the open, semi-tropical winters, which this plant requires to give it its valuable tanning properties. Sumac is indigenous and exceedingly hardy all over the eastern portion of the continent, but with the exception of what is grown in one or two Southern States, is entirely worthless as an article of commerce, owing to the length and severity of the Eastern winters, which prevent the development of the acid it is valued for to an extent sufficient to pay for its gathering. Dr. Saxe and Mr. Eberhard, of this place, have been experimenting with the seed for several years, and have now thrifty roots two years old. Once thoroughly acclimated, it will grow spontaneously anywhere where there is a sufficiency of soil for roots to penetrate. There are now from 1,500 to 2,000 tons of sumac annually consumed in this State, and the market for it is yearly increasing. If the California production will prove anyways near as valuable as the imported article, much land that is now unremunerative may be made to return a handsome profit when once covered with native sumac.

**OLIVE OIL MAKING.**—*Mercury*, May 3: The latest industry to which our attention has been called, and one which we doubt not will assume considerable proportions in the valley before the end of another year, is the manufacture of olive oil. The Santa Clara college olive trees are used to supply the college faculty with oil, the priests utilizing the fruit in manufacturing the same into oil by a method of their own. During the past winter, Mr. G. B. Ruffino, on Market street, between San Augustin and St. St. James streets, conceived the plan of manufacturing this oil. For that purpose he erected some machinery and began collecting the fruit in various parts of the county, chiefly at San Jose Mission. We learn he has made 500 gallons of oil within the past two months. A sample which is now in our possession is of a bright rich color, a great improvement over the bottled article sometimes sold from our stores as the pure imported article.

## STANISLAUS.

**HOP CULTURE.**—*News*, May 4: Some four years ago Mr. Ostrom secured a few plants of

hops and set them out where he was gardening on Mr. Rogers' ranch, on the Tuolumne river. They grew well, and the next year he increased the number of plants to 30. He cured the hops in a crude manner and marketed them to our local brewer, Mr. Brown, for \$3. From this he took the hint that their culture would prove profitable. So he leased land from Mr. Rogers, and has nearly 40 acres in hops the present season. He has also secured land from Mr. C. C. Baker, and on the adjoining ranch, and has now a hop-yard of 40 acres on that place. Both of these hop-yards are on the low, rich bottoms of the Tuolumne, where the soil is constantly moist, and hence Mr. Ostrom is not apprehensive as to the drouth affecting the yield. Last year's crop was quite remunerative, and it is believed it will be much more so the present season. Those of our people who have suitable lands should give hop culture an investigation. With good moist soil, protection from high winds, and a proper and careful culture and handling, we have no doubt it could be made very profitable.

## SONOMA.

**RUSSIAN RIVER.**—*Flag*, May 3: The rust or mildew that threatened the destruction of the wheat, having almost entirely disappeared, the grain is putting forth with renewed vigor, and I believe it will come out in the end more than conqueror, and the farmers may yet receive a large reward for their labor. Late sown grain is not looking very flattering, but there is very little of it. On one farm where wheat was sown late, men were engaged in plowing and preparing the same land for corn.

**COTTON.**—Mrs. C. W. Mathews, of Alexander valley, planted a few cotton seeds last year, as an experiment. They grew, and the plants bore large bolls of the snowy fabric, a specimen of which she presented to Manager Andrews, of the Grangers' store, and which we have seen. We have also, in our cabinet, very fine specimens, raised by Mrs. Cornelius Bice, southwest of town. As our farmers raise, experimentally, cotton, tobacco, the orange, pomegranate, almond, etc., and meet with success, we would like to hear of some plant that will not live and thrive in this section.

## SUTTER.

**OUR CROPS.**—*Banner*, May 5: One indication of the fact that Sutter county farmers expect good average crops this season is to be found in the number of new agricultural machines daily hauled through our town. To the credit of the farmers be it said that all these machines are of the best and most improved make. If the price of grain continues at its present figures—and the indications are that it will—Sutter county farmers will have something tangible and bright to look forward to. Wheat is now selling at three cents, and barley at \$1.90, and these prices are not apt to fall very much. We have heard of offers of \$2.50 for growing crops, with few takers. So much for our grain prospects. Our fruit is abundant, and has already made its appearance in market, where it commands good prices.

## VENTURA.

**THE COUNTY ALL RIGHT.**—*Free Press*, May 5.—We are informed by careful farmers that there will be in the neighborhood of 50,000 sacks of grain raised in the section of country east of the Santa Clara river, this season. Besides this, there will be large quantities of grain cut for hay, to sustain stock during the fall and winter months, and for feed while putting in another crop. There is considerable grain which will head out but it will be found more profitable to feed it to hogs in the field than to cut it for grain. On this side of the river from Ventura to the Camulos, with ordinary fogs and dew, farmers tell us that there will be a very fair crop of corn, and that the acreage devoted to this cereal is greater than in any previous year. There is also, on each side of the Santa Clara river, several irrigating ditches along the lines of which tremendous crops of corn, barley, potatoes and hay will be raised. In the Ojai valley we are assured that there will be a good hay crop, some corn, plenty of hog-feed, and possibly some grain. From town to M. Barnard's mill, a distance of about five miles nearly all farming land is under irrigation. The fruit crop throughout the county promises to be unusually heavy, and many young orchards are coming into bearing.

## YOLO.

**GRAIN CROP.**—*Mail*, May 5: Every acre of grain which will pay the expenses will be cut this year. Fields which will give a yield of only eight or nine bushels will be gathered in, and where farmers own their own headers such a small yield will pay. We have seen some fields of winter-sown which will pay to cut, and some of these will give a yield of from ten to 15 bushels if properly cared for. We have seen O. D. Reed, of Davisville, who has made a tour of inspection of the wheat fields bordering Putah creek, and along the line of the Vaca valley railroad from Winters to Madison, and he says that the summer-fallow wheat looks better than he ever saw it, and that it will produce more bushels to the acre than it has for many years. From the present appearances and from the price outlook, we think it would be safe to say that the grain of Yolo county will bring more money than that of last season. But while this is true, there are many who most need it that will not raise enough wheat for seed. We are very certain that the question of the value of summer-fallow is sufficiently illustrated this year to do away with any further argument. It has solved itself to the satisfaction of all.





### Tired Mothers.

A little elbow leans upon your knee—  
Your tired knee that has so much to hear  
A child's dear eyes are looking lovingly  
From underneath a thatch of tangled hair.  
Perhaps you do not hold the velvet touch  
Of warm, moist fingers holding yours so tight;  
You do not prize the blessing overmuch—  
You almost are too tired to pray to-night.

But it is blessedness! A year ago  
I did not see it as I do to-day—  
We are all so dull and thankless, and too slow  
To catch the sunshine till it slips away.  
And now it seems surpassing strange to me  
That while I bore the badge of motherhood,  
I did not kiss more oft and tenderly  
The little child that brought me only good.

And if, some night when you sit down to rest,  
You miss the elbow on your tired knee  
This restless curly head from off your breast,  
This lisping tongue that chatters constantly;  
If from your own the dimpled hands had slipped,  
And ne'er would nestle in your palm again,  
If the white feet into the grave had tripped—  
I could not blame you for your heart-ache then.

I wonder that some mothers ever fret  
At their little children clinging to their gown,  
Or that footprints, when the days are wet,  
Are ever black enough to make them frown.  
If I could find a little muddy boot,  
Or cap, or jacket on my chamber floor  
If I could kiss a rosy, restless foot,  
And hear it patter in my house once more;

If I could mend a broken cart to-day,  
To-morrow make a kite to reach the sky,  
There is no woman in God's world could say  
She was more blissfully content than I!  
But all! the dainty pillow next my own  
Is never crumpled by a shining head;  
My slinging birdling from its nest has flown  
The little boy I used to kiss is—dead.

### Woodside Papers.—No. 10.

[Written for the RURAL PRESS by JENNIE E. JAMESON.]

(Concluded.)

"Ah, Mrs. Williams how are you?" said Mrs. Payson, as a plump little woman entered the kitchen.

"Me? Oh, I'm first-rate, and gaining every day. How do you do, Mrs. Towne. It seems to me that you are looking a little better. The last time I saw you, looked as solemn as Dan. Tucker when he was whistling for his supper, and about as fat as a match. I believe that new wrapper has something to do with it, or perhaps it is that knot of ribbon!"

Mrs. Towne smiled as she replied: "Mrs. Payson is to blame for this new wrapper, for she helped me pick it out, and then she went to work and cut it; and Eben says I haven't looked so well for years."

"I predict better days for Mrs. Towne," said Mrs. Payson. "She is beginning now where she should have begun when a child. How many poor mortals there are who begin to learn how to care for their health only when they have lost it. We have been talking about bathing. I do not pretend to be as Elmer would say, 'skiantific,' but when I believe that health depends upon certain measures that we can take, I would persuade every one to take them. If we have health it is our duty to take care of it, if not, we should try to regain the lost blessing. Perhaps if more attention were paid to bathing there would not be so much complaint about poor complexions. I took up a book on 'Personal Beauty' the other day—here it is now—let me see, on page 178, I find something upon this subject. The author says: 'Think for a moment what a bath does. Do you know why, of all parts of the body, the face is most subject to spots, pimples, and similar eruptions? you probably think it is simply the aggravating way of matters in general. No such thing. It is because the face is washed oftener, the pores are kept open, and the circulation stimulated by the rubbing, so that the effete humors in the blood find there a readier exit, and consequently crowd thither from all parts of the body, giving the skin there too much to do. Wash and rub daily all parts of the surface and the secretions will be equally distributed, and no one part over-tasked.' The same book tells of those who indulge in milk baths and described them as very pleasant and exhilarating. Of sea bathing it says: 'It is an admirable tonic to the general system,' but that one of the most important points about it is that at the sea-shore people will bathe daily while at home they won't, and it quotes from an author of reputation: 'As an agent for preserving the softness and delicacy of the healthy skin, and the bright hues of the complexion, it is inferior to the tepid bath.'"

"What time do you think is the best for bathing?" inquired Mrs. Williams.

"Some say in the morning, others in the middle of the forenoon. I feel best when I take the latter time, unless I have to work too hard before and after; but it is most convenient in

the morning; I do not count the evening at all for myself, because I am too tired to receive much benefit from a bath at that time. There, Mrs. Williams! I am glad you are taking the paper from that bundle. I have been wondering what it was."

"This?" said Mrs. Williams, "have you never seen anything like it? It is a piece-bag after the most approved pattern. The foundation is of canvas, covered with print. Upon the front are sewed 16 bags. The canvas is a yard long and three-quarters wide. There is a hem at the top and bottom. I think this is a yard long, now that the hems are taken, and 26 inches broad. The bags I made in one piece, that is, instead of having every pocket separate, I took a width and more of print, about 40 inches, and stitched a strip of trimming print on, to divide it into pockets. There are three in the first row, three in the second, four in the third and six in the top; and there is a space of about an inch, you see, between each row. The lower ones are, I think, 13 inches deep, the second nine, the third five and a half, and the upper ones four and a half. I allowed two inches on each to make a hem and a run for the rubber-tape, which gathers them a little and makes them look neat and trim, but stretches when one wishes to put anything in. There can be slender sticks run into the hems at the upper and lower edges, and it can be fastened to the inside of a closet door, or in any place one chooses to put it, by small nails in the ends of the sticks; or it can be bung up by rings sewed to the hem. I have not got mine ready to hang yet, for I thought I would bring it over and show it to you so that you could make one like it."

"Isn't it nice to have the contents of each pocket labeled, so that even a child can go and get work, materials to work with, old linen for a cent finger, etc. You had better get your tape a little wider than mine, so that the printed letters may be a little larger."

"One could mark them as they choose, of course, with names of such articles as they would be most apt to put in," said Mrs. Payson.

"Oh, yes, certainly," replied Mrs. Williams. "I have not marked mine like those I saw at my sister's in Maine, when I was visiting there last month. You see I have marked the lower ones for new white cottons, old white cottons and patterns; the next row for old linen, flannels and print; the next for new hose, old hose, yarns and silks; and the six upper ones for tapes, buttons, thread, old ribbons, cord and patterns—small ones. Sew the tapes right across the middle of the pockets with your machine, before they are attached to the canvas. I bound the sides of mine with the strips of trimming. After your pockets are all on, put on a large general rag-bag at the back before you bind the sides."

"My sister uses her's for soiled clothes, and says she has kept large sums of money in it, as no one would be apt to look among soiled clothes for money."

"You see my print is rather dark, but I thought it would not look soiled so quickly as light, and if it has to be washed the ink I used for marking is indelible, so it will not wash out. I have a shoe-bag, made about the same way, with four pockets. My sister said she could not keep house without her piece-bag, for she has but very little closet-room, and no room at all for storing trunks, boxes, etc. Then one does not have to tumble over a lot of bundles when they wish to find any of these little things."

"Well, Mrs. Williams, you are a blessing to the community. Really, the piece-bag is ornamental as well as useful. How nice it must be in cities where, in some blocks, there is hardly a closet to a house, and so little room for storing anything. It never would be so if women had the planning. They would have a closet for every room at least," and Mrs. Payson glanced at the clock and took the pudding from the oven.

"I declare!" said Mrs. Towne, "here it is almost dinner-time, and we must go home. Some-way time always flies faster here than when I'm at home."

A MOTHER'S INFLUENCE.—From their mother, we are told, the Wesleys inherited, the one, his placid temper, his calm perseverance, and his dauntless courage, and the other his gift of song. From his mother Sir Walter Scott imbibed his love of poetry and painting; and his writings prove that it was no common gift. Byron's fine gifts were crippled with a miserable temper—a legacy from a furious and fickle mother. Old *La Mère Bonaparte* was never beaten in any project she undertook. Her energy was simply indomitable; and this great trait has been strikingly illustrated throughout the great Napoleon's life. It was from his mother that "Bobby Burns," as Scotchmen love to call him, imbibed his love for song; for she used "to give wings to the weary hours of her checkered life by chanting songs and ballads she herself had composed." Patrick Henry had many a lesson in conversational power, his mother training the gift in the promising lad. Dr. Johnson's mother always argued with him in order to do him good, although she knew that the willful, burly boy sometimes deliberately took the wrong side. Philip Doddridge's mother created his taste for Scripture scenes and Scripture subjects, by teaching him from the Dutch tiles around their old-fashioned hearth-place.—*Harper's Weekly*.

### The Opportunities on the Farm.

EDITORS PRESS:—It has been said that the strength and glory of this country depends upon the nobility of all pursuits, agriculture. How true the statement, and what avocation is more elevating, health-giving and lasting. Divided into various branches, it cannot but invite the attention of every youth. There is the beautiful pursuit of the florist, adapted to the most delicate and refined of both sexes. Then there is the vegetable garden, grain growing, horticulture, stock raising, and many other useful and self-sustaining divisions of agriculture, all of which demand a more exalted position in the minds of America's true sons and daughters. When the minds of our ambitious youth shall be diverted from the many alluring avocations with which the life blood of the country is already stagnant, and directed in the life-giving furrow which ennobled Sparta's sons, then will America become the impenetrable fortress of the world. How true the great Jewish historian who wrote that agriculture was at the head of all arts. Too many in California are over anxious to become rich, and too many become easily discouraged because they are impatient and can't wait until the tree bears its fruit. Will, energy and forbearance combined with experience and the assistance of a wide-awake agricultural journal are the requirements which make successful farmers. We have a goodly number of such agriculturists, but they constitute the minority. I would not infer that the signs of the times are discouraging, for farming in California is taking deep root, and I believe in advance of the State in the use of late improvements and inventions. It is only lamented there are so many frivolous and slack farmers among us; that so many of our young men want to be lawyers, merchants, clerks, doctors, agents, printers, preachers, etc., with which the market is over-stocked. A few instances we have of men of superior intellect who have surrendered their profession and engaged in farming. Rightly managed farming is not a drudgery. The vast amount of intellect employed in many of the over-stocked avocations if turned into the various branches of agriculture would do more towards lifting up our nation than any other means. Look at the many sickly pale-faced people of sedentary habits. Are they a blessing to themselves and children? Will not their children as a rule be even more delicate in body and mind? Boys and girls, if you love the Great Creator and regard the future greatness of your country, turn your attention to that branch of farming which you like best. The field is wide and there are many varieties. Parents are often blamable for creating a distaste against farming in the minds of their children.

H. W. HULBERT.  
Auburn, Placer Co., May 6th.  
[How true it is!—EDS. PRESS.]

THE DEPTHS OF THE SEA.—According to the late explorations of the English, German, and United States governments, it has been proved that the average ocean depths in the southern hemisphere are less than those of the northern hemisphere. The greater range of water surface in the southern hemisphere is, therefore, in a measure, compensated for by its shallowness. It has been a question how, considering the great apparent preponderance of land in the northern hemisphere, the center of gravity of the earth could coincide with its actual center, if such be the fact. These contours of the ocean-bed point to a possible solution. The greatest recorded depth in the southern ocean is 17,000 feet, while in the northern oceans 27,000 and 23,500 were found respectively in the Pacific and Atlantic. A published report of Captain Evans' remarks before the British Association, says: "The general surface of the sea-bed presents in general to the eye, when graphically rendered on charts by contour lines of equal soundings, extensive plateaux varied with the gentlest of undulations. There is one great feature common to all oceans, and which may have some significance in the consideration of ocean circulation, and as affecting the genesis and translation of the great tidal wave and other tidal phenomena, of which we know so little—namely, that the fringe of the sea-board of the great continents and islands, from the depth of a few hundred feet below the sea-level, is, as a rule, abruptly precipitous to the depths of 10,000 and 12,000 feet. This grand escarpment is typically illustrated at the entrance of the British channel, where the distance between a depth of 600 feet and 12,000 feet is in places only 10 miles."

BEAUTIFUL LITTLE ALLEGORY.—A humming-bird once met a butterfly, and being pleased with the beauty of its person and the glory of its wings, made an offer of perpetual friendship. "I cannot think of it," was the ready reply, "as you at one time spurned me and called me a contemptible drawing dolt." "Impossible!" exclaimed the humming-bird. "I always entertained the highest respect for such beautiful creatures as you." "Perhaps you do now," said the other, "but when you insulted me, I was a caterpillar. So let me give you a piece of advice: Never insult the humble, as they may some day become your superiors."

"SAMBO, is your master a good farmer?" "Oh, yes; massa fus rate farmer; he make two crops in de one year." "How is that, Sambo?" "Why, you see, he sell all his hay in de fall, and make money once; den in de spring he sell de hides of all cattle dat die for want of de hay, and make money twice. Dat's two crops, massa."

### The Social Position of the Farmer.

In the beginning God created the world. To perfect the work he created man after his own image, and placed him where? Not in a workshop, not in a law office, not in trade and traffic, but in a garden—the fine art hall of agriculture. For an assistant and a companion he created woman, and she too was placed in the garden. Knowing this fact, why should not the standing of the agriculturist be of the highest grade? Why should they not feel they are God's favored people? True, our first parents lost their rights to the garden and were commanded to till the soil and by the sweat of their brow to earn their bread; they were not required to perform other labor than that of agriculture.

To develop man all the animal kingdom was made subject to his will, and the care of domestic animals was given especially to him. Consider well this high charge; the care of animals is wholly dependent upon man. The improvement of our domestic animals in their numerous families, this charge alone should make the true farmer feel that he is no inferior person—should cause him to know that so responsible a position is given to him only whose thoughts are of the right mold.

Perhaps we might ask what is a true farmer? My definition would be one who tills the soil, whose object is each year to grow a greater and better crop, each year to show an improvement in the condition of the farm, both as to soil and better and more convenient arrangements, better stock, better farm buildings, better libraries, more and better selected papers, magazines, etc., so arranged as to suit the tastes of each member of the family. A farmer's home should be a good place to go to, so good that his children will want to stay there as long as possible, and if their business or other changes should lead them from home, they will ever wish to return at every opportunity. A farmer's life should not, need not, be a life of drudgery. It is a calling that when the body is at work the mind can be employed on an entirely different subject. No other business affords so much time for mind culture.

In our present life different employments afford greater or less opportunities for the improvement of the mind—no such large room for study as farming. The trees, all vegetations, the soil, the rocks, insects, birds, animals—all have their lessons, and the farmer, if he will, can study them as he labors. But unlike the scholar, he can never graduate, for every season brings out a new lesson to be learned.

The farmer, (the true farmer,) is not afraid to meet superiors, for he well knows he is, all things considered, the equal, if not more, of any in the land. In proof of this, I would ask from whence came our greatest statesmen? Not one great statesman in ten comes from the professions, not one in five from the workshops; the balance come from the farm, and when their work is closed they go back to the farm. The few business men who make a competence, when they wish to retire, go to the farm—and by the way they are a very great help to the farmers—having money to spend, they show us some successful experiments and many successful failures. They have money to lose, and we can read their lessons and govern ourselves accordingly.

Let us remember as God made the first man a farmer and the first woman a farmer's wife, the business is honorable; it remains for us to keep it so. If, as farmers, we do not stand on the top round of the ladder of honorable men, it is our fault and we dishonor our business.—*J. P. Richmond*.

NEW MUSIC.—We have received from Oliver Ditson & Co., of Boston, an "Angel of Beauty," one of Schubert's magnificent songs, and with it Bauer's quartet, "Hear, Father, hear our Prayer," very striking, with prominent alto solo. Also, Collin Coe's song and chorus, "Always Remember," which we will do, to a certain extent, with respect to this fine song. Then there is a sample of a whole nest of "Little Fancies," 22 in number. They are unusually sweet, easy piano pieces for learners. This particular one is "Mary of Argyle," and is No. 15 of the set. Goerdeler's reverie, "Silver Moon," is a most tasteful piano piece of medium difficulty, and Winner's "Pins and Needles Galop," is just what young players will catch at and learn so easily.

A PRETTY TIDY.—A lady in the *Household* tells how to make a pretty tidy. She takes a square of stair linen, using that which has diagonal bars with a maple leaf figure in each space. Work over the diagonal lines with vine or feather stitch in black zephyr, embroider the leaves in satin stitch, the first row of leaves in diagonally in shaded red, the next in shaded brown, the third with shaded green, working the stems of each leaf with gold colored silk. Finish the edge with a deep raveled fringe, and your tidy is done.

A LITTLE bright-eyed four-year old boy, upon hearing his father read the touching story of Joan of Arc, was greatly moved by her sad trials; but when the part was reached where she was about to be burned to death at the stake, the poor little fellow could not contain himself any longer, but sobbingly clutched his parent's arm, and, with big tears running down his plump cheeks, cried, "But, papa, w-h-e-r-e were the police?"



### The Story of a Nose.

M. Arago, the French statesman, and nephew of the astronomer, is, in spite of his 65 years, a very handsome man. He has a large nose, of which he is somewhat proud. A short time ago he was traveling by train to Versailles, when a child who was in the same carriage and who had watched Arago for some time with dilated eyes, began to cry. In vain did the child's mother, Arago and another Senator endeavor to calm the perturbed juvenile. The poor mother was in despair, and as the shrieks grew more and more piercing, Arago felt bound to interfere and see what he could do.

He said to the child, "What ails you my dear? Are you afraid of me? I don't look very naughty, do I?" Thus addressed, the child sobbed out, "Take off your nose." Arago looked at the mother, who grew very confused and said: "Ah monsieur! excuse me; excuse my son." "But madam," said Arago, "what does he mean."

The mother then explained that she had during the carnival taken her children to see a number of persons in masks and with false noses, and he had got so excited that he could think of nothing else. "By an unfortunate occurrence," she added, "we got into the same carriage as you, who, for no doubt some good reason, are prolonging the carnival. But you see what a deplorable result has followed. Let me then beg of you to have pity on a poor mother and take off your nose." "But madam," said Arago stupefied—"A little more and my child will have convulsions," shrieked the mother, "take off your nose." "But madam," said Arago in despair, "that is impossible; this is not a false nose, but my own." "Impossible! Impossible!" cried the agonized lady. "Touch it," said Arago. The lady gave a pull at the Senator's nose, but it did not come off in her hand as she had expected. "A thousand pardons," she said, "but pray, oh pray, hide it in your hat." So Arago continued his journey with his nose in his hat and the child's screams gradually subsided. Arago himself tells the story with much glee.

A PRESIDENT ROCKED IN A SAP-TROUGH.—Millard Fillmore, in extreme youth, was rocked in a sap-trough for want of a better cradle. His old pastor, Mr. Hosmer, describing a visit to Washington during Fillmore's administration, says that he and Dr. Kendall went to one of his receptions, and as they entered saw the President and his family and Cabinet, and his father by his side. "As soon as we had been very cordially received, Dr. Kendall drew me aside and whispered: 'Was there ever since the world began such a contrast as that group and the baby in the sap-trough?' It was indeed a contrast. The President was a handsome man, of fine bearing, in the prime of life, and his father was venerable, tall, and not much bowed down by his 80 years; his full gray hair and intelligent face at once drew attention, and he stood there by his son as no other father then had done, as calm and self-possessed as in his justice court in some log cabin in western New York. I was to be in Washington a few weeks and Esquire Fillmore was to return home with me; but one day I met him and he said, 'I am going home to-morrow.' I said, 'But why not wait for me?' 'No, no,' said he, 'I will go. I don't like it here; it isn't a good place to live in; it isn't a good place for Millard; I wish he was at home in Buffalo.'"

WHAT MAKES A SEA-SHELL SING.—When the sea-shell is held up to the ear there is a peculiar vibratory noise, which children assure each other is the roar of the sea, however distant they may be from it. Philosophically investigated, the peculiar sound thus recognized is a phenomenon that has puzzled scholars for a long time. The experiment is easily made by simply pressing a spiral shell over the cerebra of either ear. If a large shell, the sound is very much like that of a far-off cataract. Now what causes it? Every muscle in the body is always in a state of tension. Some are more on the stretch than others, and particularly those of the finger. It is conceded that the vibration of the fibers of those in the fingers being communicated to the shell, it propagates and intensifies them as the hollow body of a violin does the vibration of its strings, and thus the acoustic nerve receives the sonorous expressions. Muscles of the leg below the knee are said to vibrate in the same way, and, if conducted to the ear, produce the same result.—*Boston Watchman*.

WOMEN ECONOMICAL.—The State prison for men in Massachusetts, accommodating 800 inmates, cost \$1,000,000. The prison for women, with a capacity for 500, cost only \$300,000. The difference is explained by the fact that women had the handling of the money in the latter case. The *Woman's Journal* finds this a good argument in favor of women in public office. Certainly the small economies which women are every day compelled to practice should have some influence on their general character, and tend to make them more economical in great things, to say nothing of their ignorance of the system of "division," so largely practiced by men in the handling of public money.

A MAN with four wives was brought before a Dutch justice for commitment on charge of bigamy. "Four wives!" exclaimed the astonished Hans. "Four wives! Dat was a most hinocious crime. Discharge him at vonst. Off he lif mit four wives he got bunishment enough. I lif mit von, and I got too much bunishment already."



The Poultry "Ring."

### Young Folks' Column.

#### School Reputation.

[Written for the Press by "COMUS CANOPUS."]

The habits we form during that period of our existence when we attend school, or when we ought to be at school, are likely to remain with us and form part of our character during the rest of our life. This is a well substantiated fact, in knowledge of which the nature of our future can easily be determined by our actions and habits during the time present. If, in school, we are unruly, foolish, obstinate, idle or quarrelsome, either of these bad qualities will stamp themselves upon our future. It can be seen, therefore how important it is that our reputation in school should be good. And yet, intelligent as our American school-boys are universally admitted to be, few of them appreciate what an important bearing upon their future their school reputation has. Few of them link the present with the future. All expect to be men, to earn their livelihood with their brains (few with their hands), but few consider as to how they are going to become men, and how they are going to fit their brains for the employment which they expect some day to pursue. Is this right? Is it natural? Yes, and no. It is right because Providence has ordained it to be natural. It is not right, because it prevents the school-boy from profiting by all the golden moments which are his. It is natural, because God did not intend that the young, unformed mind should concern and disease itself with thoughts of the future. And again it is not natural from a different standpoint.

But, however we may answer these questions, and bring them to bear upon that, "What bearing has a boy's conduct in school upon his future?" we shall find that his behavior in younger years bears about as close a relation to his behavior in succeeding manhood as night bears relation to the day which succeeds it. Says a writer of a past generation: "Independent of mere worldly success, the character found in the school-room must always affect the future life."

No one ever expects a school-boy to be the pink of perfection. The natural propensities of boyhood will assert themselves, at unguarded moments, with the best, the most intelligent and the most ambitious. In short, there is no boy, and no man, either, for that matter, who does not occasionally forget himself and give vent to his overflowing vivacity. Put there is a wide distinction between the occasional, and, perhaps, unthinking bad behavior of a boy, and that kind of conduct which indicates a naturally malevolent disposition to do wrong on his part. There is a difference between the boy who not only watches for every opportunity, but makes opportunities to misbehave in school, and the boy who, in thoughtlessness, occasionally falls into imitating the bad example of bad schoolmates.

The idler, who wastes his own time, and the trifler who wastes his time, and that of his classmates, also, by his foolish conduct, who tries to show his wit, and shows his want of it, by buffoonery or nonsensical trickery, may find momentary admirers among his more indiscreet and thoughtless companions, and even, at times, make the more judicious of them laugh at his silly performances; but while he probably accepts this seeming popularity as a compensation for the eventual loss of respect of his teachers and the more sensible of his school companions, he is certainly destined, at no distant day, to realize the difference between the transient glory of the clown, on his miniature stage, and that enduring reputation which always attends industry, obedience, truthfulness and unvarying straightforward, honorable conduct, so conducive to success in one's career in this broader stage, which is all the world.

It frequently happens that school companions and others who spend so many of their youthful hours together, are brought into contact with each other in after life, in their manhood. They travel each their respective road; the few fortunate ones easily arrive at success and eminence, but the greater number travel the path of labor, which God hath ordained that the majority of mankind shall pursue. A natural charitable feeling will prompt the prosperous man to help his less fortunate school-mate of yesterday. Here, then, it is that the question of character assumes its proper importance. A feeling of amusement may yet be awakened by the recollection of the practical jokes of the school-room trickster; but, if a position of trust and responsibility is to be bestowed, a much different reputation will be needed. The industrious, modest, truthful boy, who never set the school roaring by his vagaries, and who was also never known to do a dishonorable action, will here naturally take precedence.

Therefore, boys, of the two courses described above, choose, while time and opportunity are with you, that which has been shown to be the better.

### GOOD HEALTH.

#### The Doctor's Story.

Deacon Rogers, he came to me: "Wife is agoin' to die," said he.

"Doctors great an' doctors small, Haven't improved her any at all.

"Physic and blister, powders and pills, And nothing sure but the doctors' bills!

"Twenty women, with remedies new, Bother my wife the whole day through.

"Sweet as honey, or bitter as gall— Poor old woman, she takes 'em all.

"Sour or sweet, whatever they choose; Poor old woman, she daren't refuse.

"So she pleases whoever may call, An' death is suited the best of all.

"Physic and blister, powder an' pill— Bound to conquer, and sure to kill!"

Mrs. Rogers lay in her bed, Bandaged and blistered from foot to head.

Blistered and bandaged from head to toe, Mrs. Rogers was very low.

Bottle and saucer, spoon and cup, On the table stood bravely up;

Physics of high and low degree; Calomel, catnip, boneset tea;

Everything a body could bear, Excepting light and water and air.

I opened the blinds; the day was bright, And God gave Mrs. Rogers some light.

I opened the window; the day was fair, And God gave Mrs. Rogers some air.

Bottle and blisters, powders and pills, Catnip, boneset, syrups and squills;

Drugs and medicines, high and low, I threw them as far as I could throw.

"What are you doing?" my patient cried; "Frightening death," I coolly replied.

"You are crazy?" a visitor said; I flung a bottle at his head.

Deacon Rogers, he came to me; "Wife is a-gettin' her health," said he.

"I really think she will worry through; She scolds me just as she used to do.

"All the people have poohed an' slurred— All the neighbors have had their word;

"'Twere better to perish, some of 'em say, Than to be cured in such an irregular way."

"Your wife," said I, "had God's good care, And His remedies, light and water and air.

"All of the doctors, beyond a doubt, Couldn't have cured Mrs. Rogers without."

The deacon smiled and bowed his head: "Then your bill is nothing," he said.

"God's be the glory, as you say! God bless you, doctor! good-day! good-day!"

If ever I doctor that woman again, I'll give her medicine made by men.

—Will M. Carleton.

#### Wearing Spectacles.

A writer in *Scribner's Monthly* for April gives an article on this subject, from which we condense the following. His views correspond with the generally received opinions of medical men with regard to this matter: It is currently believed that the use of glasses should be put off as long as possible; that a too early use of them is injurious, and that when once begun it becomes, earlier than it should be, a necessity. As the office of the glass is to supply the refracting power which the eye, through age, can no longer furnish, it is evident that so soon as a need of this artificial power is felt we should resort to it. By failing to do so, we deprive ourselves of much useful work of the organ, while the work it does is done under a disadvantage, and with greater or less risk. Far-sighted persons feel the need of assistance very early—often as early as the 25th or 30th year. When one can no longer read with ease the finest print of a newspaper at a distance of 12 inches, glasses are needed. Inconvenience will first be felt in the use of the eyes in the evening, and for a year or more their use may be confined to work at that time. Under ordinary circumstances the first glasses should be weak—say about No. 60, according to the numbering in this country. Such a number, however, should be selected as will enable one to read the finest print at a distance of 12 inches. A pair of spectacles of clear glass, free from defects, and accurately ground, which in a neat steel frame cost about \$3 or less, will do as much as pebbles, for which \$25 and even more is asked. For cleansing the lenses, use a piece of old, soft cotton cloth. The case in which glasses are kept should open at the side and not at the end. The rubbing of the lenses against the sides of the case soon mars their transparency.

BARE NECK AND ARMS.—An eminent physician declared: "I believe that during the twenty-six years I have followed my profession in this city, twenty thousand children have been carried to the cemeteries a sacrifice to the absurd custom of exposing their arms naked." And yet it is said the low-necked fashion is coming again. Do not follow it.

TURNIP SEED FOR INDIGESTION.—A reader of the Press writes as follows: I use turnip seed for medicine in case of dyspepsia or indigestion, and find them much better than the mustard seed, commonly used, besides they are much more palatable. They taste something like a nut kernel.

### DOMESTIC ECONOMY.

#### Hints for House Cleaners.

A lady drawing from a long experience in house cleaning arts has prepared an article for the *Prairie Farmer*. We select therefrom a number of hints which we believe will be useful to many readers:

Soot falling on the carpet from open chimneys, or carelessly handled stove pipes, if covered thickly with salt, can be brushed up without damage to the carpet.

A little spirits of turpentine added to the water with which floors are washed will prevent the ravages of moths.

When carpets are well-cleaned, sprinkle with salt and fold; when laid, strew with slightly moistened bran, before sweeping; this with the salt will freshen them wonderfully.

Fuller's earth mixed to a stiff paste, with cold water, spread on the carpet, covered with brown paper, will, in a day or two remove grease spots; a second application may be necessary.

Spirits of ammonia, diluted with water, if applied with a sponge or flannel cloth to discolored spots in carpets or garments will often restore the color.

A paste made of whiting and benzine will clean marble, and one made of whiting and chloride of soda, spread and left to dry (in the sun if possible) on the marble will remove spots.

Paint splashed upon window glass can be easily removed by the application of a hot solution of soda.

Use kerosene and bath brick, or powdered lime to scour zinc, tin, or copper; wash in hot suds, and polish with dry whiting.

To give glass great brilliancy wash with a damp sponge, dipped in spirits, then dust with powdered blue or whiting (tied in a thin muslin bag) and polish with chamois skin.

A flannel cloth dipped into warm soapsuds, then into whiting, and applied to paint, will instantly remove all grease and dirt. Wash with clean water and dry; the most delicate paint will not be injured, and will look like new.

One pound of copperas dissolved in one quart of boiling water will destroy foul smells. Powdered borax scattered in their haunts will disperse cockroaches.

Plaster of paris mixed with gum arabic water makes an excellent white cement, but must be used immediately as it hardens quickly. A mixture of five parts gelatine to one of acid chromate of lime, applied to broken edges, which should be pressed together and exposed to the sunlight, makes an insoluble cement.

To whiten walls, scrape off all old whitewash, and wash the walls with a solution of two ounces white vitrol to four gallons of water. Soak one-fourth pound off-white glue in water for 12 hours; drain and place in a tin pail, cover with fresh water, and set the pail in a kettle of boiling water. When melted, stir into the glue eight pounds of whiting, and water enough to make as thick as common whitewash. Apply evenly with a good brush; if the walls are very yellow, blue the water slightly by squeezing it in a flannel bag in which is some powdered blue.

To clean matting, wash with a solution of one pint of salt to four gallons of water and wipe dry immediately.

To clean oil-cloths, wash always with warm milk. Once in six months scrub with hot soapsuds, dry thoroughly, and apply a coat of varnish. They will last as long again.

A little kerosene added to stove polish improves the luster. Apply while the iron is warm.

To remove spots from furniture take four ounces vinegar, two ounces sweet oil, one ounce turpentine; mix and apply with a flannel cloth.

Gum camphor wrapped in paper and laid around sugar barrels will disperse ants.

CONSOLIDATED TEA.—The operation of compressing or consolidating tea, as carried on by Messrs. Goundry, of London, is very simple. The tea is weighed out by girls—who almost exclusively carry out the process from beginning to end—into quarter pounds, which, one after another, are passed into molds on a revolving iron table, a piece of metal exactly fitting the mold being placed on the top. As the table revolves, each mold comes under the stroke of a hydraulic ram, which exercises a pressure of about 80 tons on each quarter of a pound of tea, reducing it to one-third of its bulk, and consolidating it into a mass, marked out by depressions into divisions of exactly half an ounce each in weight. As the table revolves, each cake is ejected from its mold, and the process, in which, by the way, not a particle of moisture is used, is completed. The effect of this enormous pressure is stated to be to so thoroughly break the cells and smaller vesicles of the tea leaves that the theine and aromatic oil are set perfectly free, and the mass of tea is more easily affected by boiling water, in which it at once falls to pieces. The practical result is that the liquor produced from consolidated tea after ordinary infusion is considerably stronger than that produced from loose tea, varying according to the quality of the tea subjected to the process. It is found that a half ounce of consolidated tea gives in five minutes the same strength of liquor as the same weight of ordinary tea in four or five hours.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line. .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch. .200 6.00 14.00 40.00

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONO. J. L. BOONE

SAN FRANCISCO:  
Saturday, May 12, 1877.

## TABLE OF CONTENTS.

ILLUSTRATIONS.—On the Way to the Camp Ground; The Horse With and Without the Check Rein, 289. Lillie's Fruit Pitter; Village Hook and Ladder Truck; Babcock Self-Acting Fire Engine, 297.  
GENERAL EDITORIALS.—Check Reins or Gag Reins; The Camping Season; How the "Rural Press" is Read; Los Angeles Fruit Growers' Association, 289. The Week; Taxation of Growing Crops; The West Side Election; Notes on Prickly Comfrey; California Sheep in the Sandwich Islands; The Southern Honey Crop, 296. Uses for Straw; A Fruit Pitting Machine; Village Fire Departments; Sumac, 297. Large Fees for Lawyers; Why Summer-Fallow Does Best in a Dry Year; Notices of Recent Patents, 300.  
CORRESPONDENCE.—Our Industrial Condition; Description of Kings River; Thin Seeding and Good Cultivation; Kingsburg, Fresno County, 290.  
THE STOCK YARD.—Cost of Production and Marketing Cattle and Sheep, 290-91. Rinderpest in Europe, 291.  
THE APIARY.—Pioneer Bee-Keepers of California, 291.  
HORTICULTURE.—Cause of Disease in Fruit Trees; Cure for Rabbit Gnawing, 291.  
THE VINEYARD.—The French Wine Crop; On Bonding Grape Brandy; Phylloxera, 291.  
THE GARDEN.—Foreign Asparagus, 291.  
POULTRY YARD.—Difficulty in Turkey—Solution Wanted; The Best Layers; Imported Games, 291.  
PATRONS OF HUSBANDRY.—Worthy Lee Turner's Visits; Co-operative Association and Crops of the Sacramento District; Education at Golden Gate Grange; Petaluma Grange; Errors and Statements; Assessing Growing Crops; Grange Discussion of Co-Operation Postponed; San Jose Grange; Lompoc Grange, 292.  
AGRICULTURAL NOTES from the various counties in California, 293.  
HOME CIRCLE.—Tired Mothers (Poetry); Woodsides Papers. No. 10; A Mother's Influence; The Opportunities on the Farm; The Depths of the Sea; Beautiful Little Allegory; The Social Position of the Farmer; New Music; A Pretty Tidy, 294. The Story of a Nose; A President Rodeoed in a Sap-Trough; What Makes a Sea-Shell Sing; Women Economical, 295.  
YOUNG FOLKS' COLUMN.—School Reputation, 295.  
GOOD HEALTH.—The Doctor's Story (Poetry); Wearing Spectacles; Bare Neck and Arms; Turnip Seed for Indigestion, 295.  
DOMESTIC ECONOMY.—Hints to House Cleaners; Consolidated Tea, 295.  
THE STABLE.—European Market for American Horses; Turcoman Horse Rearing, 298.  
ARBORICULTURE.—The Coffee Tree; Trees on High Lands, 298.  
GENERAL NEWS ITEMS on page 300 and other pages.  
MISCELLANEOUS.—Distribution of Plants, 281. The Movement of Storms; Formation of Sulphur Springs; Star-Twinkling as a Sign of Rain, 298.

## NEW ADVERTISEMENTS.

War Maps, E. Steiger, New York; 25 Elegant Cards, J. B. Husted, Nassau, Y. Y.; Jenks Portable Lawn Sprinkler, George E. Jenks, Concord, N. H.; Washburn & Moen Manufacturing Company, Worcester, Mass., and I. L. Ellwood & Company, DeKalb, Ill.; A Farm for Sale in Napa County, William Clark, Napa City, Cal.

## The Week.

The doors of the large fruit season have been pushed open a little way by receipts of apricots from Vacaville. It will not be long ere the full richness and lusciousness of the fruit crop will be upon us. The crop according to all advices which we have will be large and in some kinds of fruit will be of gratifying excellence. What the market will do for the producer is yet quite uncertain. It seems reasonable to expect, however, a little improvement over last year although it may be very slight. There may be expected to be a little more than the usual activity in the way of overland shipments. The companies for the operation of refrigerator cars are more numerous, and there will be a disposition to test the new devices which are announced. This will move a little more than last year. The trade by common cars, for those kinds of fruits which will bear the long transit, may be expected to be larger than last year because the beginning of better times at the East, with increased prices for produce and awakening manufactures, will loose the purse-strings and tighten the longing jaws of Eastern consumers upon our splendid fruit. But aside from these hopes across the continent we look for an increased consumption in our own markets. If the possibilities in the way of price for bread-stuffs are realized there will be a disposition on the part of our eaters to laze their tables more abundantly with the cheap and healthful fruit. Beyond this possibility lies the recourse to canning and drying. There have been new establishments for these practices erected, and their influence may be felt. Although these notes are but surmises of the things to come, the outlook is unclouded, so far as we know, by any adverse expectations, and it is therefore well to hope that the season in the orchard will be one of profit as well as abundance.

## Taxation of Growing Crops.

The county Assessors in the agricultural districts have a severe task placed upon them this year by the State Board of Equalization. They have to go in the face of the wisdom of all ages and declare that the tail does not go with the hide, but should be cut off and weighed in with a side of finished leather. For what more than this does it mean, to separate a growing crop from the land upon which it is growing, and class its undeveloped value with the certain value of gold coin or chattels. We do not profess to be acute in the law. We did the fair thing by Blackstone in our earlier days, but we are forced to examine the issue raised as to the proper classification of a growing crop in the property list, through the glasses of common reasoning and not with the microscopic vision of legal erudition.

We do not see under what true definition growing crops can be classed as personal property. Going back to the first definitions in which the contrast is drawn between real and personal property, on the fact that one is movable and the other is not, would class an immature crop as real property, because it certainly cannot be moved without the complete destruction of its value. We are aware that this old definition has been much circumscribed by laws and statutes which give it special interpretations in special cases. For instance, John Norton Pomeroy, writing on the nature of property, and the distinctions between real and personal property, says: "Although many of the ancient distinctions have been removed by modern statutes, still the differences which remain are very striking, the most important being the wholly dissimilar modes of succeeding to real and to personal property on the death of an owner; the former passing directly to his heirs or devisees, the latter passing to his administrators or executors for distribution among creditors, next of kin and legatees."

Now, although this prevailing distinction between real and personal property would class farm produce in the latter division clearly enough, if the crop were mature and in such shape as to constitute property of any kind, how can it include that which has no determinate value whatever? It is true that a growing crop has a prospective value; it is something to hope for, but it does not by any means possess the actual value of a chattel.

As we look upon it, the seeding and growing of a crop is only one step beyond the work which is done upon the soil, and any expenditure which may be made for fertilizers. Getting the soil into fertile condition is as important a part of growing a crop as the sowing of the seed, and it seems to us that both these acts, inasmuch as they increase the market value of the real property, are assessable as improvements. But why should the sprouting seed or the growing stems and leaves be classed as personal property any more than the fineness of the soil or the cartloads of fertilizers which may have been applied? The growing plant is merely an agency for transforming these values of soil and work into a commodity which has a marketable value, and which may become movable and transferable as personal property.

We are aware that a growing crop is mortgageable apart from the land on which it grows, and this ruling of the law would seem to indicate that the tail may be legally separated from the hide and classed as personal property. But what does this avail so far as a personal property assessment is concerned? If there is to be any value in the crop the mortgage has it. And if there is to be a separate assessment on the item why should it not be placed upon the mortgage. No; this is not the practice. The mortgage, which perhaps represents all the possibilities of the crop, is free from assessment, while the crop, which is already carrying a full load in the mortgage, has to shoulder another burden in the special tax.

This subject of assessing crops is now being widely discussed throughout the State and we have full confidence that the united wisdom and determination of the farming population will effect the placing of this matter where it belongs in right and justice. We have printed resolutions embodying the sense of the meetings which have discussed the question and we print others in this issue. There are other meetings to be held. The subject is one of the many important ones which are now pressing for discussion and action. We trust none of our readers will fail to enter into the earnest considerations of the questions and either let his voice and influence be heard and felt at the open meetings which are being held, or else prepare his views for publication in the columns of the RURAL PRESS to the end that all interested may feel the strengthening influence of forcible and logical presentations of the truth.

PERSONAL.—We have had a call from Horace J. Smith, of Philadelphia, whom we have had occasion to mention as Secretary of the National Agricultural Congress. Mr. Smith has passed the winter in the southern part of the State, and is now on his way home. During his stay he has written a series of admirable letters to the Philadelphia Press, in which the needs of the southern counties in the way of direct railroad connection overland are fitly shown. We believe Mr. Smith's visit will prove of as much value to the interests of our people as it has been of pleasure and recreation to himself.

ON FILE.—"Answer to Queries on Orange Growing," R. L.; "Food Plants," C. H. S.; "Auburn," H. W. H.

## The West Side Election.

The vote on the west side of the San Joaquin river on Tuesday, May 1st, leaves no doubt as to what is the mind of the people on the subject of a complete and effective irrigating system. This vote, of which we shall present details below, is so unanimously in favor of the proposed measure that we may now expect the immediate undertaking of onward steps in the work. The Legislature, which will convene next winter, will find itself called upon to struggle with some of the most advanced engineering problems of the day, and we trust that the steps which shall be taken will be wise and best designed to reach the desired end speedily and economically. There has arisen in the later days such an atmosphere of fraud and malfeasance in the prosecution of great public works, that we doubt not the vultures will endeavor to make prey of this great enterprise. We trust the eyes of the people are now awakened so that such wrong-doing shall be made impossible. As the project is now approved, it is of the greatest importance that wisdom, economy and honesty shall rule in our legislative halls this winter. There will be other measures of vital importance to our growing agricultural interest brought before the law makers at the coming session. For these, and for the redemption of the great San Joaquin region, the whole State owes it to itself that none but the most honest and competent citizens be entrusted with the people's interests at the coming elections.

The West Side, a paper printed at Hill's Ferry, gives the following as the result of the election:

Point of Timber—Tax, yes, 3; tax, no, 135. Ellis—Tax, yes, 83; tax, no, 0; Bantas—Tax, yes, 53; tax, no, 13. Grayson—Tax, yes, 73; tax, no, 8. Crow's Landing—Tax, yes, 24; tax, no, 4. Hill's Ferry—Tax, yes, 42; tax, no, 7. Cottonwoods—Tax, yes, 62; tax, no, 1. Los Banos—Tax, yes, 62; tax, no, 32. Ortigalito—Majority for tax, 16. Firebaughs—Majority against tax, 1. Total majority for tax, 252.

One little precinct, Wirick, is yet to be heard from, but it only polls a few votes. From Firebaughs and Ortigalito we have only the majority at hand. It will be seen from the above that the only real opposition to the canal centered at Point of Timber, Los Banos and Firebaughs. As Contra Costa county will undoubtedly be stricken out of the district, it will be seen at once that the real majority within the district proper is 384.

Below are the officers elect with their majorities: J. B. Crow, Treasurer, unanimous; J. R. Purvis, Tax Collector, 55 maj.; S. A. Smith, Assessor, 123 maj.; J. Christensen, Commissioner, 177 maj.; J. R. McDonald, Commissioner, 208 maj.; J. L. Crittenden, Commissioner, unanimous; J. Meyers, Commissioner, unanimous; C. D. Needham, Commissioner, unanimous.

## Notes on Prickly Comfrey.

It seems that with the newly utilized forage plant which we recently illustrated, as with other useful plants, much depends upon the treatment which the plant has at the hands of the growers. As with alfalfa it must be cut at the proper time to secure value from it. On this point and of the remarkable drouth defying qualities of the plant, the London Farmer says: The Toronto Globe publishes a letter from "N. S. G.," saying he had "grown comfrey sent from England, but of all his stock only a tame sheep would eat it." Mr. Thomas Christy writes to us to say that this was evidently a good sort of comfrey, and no doubt this tame sheep ate some of the young leaves when they first came up, and so he had become fond of comfrey. The stock were only offered the "fine leaves" referred to, "18 to 24 inches long," hence the cause of so great failure and disappointment. If the leaves, he says, had been cut when young and small, they would have been less prickly, and been eaten at once. But the purer the variety of *Symphytum asperinum*, and the better the soil, the closer and sharper are those prickles. Under a microscope they look like white thorns of a close gelatine substance, perforated with holes. These collect the slightest moisture and pass it into a chamber in the leaf at the base of this tube, and so it gets to the stem. A manager of a Ceylon coffee estate situated in the Doombura district reports to the London house on the 12th of February, after mentioning that the weather had been very hot and dry, and that he had suffered from long continued drouth (for he had had no rain for some time, with the exception of a light shower on the 2d of February measuring 0.21 inches) remarks, "that the coffee was suffering greatly from the dry weather, and that nearly all of some cocoanut plants he had put out lately had been destroyed by the drouth, that about 40 or 50 out of 200 cinchona plants, although watered daily, had been killed by the drouth—but that the prickly comfrey plants were growing well."

WEBBER LAKE.—We have in preparation engravings to illustrate a very interesting article on Webber lake, its natural beauties and its character as a sanitary resort, which has been prepared for us by Prof. J. G. Lemmon. The locality is one of the most charming in the State, and with Prof. Lemmon's word painting will be fitly brought to the notice of our readers.

## California Sheep in the Sandwich Islands.

Each year is recording our progress in finding a market for our fine agricultural produce in the regions of the Pacific and the coast of Asia. The Japanese Commissioners made considerable selections of thoroughbred animals of different kinds. The latest item of this foreign trade is concerning some blooded sheep from the famous flock of Mrs. Blacow, of Alameda county, which have lately been taken to the Sandwich islands, and, if we may judge by the words in the Hawaiian newspapers which we have before us, the islanders are very much delighted with their acquisition from California. There can be no doubt that one of our markets for improved stock lies to the west of us. On the islands of the Pacific and in the awakening Asiatic countries there is springing up a brisk demand for improved domestic animals, and we have all the geographical advantages in the way of supplying this trade. Although the chance of selling to the west would be a small inducement toward the improving of our farm stock, if that were the only chance for profitable disposition of the surplus, still it is a good thing to have in mind, and a good trade for our stockbreeders to encourage with all diligence.

We quote, as of interest in this connection, a paragraph from the latest received issue of the Hawaiian Gazette to show the reception which was awarded to Mrs. Blacow's sheep and the good company in which they lost their fleeces:

The fine lot of French Merino bucks, 10 in number, from the noted stock farm of Mrs. Blacow in California, which arrived here per steamship *Australia* on the 5th of April, and which attracted so much attention in this city on account of their extraordinary size, their great bulk of fleece and superior form, were all purchased by Mr. W. M. Gibson for the Lanai ranch. They were shipped to Lahaina per *Kilauea* last week, and at this point were sheared by Mrs. Blacow's farm manager, Mr. Roberts, who accompanied the sheep, and of this clip of imported bucks we give below the following extraordinary results:

Total weight of 19 fleeces.....	752 lbs
Heaviest fleece No. 1, from imp. sire Napoleon..	51 "
Weight of No 419, from imported sire Domingo..	45 "
Weight of lightest fleece.....	30 1/2 "
Average weight of fleeces.....	39 1/2 "

The Hon. H. A. Widemann, Acting Governor Aholo, Sheriff Everett, T. Forsyth and many others, were present at the shearing and weighing of these fleeces, and at the same time an average buck that had been sheared was put on the scales which he turned at 220 lbs; weight of his fleece, 45 lbs; 265 lbs full weight. This is unquestionably the finest lot of pure bred fine wool sheep that has ever been imported into this archipelago. These bucks were sired by imported rams from the celebrated Rambouillet stock farm in France, and are all prime young bucks, and in the very best condition. The wool from these sheep is in a comparatively clean condition, free from all foreign matter, except the natural yolk of the fiber.

## The Southern Honey Crop.

The busy bees of the southern counties will yield but a small surplus this season, if the reports which are now at hand are accurate. Our information is not now wide-reaching enough to form an estimate of the numerical amount of this year's yield, but a considerable reduction in the gross amount is certain. We trust our readers will furnish us with accounts of the outlook in their different localities.

The Los Angeles Herald, after reprinting our recent note of the movement of California honey to Spain, remarks: We have always looked forward to a foreign market which we felt confident would be opened as soon as we had a surplus. The shipment of honey to Europe is no longer a mooted point. It can be shipped to any part of the world as easily as any other article of commerce. The European market is now tapped and we may look for better prices. The failure this season in southern California will add materially to the demand everywhere, not only for this season, but for two or three years to come, as the loss in bees in southern California this year will be very great and cannot be replaced for the next two years to come, should the seasons prove good. We learn that already many bees are starving out and from present prospects, unless something comes to their rescue soon, there can but few, if any, survive the season. Those who are able to feed and carry their bees through will undoubtedly realize a good price for them another season. The prospects in our locality are quite gloomy. We would be glad to learn from other portions of the county. Will some of our friends inform us of the outlook in their vicinity for honey. From all we can learn from old Californians this is one of, if not the most remarkable drouth season known in the last twenty-five years. Bee-keepers have never witnessed its equal since the introduction of bees on this coast.

PICNIC OF SANTA CLARA COUNTY PIONEERS.—We acknowledge the receipt of a card of invitation to attend the above named festivity which will occur at O'Donnell's gardens, San Jose, Friday, June 22d. The occasion will doubtless be one of much enjoyment to the pioneers and their guests. The picnic is under the auspices of the Pioneers' Association, of which Coleman Younger is President and A. P. Murgotten is Secretary.



## Uses for Straw.

In last week's issue we published a lecture by Prof. Hilgard, of the University of California, in which he stated that the "straw of a crop of wheat withdraws from the soil the full equivalent of another crop of grain." In moister climates than ours, straw is easily rotted, so as to form a valuable manure. Here the operation is attended with some difficulty, but the return of this valuable material to the soil is certainly of sufficient importance to justify some labor and expense. A large amount of straw can be worked up in an ordinary barn-yard, by throwing a moderate quantity at a time where it will be picked over and tramped upon by the animals, and afterwards throwing it into a heap with the stable cleanings. The fresh manure will furnish heat to help on the decomposition, and the process may be hastened by an occasional wetting. Many farmers have a stream, spring or windmill that will furnish the water needed without appreciable cost. Of course, care should be taken not to apply too much water to the compost, and leach out its most valuable elements.

Low spots, which receive and retain for some time the winter water from surrounding land, can also be utilized, the straw being spread on them after harvest, when they are dry, and hauled away the next season. Pigs, confined upon the place while it is moist, will help to break up the straw. The compost thus obtained will doubtless contain much of the valuable material washed from the land by the rains, in addition to that contained in the straw. A waste place will thus be made profitable.

Some will admit the value of these suggestions as applied to small farms, but claim that they cannot be carried out on large tracts. We hold that "waste makes want" everywhere, and the man who carries on a large business should be, if anything, more careful to stop the leaks than the small farmer, whose operations do not involve the welfare of so many others besides himself. A small percentage of loss or gain certainly counts up faster with a large than with a small capital.

The largest ranch in the State can be cleared of its straw and other offal by a little forethought, and that too without sending a pound of it away. Those who combine stock-raising with grain-growing (may their tribe increase) hardly need any suggestions on this point. Let care be taken in selecting threshing places to economize the labor of the men and teams, and leave the straw in a few convenient places, where it will not be in the way of the plows the next season. There are straw-carriers, and other mechanical contrivances, by means of which straw can be stacked almost as cheaply as it is usually "bucked" out of the way. Clear and plow a space about the stacks as a protection against fire, fence them in if there is loose stock around (movable panels would be the most convenient), and you are ready to wait for "a dry year."

If you choose to go a step farther and have your stacks insured for a sum large enough to cover the cost of building them you can, at the most, suffer no greater loss than in following the usual custom of burning. When the dry year comes, the accumulated straw may be turned to cash in one of several ways. Animals can be bought at a low figure and carried over the time of scarcity to be sold at an advance, or they can be taken for a few months on liberal shares, or again, the feed may be sold for cash, to be used on the ground. The stacks should be at a reasonable distance from the water, so that the droppings of the animals will be scattered over considerable surface. If much manure collects in spots, let it be moved to where it is needed. Next time let the stacks or water-troughs be moved so as to manure a new portion of the ranch.

In many places "driven wells" may be used, and moved as often as desirable. If any one doubts these things, let him ask the price of straw in the drier parts of the State this year. Most of our farmers would be rich if they had the straw now which they have burned in good years. Remember, above all, when you sell straw, to specify that it is to be used on the spot.

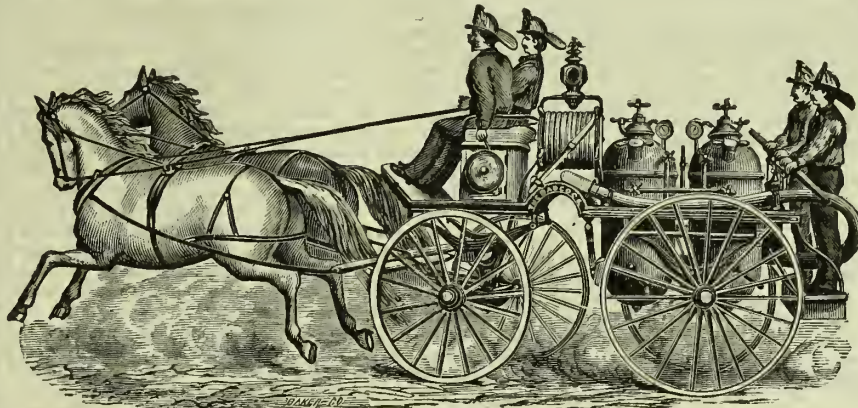
**THE MOUNTAIN SHEEP RANGES.**—The Stockton Independent says: We were informed yesterday by a gentleman who has lately traveled through portions of the upper Sierras that the prospect for feed in those high altitudes is very good, and that those who have sheep ranges in the mountain valleys will be able to carry their sheep through this season of drouth without difficulty. Owing to the fact that there has been much less than the usual amount of snow-fall in the mountains the grass is earlier than usual, and sheep can now be driven to the higher altitudes for pasturage without difficulty.

**CURIOUS EGG.**—We have received from Mr. F. F. Perry, of Oakland point, an egg the shell of which is covered with a coating one-eighth of an inch thick, of yellowish, semi-transparent substance, having much the appearance of dark colored amber. The yolk inside the shell is very large and the "white" seems nearly wanting.

## A Fruit Pitting Machine.

There is now on exhibition in this city a machine for pitting fruit which is being examined with considerable interest because of the rapid work which its inventor claims it capable of accomplishing. We have not seen the machine in operation, but we are shown very emphatic testimonials of its efficiency in the hands of fruit manipulators who have used it in Oregon, where the inventor, Mr. Lillie, resides. The apparatus promises so much and there is such great need in our fruit drying and canning establishments for some mechanical contrivance which will reduce the great expense demanded by hand pitting, that we have made a little engraving of the machine so that we may give all interested some idea of the arrangement.

As the fruit drops from the trough, where it is shown in the engraving, it falls between springs or guides which are so adjusted that each fruit, large or small, shall be held centrally over two circular saws which revolve towards



BABCOCK SELF-ACTING FIRE ENGINE.

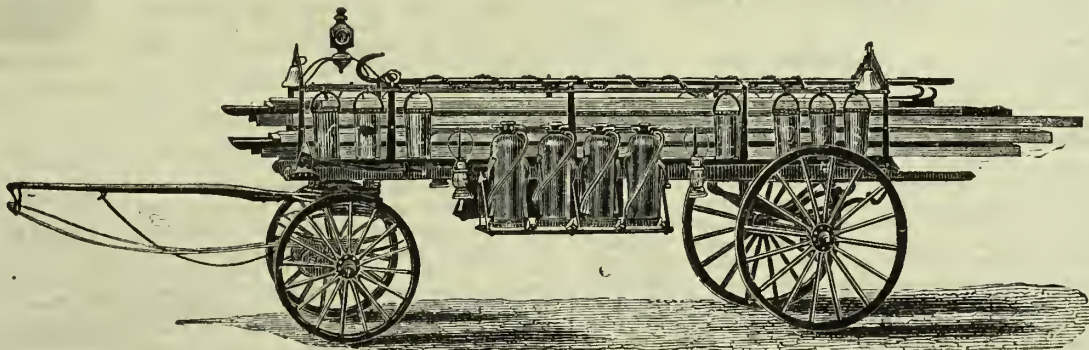
each other. When the fruit is in this position, the hammer, which is operated by an adjustable lever, (as seen in the engraving at the back of the machine,) falls and pushes the fruit down until it is caught by the saws. As the saws revolve toward each other they cut into the fruit to the pit and seize it so firmly as to carry it down past two spring knives on each side of the saws. These knives cut the fruit from the pit, which passes down and is dropped into a box underneath the machine.

The hinged standards, on the upper ends of

ability to pit cherries successfully. Its average working capacity is said to be 3,000 pounds of fruit per day. For this information concerning the machine we are indebted to Mr. H. Jones, who is the sole agent for this State. The apparatus is on exhibition at Mr. Trumbull's store, 419 Sansome street. Mr. Trumbull says he proposes to have the machine fully tested in public sight as soon as fruit becomes more plenty. Meantime he will be pleased to show it to all who may be interested.

## Village Fire Departments.

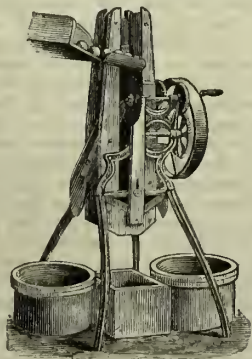
Villages and country towns are not, as a usual thing, well supplied with apparatus for the extinguishment of fires, so that when conflagrations occur great damage is the result. The citizens are apt to rely too much on the isolation of the buildings, but when one catches fire it is pretty sure to go, even if those in the vicinity are not destroyed. A great difficulty in small towns is that the water supply is



VILLAGE HOOK AND LADDER TRUCK.

which the saw mandrels are mounted, are held together with the requisite force by two wooden springs, adjustable by a bolt and wing nut. These standards have to be adjusted to the size of the pit of the fruit which is being pitted, by the wedge shaped pieces screwed on the sides of the wooden frame.

The machine is represented as doing as good work with clingstone fruits as with free. With clings there has to be a little change in adjustment, by which the under or shorter knife on



Lillie's Fruit Pitter.

each side is kept up to the saw by means of the tail screw with its coil spring, but in pitting freestones these knives are let down so far as not to touch the pit as it passes down. The upper, or long knives, are sufficient for free stone fruits. The machine is operated by a crank which the operator turns with his right hand, and with the left hand he regulates the rolling of the fruit into the opening.

This interesting apparatus is put forth as a pitter of all stone fruits, and claims the sole

## Sumac.

The subject of sumac is not altogether new to California readers. The plant has been successfully grown in Santa Clara county, as an item in our "Agricultural Notes" will show. We have also presented facts about it in former years. Then, as now, sumac seems one of the things which is worth the thought of the agricultural producer. Californians who hail from the Middle and New England States, doubtless remember the great thickets of sumac trees which occupy the waste places in many parts. They also remember it as worthless growth, except as it figured in the rude pharmacy of the housewives' "yarb" prescriptions. While this is true of the fruit of the tree as grown in the northern latitudes, it is not true of it when grown beneath a warmer sun. The sumac grown in Virginia and perhaps in some other Southern States, is rich in tannin and is of commercial value, as it is in constant demand by the tanners of soft leather. The supply used in this country is largely drawn from the shores of the Mediterranean. There seems every reason to believe that the tree if grown in this State will secrete the desirable property. Indeed the authority which we quote in our "Agricultural Notes" says the product has already been tested and found satisfactory.

The wild species growing in the southern part of the State is of great value to the bee-keepers; furnishing honey of the best quality. But if its blossoms are sweet its leaves are far from it. They have the peculiar bitter taste of tannin in a marked degree. Let some of the leaves be gathered and tested. Their sale may bring in money that would be very acceptable in a dry year. Probably the leaves could be stripped from a portion of the bush in the autumn without injuring its vitality or blossoming powers.

Our attention is chiefly drawn to this subject at this time because our friends in the Sandwich islands have laid out the San Francisco market as their own property, and are going to ship our tanners a specimen of their product for trial. We welcome them to make the trial, but we are reminded at the same time that we ought not only to grow our own sumac, but should supply the exceeding great demand for the substance which exists in the Eastern States. The following will show what the Sandwich islanders have in mind in this connection. The Gazette says:

Large quantities of sumac grow wild in certain parts of Hawaii. There are hundreds of acres of land which are covered with the plants in a state of the greatest thrift. It is a well known fact that this plant is used in tanning the finest and softest varieties of leather, such as French calf and morocco. It is raised in many parts of the world, the island of Sicily furnishing the choicest article, and the Turkish empire the largest quantity. England alone imports annually more than 16,000 tons of prepared sumac. In California there are about 300 tons consumed annually in the manufacture of leather, and the market price there is \$150 a ton. In Sicily the suckers of the plant are set out in rows four feet apart, and the shoots are yearly cut to within a few inches of the ground. The shoots are dried and thrashed, and the leaves are ground between mill-stones, when it is ready for market. Owing to its value it is often largely adulterated. Mr. Notley, a tanner, of Waimea, Hawaii, has tested the quality of the article grown here, and he found it to be equal to any sumac raised abroad.

## Treatment for Wire Worms.

**EDITORS PRESS:**—Some time back I saw an inquiry asking the best remedy for wire worms. The only effectual remedy I know of is thorough cultivation of the soil. Those that are troubled with them will find by examining their soil that it is cold, and by stirring it thoroughly it will get warmer. By so doing they will kill the wire worm, as it cannot live in warm ground. There are other remedies such as soaking the seed in different solutions. We used to soak our corn in May-apple root to keep the wire worm from eating it, in Iowa, but the only effectual remedy I have ever found is to stir the soil well before planting. G. N. W.

**SUGGESTIONS TO HOP GROWERS.**—The following extract from a private letter received from London, contains suggestions of interest to our hop growers. For the guidance of any hop growers your friends in California may deal with, I may mention one criticism I have met with more than once in speaking with practical men here. They state that many bales from California come to hand unevenly packed; that is, green and brown hops running almost in veins in one bale. The hops will come down from the poles in this way, but the Kent growers take care to mix their growth after drying, or else to pack the greener kinds in separate bales. Whatever the actual color may be, they run pretty even in bales. Veins of different colored hops in one bale certainly detract from their value in this market, out of all proportion to the little trouble required in well mixing prior to packing.

The largest carpet-mills in the United States, those of Dobson, at Schuylkill Falls, will close, thus throwing out of work some 1,400 hands.

The war in Colombia is virtually ended.



## THE STABLE.

### European Market for American Horses.

At a recent meeting of the New York Farmers' Club, a paper was read by Mr. J. A. Buck, on the above theme: In this Mr. Buck said that the main facts stare us in the face on the threshold of the discussion; first, that the United States and the Canadas are largely overstocked with horses, both for general purposes and for the race-course, although our breeding facilities are by no means heavily taxed; second, that in Great Britain, at least, there is a scarcity of horses for lighter draft purposes, while trotters, such as are so plentiful with us—animals that can draw two persons in a top buggy over a mile of road in from three to four minutes, or can speed a 2:40 gait—are almost unknown, and as yet little desired. This being the situation, our market glutted and theirs vacant, it is a simple business principle that one should be supplied from the other, for the benefit of both.

#### Breeding Horses for Exportation.

In drawing attention to breeding horses for exportation to European markets, Mr. Buck further said that good, sound, serviceable young horses, of course without special claim to speed or breed, can be bought by the thousand in Canada, Illinois, Kentucky, Tennessee, and Texas, for from \$80 to \$120; more frequently the price will be under than over \$100, and there is no apparent end to the supply. These are horses such as we see in ordinary use, that will naturally trot along at a rate of 10 or 12 miles to the hour, and from four to six years old—not by any manner of means candidates for the bone-yard. At the same time such animals are greedily purchased in the European markets for not less than \$250, and more often selling for \$400 and \$500; and as there seems to be no end to the supply on this side of the ocean so there is none to the demand on the other. In illustration of this demand Mr. Buck cited the instance of Mr. James H. Small, who went to Great Britain and some two years ago settled down in Glasgow, Scotland; there he became managing director of the street railroads of that city, or tramways, as they call them. Mr. Small soon saw that there was a great need for proper horses, and in 1876, for his own uses, he imported, from Canada mostly, no less than 600. The good results of his policy are to be seen to-day in the appreciation of the stock—which was worth only 50 cents on the dollar—to par. The chief cause of his success Mr. Small attributes to the economy resulting from the introduction of American horses. This is an item of 600 horses for one purpose in one city, and yet so slow of movement are our British friends that the example of this enterprising Glasgow director has nowhere been followed to the writer's knowledge. But Great Britain, he said, is moving in the matter in a proper manner and on a grand scale. More than a year ago a scheme was started, which took shape on the 30th of January last in the incorporation of the British Empire Horse Supply Association, with a large capital. The business of the Association is under the control of an executive council. The plan is to build large steamers especially for the transportation of horses and cattle across the sea. The ports of shipment will be Norfolk, New Orleans and Galveston; and calculating that each steamer can carry 500 head at a trip and make six round trips in a single year, the Association figure up a large profit for themselves. Whether their glowing anticipations will be carried out Mr. Buck thought could be of little interest to the club, though as farmers they would be interested in bearing of this prospect for an influx of purchasers to our horse markets. Each steamer of this Association will carry, it is thought, 3,000 head of American horses to England in a year, and there will be probably enough steamers in the line, when fully organized, to make the total exportation from 15,000 to 20,000 head per annum. This draft, large as it is, the writer believes will not make much of an inroad upon our capital, which is estimated at 10,000,000 head, but it will be an immense relief to our surplus, and it by no means represents the extent of the exportation that could profitably be made to foreign lands.

#### The Style of Horse Demanded.

The intent of Mr. Buck's remarks thus far was to show that if farmers choose to go into horse-breeding there is a market abroad where remunerative prices obtain if there is not at home. The next question considered was, what style of horses to breed to meet the wants of the day. The answer is found, the writer affirmed, in the high rates ruling abroad. In the British islands they have been ordering the breeding of the high-mettled thoroughbreds. They have a superfluity of light-built nags, that last for a brief season on the race-course or the road, but break down at the first touch of hard work. They want horses to draw their grocers', bakers', butchers' and beer wagons, their street-cars and 'buses, to do their general purpose work of all descriptions. For these needs, the desideratum is a sound, sturdy, rather small-sized draft-horse, one which can be counted on for 10 or 15 years of solid work, day in and day out, always honestly earning the good meal he never fails to eat. There is a lack of such animals here. We employ chiefly long-limbed Western animals, not compactly built, that break down in their prime; but, Mr. Buck said, we are beginning to supply our deficiencies, and for exportation, farmers should breed through

the use of the Norman Percheron stallions. This, according to his idea, is, *par excellence*, the stock to which we must look for recruiting the failing energies of our equine dependents; and there is a nice touch of compensation in the fact that we must go to Europe for the sires which produce the stock for which Europe must seek our shores, because we have the right mares and the broad acres for pasturage.

### Turcoman Horse Rearing.

The horses of the Turcomans are the noblest and the most serviceable of all the Tartar races. There, the demeanor of the horses is attended to with especial predilection and the greatest care, and the nature of the soil seems to be particularly favorable to the growth of the foals. Large troops of horses are met with on the luxuriant pastures on the Lena, which are mostly owned by rich proprietors. When the animals have arrived at the age of from two to three years they are caught, and are either employed in the service of the owner or sold to dealers of the neighboring localities at comparatively high prices.

The Turcoman is a nimble, extremely dexterous and bold rider, who trains his three or four year old foals after the English fashion; he lets them run about several hours during the day, gives them only a small portion of hay or other coarse provender, instead of which they get a sufficient quantity of barley and bread, and now and then barley pudding, which is made from barley meal, milk and water, and taken with them on their journeys. In the evening, after their long excursions, when they are again turned into their stables or sheds, they are covered with woollen cloths to cause them to sweat, by which means they are prevented from becoming fat, and grow up with strong muscles and powerful sinews. The Turcoman wishes his horse to have muscles as "hard as marble," because only a muscular animal of this kind is capable of going through what is daily required of him. When we are told that the Tartar generally, but especially the Turcoman, with his horse will travel for weeks together, fifty to sixty miles a day, and that the animal is capable of bearing the greatest hardships on bad and stony roads, we are astonished at such feats—they are really wonderful. The build of the Turcoman's horse is of such excellence that his movements in whatever pace are pleasant and not at all fatiguing for the rider, and on this account they are used with special predilection by the Baschliks, commanders-in-chief, and all the great people of those countries, and are often sold at very high prices.

## ARBORICULTURE.

### The Coffee Tree.

EDITORS PRESS:—You give so much attention to every untried product which promises to be of value to the farmers and orchardists of this State that I have gathered a few facts concerning the history, appearance and growth of coffee. I am persuaded that there are possibilities in that direction, and I have plants which have done well this winter with out-door treatment. The coffee belongs to the cinchona family (natural order rubiaceae). It is a native of the southwest point of Abyssinia and thence was introduced into Arabia, which country for two centuries supplied the world with coffee. In the 17th century the first coffee plant seen in Europe was received at Amsterdam. Early in the 18th century the French carried coffee to Martinique and from thence its culture rapidly extended to Brazil and Central America. It has much more adaptability than has been generally supposed, and travelers in Java and Brazil state that its culture has been extended far up the mountain side into the cooler and sub-tropical belts.

The coffee tree sometimes grows twenty feet high, with a stem several inches thick; but in cultivation it is kept dwarf and compact for convenience in gathering, and also because the stem is liable to suburn. The tree is an evergreen, with handsome lanceolate leaves placed opposite, and bearing dense clusters of snowy white, fragrant blossoms, in the axils of the leaves. The flowers are succeeded by red, fleshy berries, each of which contains two or more seeds. La Roque, a French writer, says that the berries are quite like a large cherry, and are very good to eat. He is quite enthusiastic over the beauty of the tree, with its long, drooping limbs, whitish bark, glossy leaves, handsome flowers and bright berries; for both blossoms and fruit are to be found on the same tree, at almost all seasons. The

#### Cultivation of Coffee

Appears to be very simple. The plants are grown in a nursery, and when two years old are planted in the orchard, eight feet apart each way, and receive ordinary cultivation, but are kept low and bushy. They begin to bear the second year after they leave the nursery, when the average yield may be set down as one pound per tree, and reach their full growth at about the fifth year, when they average nearly four pounds. Dr. Lugenbee, writing from Liberia, mentions a yield from a single tree of thirty-one pounds, but this must be taken as exceptional. It is certain that plantations can be kept in vigorous bearing for twenty years.

The berries are gathered when ripe by being shaken from the tree upon a cloth; the pulp is removed by a machine called the pulper; the seeds are then dried and passed between a pair

of rollers to crush the inner shell and separate the pair of seeds. The coffee is then ready for market.

There is every probability that coffee can be grown profitably in many parts of California. It has high claims as an ornamental shrub, but higher as offering a new industry. If anyone will figure upon the product of an acre they will see that there are wide margins, wherever the coffee succeeds. Protection from chilling winds is all it asks, and it will flourish wherever the orange grows. CHAS. H. SHINN.

Niles, Alameda Co.

### Trees on High Lands.

At the last quarterly meeting of the Carmarthenshire Farmers' Club, a paper was read by Captain Horseman on "The Effect of Trees in Reclaiming Mountains and High Lands." Among other things he said: The great effect that arboriculture has upon the general cultivation of mountain land is a fact that cannot be disputed; but, unfortunately, it has not been carried out to any extent, and generally the plantations and belts of trees have been planted without due regard to the position and requirements of the farms, the object in view being merely the planting of spots of superficial or useless land, whether they happened to be in valleys or not, with the ulterior view only of cutting the timber at a future time. There are thousands of acres of high lands, which are now literally swept by the cold winds of early spring, rendering them next to utterly valueless for growth of corn—lands which have the required depth of soil and which contain in themselves the necessary elements for the growth of corn or grass, where if the young blade of corn were protected by belts of trees, it would produce crops in some cases nearly equal to the crops produced in the valleys.

No person will for a moment hesitate to acknowledge the influence which belts of trees afford as a means of shelter for grass and corn lands; and in addition to this they form a valuable shelter for sheep and cattle. Cattle and sheep in an exposed position will require more food to keep them in equal condition to those who enjoy a freedom from such exposure. I think the great loss which farmers annually sustain among their young cattle may be traced, for the greater part, to the amount of wet and cold they are exposed to through want of shelter.

I think that by planting poplars on the windward side of a plantation (their growth being so quick) the injury to the trees near that boundary might be obviated. Although larch is a much more profitable tree than either spruce or Scotch in plantations intended for shelter, an admixture would be preferable to planting with larch alone. The one being a deciduous tree, grows quicker at first than the spruce; the other being an evergreen, presents a greater opposition to the winter storms, and seems satisfied for the first few years with providing itself with large roots, so that when it grows tall it may resist them; but once these roots are formed, they grow as fast, and frequently overtake the larch. This I have seen myself in one instance. The best trees for planting in exposed situations or on very high mountain land, are poplar, sycamore, beech, larch, Scotch and spruce firs. I may here mention that poplar trees, which were at one time of little value as timber, are now used to make railway brakes.

I may mention the following trees as suitable for hedge rows in mountain districts, viz., beech, laburnum (the two varieties). Black thorn is preferable to the white, and when they are kept in order, common gorse. These, when seen afar, look very well. And now for the last word. All this has been tried, and has succeeded.

### The Movement of Storms.

Prof. William Ferrel, of Washington, has gained and deserves high reputation at home and abroad as a student of meteorology. His constant endeavor is to bring it, as a science should be brought, to the tests of facts and mathematics. The essay which he has just delivered before the National Academy of Sciences will add to that reputation. This essay on the "Progressive Motions of Storms," is intended to show that the movement of great storms (across our continent, for instance,) is determined by the currents of our atmosphere—its upper currents especially. He presented in tabular form the results of his theoretical determinations as to the speed of atmospheric currents for different heights. By these currents neither the ordinary surface winds nor the winds which form part of great storms or cyclones are referred to, but the great easterly current which is mainly above the surface and extends far above the clouds. This current is chiefly due to the difference of heat between the equatorial regions, and consequently is greater in winter when that difference is greatest, as compared with summer, when it is least. The theory assumes that this current is swifter with increased heights from the earth, but varies with different latitudes. The figures of the increment are:

Latitude.	Per Mile of Height from Surface.	Winter.	Summer.
70	7.5	5.8	5.8
60	10.1	5.6	5.1
50	10.9	5.1	4.9
40	12.1	4.3	4.3
30	14.7	2.4	2.4
20	15.6		

The increment is to be added to easterly surface wind; but where, as in low latitudes, the surface wind (trade wind) is westerly, it should

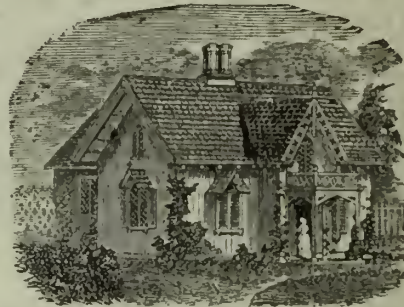
be subtracted. Thus for latitude 40 degrees the amount to be added to the prevailing easterly wind at the surface would be, for a light of five miles, in winter, 60½ miles per hour. In this great easterly current it is conceived that storms, cyclones, and the like are carried along though their specific winds may be blowing on the surface in an apparently contrary direction. The theory is partly corroborated by the calculation of the Rev. Clement Ley, of England, that the maximum speed of cirrus clouds having an altitude of four miles, is 120 miles per hour.

A theoretical explanation was also given for the observed circumstances that while the storms north of 40 degrees latitude go easterly, those south of that line go 30 degrees north of east. But Prof. Ferrel's chief object was to show that the progress of a storm most largely depends upon the general movement of the atmosphere; a movement increasing with altitude, and greater in summer than in winter.

FORMATION OF SULPHUR SPRINGS.—M. E. Plaugand found near the source of a mineral spring, strongly impregnated with sulphur, a number of fine conifers, which he washed carefully and left in a flagon of ordinary water. About eight days afterwards, wishing to re-examine them, he was struck with the strong sulphurous odor which escaped the water. He then instituted experiments, which led him to conclude that sulphurous mineral waters owe their formation to the reduction of diverse sulphates, under the influence of living bodies, which act as ferments.

STAR-TWINKLING AS A SIGN OF RAIN.—Humboldt observed that in tropical regions the approach of rain is often announced by the twinkling of stars near the zenith. Montigny observed the intensity of the twinkling for 230 evenings, and found that it increased if a storm or a barometric depression was approaching. When rain is foreboded the glimmer is especially strong.

## CENTRAL CALIFORNIA COLONY.



### BEWARE OF DRY SEASONS!

Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

### THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

### The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited.

Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

## CALIFORNIA



## MILITARY ACADEMY.

For circulars, address

Rev. DAVID McCURE, Principal,  
OAKLAND, CAL.

### MOUSTACHE PROTECTOR.

Will suit any Cup. Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as at Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.

### TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.



## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Württemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

## GREAT

## IMPROVEMENTS

ARE NOW

BEING INTRODUCED  
IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

## Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY &amp; JORDAN, Agents,

433 Montgomery St., S. F.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries.

THE HIGH SCHOOL CHOIR, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents), SHINING RIVER, (35 cents), GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON &amp; CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

**ROWELL & CHESMAN**  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.  
Publish a book on ADVERTISING, AND HOW  
AND WHERE TO DO IT, that every Advertiser  
should have before making contracts either with the  
papers or through Agents. It contains lists of papers,  
prices, circulations, and much other matter of value  
which will save time and money to those seeking in-  
formation about, or making contracts for Newspaper  
Advertising. Send address on postal card, and this  
book will be forwarded free of charge.

YOUR NAME PRINTED on Forty Mixed Cards for  
Ten Cents. STEVENS BROS., Northford, Conn.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

## Poultry.

I. P. LORD, RENO, NEVADA.

BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. State where you saw this.

**WHITE LEGHORNS.**  
Eggs for hatching from a pen of very choice imported Fowls, shipped at reduced prices. Also, a yard of California bred Leghorns, out of imported stock.  
Bone meal and ground oyster shells, for forcing egg production, for sale in any quantity. Address,  
C. P. STONE,  
Healdsburg, Cal.

## Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few sittings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

**LOOK!**  
ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.  
ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS &amp; MOORE, Prop's,

Stockton, Cal.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.

Get the best. Take the RURAL.

Superior Pianos for the  
People at Popular  
Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

The Brilliant and Durable

## GOLDEN PIANO

Which we now offer the readers of this paper

At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

## Prices of the Golden Piano:

The Usual Installment Plan Prices, and Cash Prices.

The Golden Piano, \$500 \$350  
(UPRIGHT—C.)

The Golden Piano, \$375 \$300  
(SQUARE—No. 1.)

The Golden Piano, \$500 \$350  
(SQUARE—No. 2.)

The Golden Piano, \$600 \$400  
(SQUARE—No. 3.)

The Golden Piano, \$800 \$450  
(SQUARE—No. 4.)

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.



## Large Fees for Lawyers

The St. Louis *Globe* says: "In the Dancer will case there are said to be 30 lawyers, and \$450,000 to fight over. This is only \$15,000 to each lawyer. The Bar Association should protest."

This sarcastic paragraph will be appreciated by nearly everybody except the lawyers themselves. It has become so much the custom to charge heavy fees in cases of any importance, that lawyers of very limited ability have the assurance to place their services at outrageous figures in every case where a large amount is involved. In contested will cases in particular the practice has become so notorious that people always expect to be mulcted of a large sum, and executors consider it necessary or expedient to take a good slice of the estate either for a compromise or to defend it. In either case the lawyers get the larger share, and the heirs are more or less at the mercy of the legal fraternity.

The principle, pretty well agreed upon among lawyers, that the fees should be in proportion to the value of the property involved, rather than to the extent or value of services rendered, is a very bad one, and calculated to bring disgrace upon the profession. In a recent prominent suit in this city, the witnesses for a lawyer who charged an exorbitant fee, all lawyers themselves, seemed to agree in the principle mentioned, although the community at large held a very different view of the subject. The idea that a man must have half or two-thirds of a large estate simply because he is agent for a client who claims it is preposterous. These circumstances have happened so frequently of late, however, that people are getting their eyes open to the abuse with a view to remedy it. People who employ lawyers in cases where large property is involved, will do well to have written agreements as to fees before anything is done, and refuse peremptorily to accede to any exorbitant demands, out of proportion to the services rendered.

In the legal profession of course considerable study and practice is necessary, and to be a good lawyer even the most brilliant intellect must have special training and extended practice; so that good lawyers expect good pay. Still this is no excuse for charging extortionate fees. People in other professions and trades also require special training and study, but the compensation in no other profession equals that expected, and often received, by the legal fraternity. The abuses in this direction, for a long time tolerated, call for speedy remedy, and if not corrected by the more far-seeing of the profession must be by the people themselves. It is hardly worth while for a man to work hard and accumulate wealth for certain persons, and have it distributed around at his death among a lot of lawyers who he never saw or heard of.

To some extent it is the fault of the people themselves that such heavy fees are paid, as when contesting a will, for instance, people are willing to pay pretty heavily to get even a small share, especially as such cases are frequently taken on a contingent fee—that is, they get nothing unless they win.

If persons who had disputes would submit to arbitration instead of going to law, they would be better off in nine cases out of ten. Get one, two or three fair-minded men to listen to the cause of grievance on both sides and let them decide. The only trouble about this is that those who lose are apt to want to go to law afterwards; but if a written agreement not to do so were drawn up in the first place this could be obviated.

At this moment there comes to mind an instance among many, of the truth of the foregoing concerning the advisability of friendly arbitration in all cases where this method can be applied. We know of a case at issue between two of our leading stock breeders. They had embarked in a partnership enterprise and during the years of its continuance there had been but little reckoning of accounts; as might be expected, when the time for final settlement came, there were many points and items of charge, concerning which both parties could not think alike. It was impossible for them to reconcile their differences. Instead of going to law they agreed to submit their different sides to the consideration of an arbitrator, and chose for their arbitrator a stock breeder who was familiar, from experience, with all the points of practice on which each of the disagreeing parties set different estimates. He was a man of recognized integrity and good judgment. He gave the case his careful study and submitted a report which will prove the basis of a settlement between the parties. If this case had been carried into the courts it would have called upon each of the contending parties to expend an amount of time and money which would have consumed more than the money involved in the dispute, and the decision would have been exceeding doubtful in point of justice, for the questions raised were such as only a stock breeder could form intelligent judgment on. Such cases as this assure us that the method of arbitration can be wisely used in many of the discords which will sometimes arise among even the fairest and most upright men.

"CRAZY HORSE" has surrendered to General Crook with 1,300 Indians, about 3,500 ponies and all the arms.

## Why Summer-Fallow Does Best in a Dry Year.

Most improvements in agriculture are condemned by some of those who try them. They fail of the object aimed at and do not stop to consider why they did so. Last year there were many items in the papers of this State to the effect that summer-fallowed land was proving no more productive than that which was plowed and put in during the winter. In fact, the yield seemed to be in favor of the latter in many cases. This season the reports are quite different; the summer-fallow is doing well and the winter-plowed is, in many parts of the State, a failure.

We believe the main causes of these differences to be as follows: The summer-fallow is generally sown before or soon after the first rains, so as to get the benefit of all the moisture that falls during the season, as well as that which is stored up in the ground from the year before. If the rain falls gently and in moderate quantities, so as not to pack the soil, the best results are obtained. When, however, beating storms are frequent, soils which contain much clay, as our adobes, have a crust formed on them which smothers vegetation during winter, and when hot weather comes, cracks and allows the moisture to escape rapidly. The remedy for this unfortunate result is, of course, to break the crust when the land is in proper order to crumble finely under the harrow. When grain is well rooted, very little of it is torn out by a light harrowing, and the effect of the operation is similar to that of hoeing on a corn crop. A multitude of weeds will also be destroyed and a cleaner crop harvested.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

**WATER FILTER.**—Wm. S. Snook, Oakland. The object of this invention is to provide a cheap filter for attachment to water pipes through which water is conducted under pressure, so that the water can be purified and cleansed for drinking and other purposes. By the means employed the inventor is able to use an open-top tank as a filtering vessel. Inside the tank and a short distance above its bottom is secured a horizontal perforated partition upon which is placed the usual filtering substances. Above the filtering material is placed another partition so that it can be cleaned when desired. The water is brought into the tank under pressure by means of a pipe which leads under the partition and the water then rises up through the filtering material and is cleansed in its passage. A waste pipe is arranged so that when it is desired to clean the filter the water may be turned in above the filtering substances, and the impurities will be carried off through the waste pipe. This filter can be cheaply constructed and easily managed so that it is of great value for household purposes.

**FRUIT DRIER.**—Jas. M. Keeler. This is an improvement upon the American Fruit Drier, which adapts it for making raisins from grapes, and also renders it more convenient and useful as an ordinary fruit drier. We have described this machine previously, and will probably present an illustration of it shortly.

**ADULTERATION OF COTTON GOODS.**—The *Poly. Zeitung* complains of the adulteration of shirtings and other cotton goods sent from England. It appears that the raw material is given to the weavers to weave into fabrics which are to have the same aggregate weight as the raw material supplied. These weavers greatly augment their earnings by being able to add from 15% to 45% to its original weight by means of the finishing stuffs employed. This adulteration is easily detected by soaking the fabric in water, which dissolves the finishing stuff. The Chinese first discovered the imposition, and will now only purchase washed fabric, i. e., according to "gewaschenes gewicht." The American and German shirtings are quoted as losing from 5% to 10%, and are therefore much preferred to the English material.

**TESTING PETROLEUM.**—In a recent lecture in regard to testing safe and dangerous oil, Dr. Chandler showed some interesting experiments. Some oil was placed in an open tester and gradually heated on a water bath with a thermometer. It was found to flash, or give off combustible vapors, at about 110° Fahr.; and it burned at 118°, being what is called very safe oil. He then placed some of this same oil in a closed vessel resembling a metal lamp, but provided with a cork instead of the common head or burner, and having electric wires attached. On heating the oil to 85°, and sending a spark through the vapors, an explosion took place which blew out the cork with a loud report, showing that oil which has been considered safe gives out explosive vapor at ordinary summer heat.

It is said the fuchsia in its native country, Chile, runs into varieties as freely as blackberries do here—so much so that it is extremely difficult to decide what is a species and what a variety.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical houses, Menagerie, Seal Ponds and Skating rink.

## General News Items.

ADMIRAL POPOFF will take command of the Russian armament in the Black sea.

TRANSVAAL has been annexed to the British empire.

At a recent meeting of American glass manufacturers, prices were advanced five per cent.

ONLY about half of the canneries on the Lower Columbia are in operation, owing to the light run of salmon. The warm weather will soon cause a rise in the river, when the fish will commence running in great numbers.

THE financial earnings of the Central Pacific railroad company for the first four months of this year, amount to \$4,734,600. This is an increase of \$111,000 over the corresponding months of last year.

A SPECIAL to the *Union* from Tucson, Arizona, says: Indian agent Clum left Hot Springs, May 1st, with 423 Indians for San Carlos. The military authorities of New Mexico and Clum, agree that a complete removal has been made.

THE Archbishop of Quito was poisoned on Good Friday, at Panama, while saying mass, by means of strychnine introduced into the wine in the ceremony. There was great excitement and indignation over the sacrilege. The perpetrators have not been discovered.

EX-PRESIDENT GRANT, on his arrival in London, will have a special audience with Queen Victoria and be the guest of Disraeli and other eminent men. It is said that in deference to the high office he has filled, the Queen will pay him a visit.

THE Postoffice Department has contracted with Clarence Van Tassel, of Dakota, for a mail service from Fort Pierre, on the Missouri river, to Deadwood, 180 miles, tri-weekly, until September 30th, at the rate of \$9,919 per annum. It is established in compliance with a general demand, to give the people of the Black hills country direct communication with Yankton.

MEXICAN border troubles have been the subject of discussion at a Cabinet meeting this week. It was agreed that organized cattle stealing and other depredations upon property in Texas, on American citizens, must be effectually stopped, without further delay or inattention on the part of Mexican authorities. Correspondence with the Mexican government will be immediately reopened by the State Department, and unless proper steps be promptly taken by Mexico to prevent further incursions upon our territory by bodies of her citizens, our military forces, under General Ord, will probably be authorized to cross the Rio Grande to pursue and capture the marauders.

## White House Whitewash.

The *American Manufacturer* publishes the recipe for the whitewash used on the east end of the Presidential mansion—the White House: Take one-half bushel of nice unslacked lime, slack it with boiling water; cover it during the process to keep in the steam. Strain the liquor through a fine sieve or strainer, and add to it a peck of salt, previously well dissolved in warm water; three pounds of ground rice, boiled to a thin paste; one-half pound of powdered Spanish whiting, and one pound of clean glue, which has been previously dissolved by soaking it well, and then hang it over a slow fire in a small kettle within a larger one filled with water. Add five gallons of hot water to the mixture, stir it well, and let it stand a few days covered from dust. It should be put on hot, and for this purpose it can be kept in a kettle on a portable furnace. It is said that about a pint of this mixture will cover a square yard upon the outside of a house, if properly applied. Fine or coarse brushes may be used, according to the neatness of the job required. It answers as well as oil paint for wood, brick, or stone, and is cheaper. It retains its brilliancy for many years. There is nothing of the kind that will compare with it, either for inside or outside walls. Buildings covered with it will take a much longer time to burn than if they were painted with oil paint. Coloring matter may be put in and made of any shade desired. Spanish brown will make reddish pink when stirred in, more or less deep according to quantity. A delicate tinge of this is very pretty for inside walls. Finely pulverized common clay, well mixed with Spanish brown, makes a reddish stone color; yellow ochre stirred in makes yellow wash, but chrome goes further, and makes a color generally esteemed prettier. It is difficult to make rules, because tastes are different; it would be best to try experiments on a shingle and let it dry. Green must not be mixed with lime; it destroys the color, and the color has an effect on the whitewash which makes it crack and peel.

**PERSONAL.**—Wm. J. Lawrie (or his alias). Description—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill., want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

## Luxury on the Rail.

## The Difference.

We have been frequently asked: "What is the difference between a railroad dining car and a Pullman Hotel car?" That there is a vast difference is well known by those who have had occasion to use either; but the untraveled public are not fully advised as to the points of difference. The old-fashioned railroad eatinghouse is, alas! too well known; its peculiar, hastily-caten meals have been partaken of by too many thousands to be forgotten. The dining car, then, is this well-known eating-house placed on wheels, attached to the train at the usual meal hours, and hauled along for 30, 40 or 60 miles, until the meal has been served, when it is set off on a side-track, and is by the next train hauled back to its starting point, and so it runs a few miles for each meal. To get meals in this car the passenger has to work his way through the train while it is under full motion—pass from car to car, running the risks of falling between the platforms, and finally finding the car at the rear of the train. Then comes the meal, which must be hurried through with to give chance for other hungry passengers to take your place, and you must force your way back to your seat, and again run the risks of your platform passage while the train is at full speed. In such cars you pay 75 cents for each meal, even if you take or need only a cup of coffee and a cracker. Bear in mind, in no case do these dining cars accompany the train from starting point to destination. They are always "cut off" and taken on as we have described. With the Pullman Hotel car the case is different in every respect. These cars are 60 to 66 feet long, have 10 wheels under each, are built strong, so as to insure steady, quiet running, without the usual unpleasant side motion. Each Hotel car contains, in the order named, the following compartments:

1st. A cosy, neat and clean little kitchen, fitted up with a range, an ice and meat box, rows of shelves covered with bright silver and glass ware, and all the appliances needed for preparing a sumptuous meal.

2d. A compact china and glass closet, in which is kept the table ware and table linen, cutlery, etc.

3d. A passage way, cutting off the kitchen and china closet from the rest of the car, and forming an air chamber to prevent the smell of the cooking victuals from reaching the saloon portion of the car.

4th. The grand saloon. This is fitted up with 12, 14 or 16 sections, with space for tables between each, and in these the meals are served. You, while on this car, own the space you occupy as much as you do your room at home, and no one can hurry you while at meals, nor are you forced to give it up to allow any other person to occupy it. At night, as if by magic, this saloon is changed into a boudoir, and here your couch is prepared, and here you rest yourself isolated, and as separated from your fellow travelers as you would be in your own bed-chamber.

5th. An elegant drawing-room, with room for six or eight persons. This is found alone in these magnificent cars. In it you and your family or party of friends may be as secluded as you please, or you can slide open the end and have the company of those in the grand saloon.

6th. Charming lavatories are partitioned off, and arranged in two distinct compartments for the separate use of ladies and gentlemen. These lavatories are supplied with pure water, clean towels, combs, brushes, and, in fact, everything the most dainty may desire for the perfect performance of an elaborate toilet.

7th. Then follow conductor's and porters' rooms, linen closets, etc.

It will thus be seen that this car is, as its name implies, a perfect modern hotel, with all of its appliances and comforts complete. This car is taken on at the commencement of the journey, and is part of the train to its destination. In it you get your sleeping compartments and your meal accommodations, while neither encroach upon the other. Envious dining-car employees, who are paid to decry this form of hotel car, cannot, with anything like truth on their side, give any valid or conclusive reasons for preferring the dining car because they are paid to do so. These hotel cars have run from New York to San Francisco and back with the Emperor Dom Pedro—with Jarrett & Palmer's party, that traveled at almost lightning speed—with many a party of California bonanza kings; and all join in pledging their honor that the cars are incomparable.

Two lines of these celebrated cars run between New York and Chicago, and one line only between Chicago and Omaha. It may be needless to say that this last-named line runs over the steel track of the Chicago and Northwestern Railway. That these cars are attracting a large share of the California travel, both ways, might easily be conjectured. Any road deserves to be patronized that is enterprising enough to give the travelling public such facilities as are freely tendered by the Chicago and Northwestern Railway on its California line.

We have neglected to say that, in these hotel cars, the meals are *a la carte*—you pay for what you get, and nothing more; and this at very reasonable rates.—*The Tribune*, April 7th, '77.

## AMERICAN WATCHES ABROAD.

The London correspondent of the *New York Times* writes: "There is a significant paragraph in the *Echo*, under the heading of 'The Labor Market.' It bemoans the shock which the watch trade has received by the continued large importation of American chronometers. The London watchmakers are described as getting alarmed, and quite a panic has seized the Swiss watch-makers, who have for years supplied the English market with cheap goods."

It is the advantages of such new watch manufacturers as that of the New York Watch Company, of Springfield, Mass., in style, finish and cost, that brings about the above mentioned state of affairs. In less time than we can tell it, you can see the practical reasons for all this by calling on Dewey & Jordan, No. 433 Montgomery street, San Francisco, who have a large and splendid assortment of the New York Springfield watches.

## Our Poultry Department.

E. H. Cheny writes from Bodoga, Sonoma county, as follows: "Your paper is worth its subscription price yearly to any farmer who keeps two dozen chickens, to get Mr. Eyre's opinion upon the value of the different breeds of fowls, the proper treatment for them, the diseases to which they are liable and the remedies. I became acquainted with Mr. Eyre through your columns, and I have no cause to regret it, for in my dealings with him I find everything as represented, and without any disparagement for others, I can recommend him as one in whom confidence will not be displaced."

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.



## S. F. MARKET REPORT.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 9th, 1877.

There is quite an active spirit manifested in most lines of trade, and prices are being pushed up and down by changing conditions, which seem to rule from day to day. In nearly all lines of country produce quotations are now liable to considerable fluctuation, and the wise producer will scan our Market Review and other sources of information very closely, in order that he may not be led into transactions which will bring him nothing but regret.

During the week the Wheat market has reached the bottom of the downward course which set in just a week ago and started again upward, so that our summary for the week of the Liverpool market ends just as it did last Wednesday. The following will show:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	12s 10d@13s	3d		12s 10d@13s	6d	
Friday.....	12s 6d@13s			12s 7d@13s	4d	
Saturday.....	12s 10d@13s	2d		12s —@13s	6d	
Monday.....	13s 2d@13s	6d		13s 6d@14s	—	
Tuesday.....	13s 2d@13s	6d		13s 6d@14s	—	
Wednesday.....	13s 2d@13s	6d		13s 6d@14s	—	

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875.....	8s 11d@9s	2d		9s 10d@10s	2d	
1876.....	9s 6d@9s	9d		9s 10d@10s	2d	
1877.....	13s 2d@13s	6d		13s 6d@14s	—	

## The Foreign Review.

LONDON, May 8th.—The *Mark Lane Express*, in its weekly review of the British Corn trade, says: The weather was cold throughout the greater part of the past week and little rain has fallen. Spring sowing, except in a very few backward districts, is finished. The cold wind has crusted the surface of the soil in many localities, and growing crops and vegetation generally have made very little progress. The Wheat plant has somewhat improved, but unless spring weather shortly sets in, the chance of ultimate mischief to the crops will considerably increase. In Scotland the hopes of an early grass crop have been sorely disappointed. There has been some reaction in the prices of Wheat and Maize both here and at Liverpool; but, considering the extent and rapidity of the previous advance, this cannot be a surprise, and it is not small proof of the inherent strength of the trade that the decline is only about one or two shillings per quarter on both, with an improving tendency. Imports of foreign Wheat into London have been moderate, while English Wheat has been marketed in most insignificant quantities. Fine samples, home grown, have realized very high prices—74 shillings for White and 70 shillings for Red. The quantity of English Wheat in farmers' hands, as well as granary stock in principal ports, seems extremely small. The condition of the trade would indeed be critical if there should be a chance of any limitation of our supplies from Northern Russian ports, or a risk of any interference with the Indian trade, which must for the next two or three months be our main reliance. Maize on the spot has given way about two shillings per quarter, but the amount of business in high-mixed American on passage and for shipment has during the last fortnight been astonishing. Barley has ruled very steady, the advance of eight shillings, which has taken place on Feeding Shorts since this day month, being mainly attributable to the fact that the supplies are chiefly drawn from the seat of war.

## Freights and Charters.

The *Commercial News* says: We have had a very dull freight market during the past week, which calls for little comment. Wheat freights are practically out of the market, and no quotations can be given. One vessel has been taken up for Salmon at £2, and it is probable more tonnage will be required either from this port or Oregon for this business. Outside business remains stagnant. The disengaged list does not increase very rapidly, but the engagements hardly keep pace with the arrivals. At the close we have 935 tons in port under engagement for Wheat, 10,881 tons miscellaneous and 31,767 tons disengaged. The only charter for Wheat is the following: Br bark Cape Finisterre, 882 tons, Wheat and Salmon to Liverpool, £2.

## Eastern Grain Markets.

NEW YORK, May 6th.—The excitement in the grain market has measurably subsided, and prices are a trifle lower, but they are still too high to permit active exportation; as a consequence, trade in Wheat and Flour during the week has been light, as it has been in most other kinds of produce, causing a break in freights to Europe to 6d per bushel by steam and 6s per quarter for orders. Wheat is 55¢ higher than a month ago; but it does not find buyers at the enhanced prices, most of the small shipments going forward being on owners' accounts. It is found about as difficult to sell Wheat above the markets which regulate prices as it is to make water run up hill, and sooner or later the commodity must find its level. The statistical position of this cereal being conceded, the strong holders are disposed to take things easy. The supply is light, and they have abundant means for carrying it. If all the reports, including those of the Bureau of Statistics, are to be credited, the stock of Wheat in this country at the present time is not above half of the usual average at this period of the year, and as supplies from the Black sea are cut off, there would seem to be a sound basis for the late advance, especially as the problem of the possible extent of the grasshopper devastations in the Northwest is a serious one.

Corn, of which there is an ample supply in the country, opened lower, but reacted and closed a little higher, at 68¢@75c, the latter price being for prime old. Rye has declined slightly; while Oats are higher. Shipping Flour is scarce and firm at \$7.75@8, and up to \$10@13 for the best brands for home use.

CHICAGO, May 6th.—The excitement of the foregoing week has not been kept up during this on 'Change; but the business transacted has been unusually large, and the interest far greater than ordinary, among all classes of operators. As noticed last week, the speculators have shifted from Wheat to Corn, and they have plied their business right merrily in the latter cereal all the week. The fluctuations of Corn have not been very severe, but a large aggregate of business has been done. June Wheat sold on Monday at \$1.65@1.75; Tuesday, \$1.57@1.63; Wednesday, \$1.52@1.61; Thursday, \$1.58@1.64; Friday, \$1.63@1.75; Saturday, \$1.74@1.70. Corn sold on Monday at 58¢@60¢; Tuesday, 52¢@57¢; Wednesday, 51¢@53¢; Thursday, 52¢@53¢; Friday, 54¢@56¢; Saturday, 57¢@58¢. Receipts for the week: Wheat, 47,000; Corn, 1,030,000; Oats, 259,000. Shipments were: Wheat, 421,000; Corn, 2,041,000; Oats, 421,000. Receipts in the same time last year were: Wheat, 228,000; Corn, 804,000; Oats, 349,000. Shipments were: Wheat, 791,000; Corn, 7,180,000; Oats, 268,000. Wheat closes at \$1.73 for cash; Corn 56¢; Oats, 44¢.

Provisions have fluctuated considerably, but the general tendency has been to lower prices, and the week closes with rates nearly a dollar lower than at the close last week, Pork being to-day 15¢, and Lard 9¢. No failures

of any consequence have been reported, and all who were in a shaky condition during the great panics and excitements, have apparently tied over their financial troubles. The developments of the next two months are, however, anxiously awaited.

## The Oregon Crops.

PORTLAND (Oregon), May 8th.—For several days past light showers have prevailed all over the State. Prior to the rain, the ground in some sections of the State, particularly the southern and western, was quite dry, and it was feared that the extreme warm weather would impair the prospects of the fruit and grain crops. The present rain is very great benefit to the young crops just sown, in fact, the value to the State can scarcely be estimated. The crops are looking well, and reports from all portions of the State are most encouraging.

## Eastern Wool Markets.

NEW YORK, May 6th.—The result of the second auction sale of California Wool at San Francisco, was hailed here by some dealers with some expressions of satisfaction, as that method of disposing of Wool was considered decidedly against their interests. From the expressions made use of, it was a foregone conclusion that the sale would result in failure. The market has ruled dull, though there was an improvement during the past few days. New spring California continues to arrive in fair quantities, but its condition is still undesirable, and to effect a sale low prices as a rule have to be accepted. Fall is dull, with prices wholly nominal. Shearing is now in progress throughout Texas, and some few parcels have been received here, though no sales are as yet reported. Donkoi has further advanced a trifle, or say to 33¢@36c, gold, with sales of 5,000 bales within that range.

Sales for week: 65,000 lbs new spring California, at 20¢ 25¢; 35,000 lbs fall do, 16¢@17¢; 35,000 lbs western Texas, 17¢@19¢; 1,000 lbs No. 2 Oregon delaine, 32¢; 2,000 lbs low Louisiana, 22¢; 40,000 lbs X Ohio, 36¢; and 96,000 lbs fall California, 75,000 lbs pulled do, 14,000 lbs western Texas, 16 bags Canada lambs pulled, 45¢ do No. 1 do, 4 do, 5 do super do, 53,000 lbs Pennsylvania State and Michigan fleece, 10,000 lbs Connecticut, and 3,000 lbs unwashed combed and delaine, on private terms.

Boston, May 6th.—Wool has been steadily the past week. Prices were well sustained, as stocks of all kinds are comparatively small. Transactions of the week were 1,423,000 pounds, including 450,000 pounds of Ohio and Pennsylvania, at 40¢@41¢ for medium and X Ohio, and 46¢ for XX. A lot of 29,000 pounds very choice XXX New York held at 47¢, but good average does not bring over 35¢@37¢. Sixty-five thousand pounds New York and Vermont sold at 35¢@36¢. Some 75,000 pounds Michigan, Wisconsin and New Hampshire sold at 36¢@37¢. This is a fair range for good average lots. Pulled is in fair demand. The principal sales of super and X have been in the range of 35¢@40¢, with sales of choice Eastern and Maine super at 42¢@45¢, down to 30¢ for low Western. Combed and delaine is scarce and little has been done, and quotations are almost entirely nominal. In combeds and pulled, sales have been 4,000 lbs at from 45¢@48¢, the latter for fine. New California continues to arrive freely. The stock of fall is considerably reduced. Sales of this description have been 588,500 (?) lbs at from 15¢@25¢, mostly at from 15¢@18¢. In new spring sales have been 27,000 lbs at from 21¢@22¢ for good and choice lots of Southern up to 30¢ for choice Northern, and latter price an extreme quotation for most desirable lots of Northern.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. April 18.	WEEK. April 25.	WEEK. May 2.	WEEK. May 9.
Flour, quarter sacks..	31,805	37,987	56,251	36,163
Wheat, centals.....	96,465	29,139	23,137	38,493
Barley, centals.....	10,225	6,918	12,783	10,156
Beans, sacks.....	450	350	483	1,013
Corn, centals.....	757	2,189	1,919	2,757
Oats, centals.....	6,492	5,557	3,775	5,091
Potatoes, sacks.....	11,862	9,318	13,180	12,745
Onions, sacks.....	894	483	1,105	353
Wool, bales.....	8,957	8,363	6,863	8,610
Hops, bales.....	—	—	9	5
Hay, bales.....	881	1,387	1,329	1,150

Baggs—There is no change whatever in Bag prices, and there is little doing. One of the daily papers noted the "sale of 800,000 Wheat Bags at private terms," but we learn that this was not a sale at all but merely a transfer, made for the purpose of getting the property in other hands.

Beans—Beans continue the upward movement and are now higher than they have been for the last 12 months. Full prices are given in our tables.

Barley—Barley prices have not changed. The market has been quiet and some days shows signs of weakness. We note sales for the week as follows: 1,600 sks choice Bay Brewing, \$1.95; 400 do choice Bay Feed, \$1.82; 200 do Coast do, \$1.77; 2,200 sks Coast Feed, \$1.80; 600 sks Coast Feed, from wharf, \$1.77; 100 sks good Feed, \$1.80.

Corn—Corn has sold at last week's prices. We note transactions: 500 sks large Yellow, in two lots, \$2; 300 sks large Yellow, \$2; 140 sks large Yellow, \$1.97; 80 sks mixed White and Yellow, \$1.95; 300 sks large Yellow, \$2 per ctl.

Dairy Produce—There have been large receipts of fresh Butter and the price is reported tending lower than a week ago. In our quotations we give nothing higher than 30c. Last week there was a typographical error in our Butter quotations, which made Point Reyes 5¢@7¢ higher than other brands. The quotations for choice should have been 25¢@30¢; Point Reyes and other fancy brands, 30¢@32¢. Cheese is unchanged.

Eggs—Eggs are weaker and a point lower. There have been large receipts from Oregon, one steamer bringing 6,000 dozen.

Feed—The millers have put Bran down to \$25 per ton. Other Feed prices are unchanged. We note the following sales of Hay: 42 tons Tame Oat and Wheat, \$17.50; 25 do coarse Wheat, \$18.50; 30 do good Wheat, \$22.50; 8 do choice Wheat, \$24.50; 38 tons poor stock, \$15.50; 8 do good Wild Oat, \$20; 25 do fair Wheat, \$21.50; 40 tons new Alfalfa, \$14.50; 45 do good Wheat and Wild Oat, \$21; 10 do choice Wheat, \$24; a cargo of Wild Oat at \$20, and two cargoes Wheat and Wild Oat mixed, at \$21@22 per ton; 13 tons ordinary stock, \$15; 44 do good Wheat and Wild Oat, \$20; 44 do good Wheat, \$21; 60 tons, two cargoes, fair Wild Oat, \$17.

Fruit—There are few changes in Fruit prices. Cherries and Currants are becoming more abundant and lower. Strawberries range a little higher than last week. The week has brought several novelties. The first ripe Apricots of the season were received from L. W. Buck, of Pleasant Valley, Solano county, and brought 30¢ @ lb. A consignment of Aughinbaugh Blackberries came to hand from C. Gould, of Newcastle, Placer county. A small lot of Blackberries, the first this season, was received from L. W. Buck, of Pleasant Valley, Solano county. The Australian steamer brought 1,935 bunches Bananas from Honolulu.

Hops—Hops are unchanged in price. The range reaches to 20c for choice lots to local brewers, and 15¢@16c for export. Some lots are held in the city at 25c, the limit placed upon them by the grower. Emmet Wells reports the New York market for the week ending April 27th, as follows:

There are no new features to report. The receipts are light, and shipments to London only about 400 bales for the week. Prices remain notably unchanged. Brewers continue to buy sparingly. Stocks here are considerably reduced, but, as it is generally known that there are plenty of Hops back in the country, brewers and dealers do not worry. Our London letter this week is a little more encouraging for shippers, but it is believed that nothing short of an absolute failure of the coming crop, either in England and Germany, will rid us of our surplus or help us on our new crop. Hop culture is largely overdone in this country, and without a foreign outlet growers must expect unremunerative prices. Quotations: New Yorks, choice, 15¢@17¢; New Yorks, common to prime, 10¢@13¢; Eastern, 10¢@13¢; Wisconsin, 8¢@12¢; Yearlings, 6¢@10¢; Olds, all growth, 4¢@6¢; Californians, nominal, 12¢@17¢; Oregon, nominal, 12¢@17¢.

Oats—Oats are unchanged. We note sales: 300 sks ordinary Feed, \$2.05; 50 do good Surprise, \$2.27; 100 sks common Feed, \$2.05; 250 do choice. Black, \$2.20; 240 sks fair Feed, \$2.05; 250 sks Bay Feed, \$2.30; 100 do do, \$2.25; 250 sks common, \$2.05.

Onions—Onions have declined considerably during the week, as may be seen in our quotations. There is, however, an occasional sale of new Onions at \$3 per ctl.

Potatoes—Potatoes are a shade lower than last week. New Potatoes are now becoming very abundant and the price falls.

Poultry and Game—The market is altogether without notable change.

Provisions—There are no changes reported either in Fresh or Cured Meats from the rates quoted last week. In Cured Meats there is still a firm feeling and a tendency among dealers to advance prices, but customers do not as yet accede the advance.

Rye—We note a sale of 100 sks good at \$1.75; choice is rated at \$2.

Vegetables—Old Garlic is now almost unsalable; new has sold at 10c. Peas and Rhubarb are a little higher than last week, and Summer Squash is becoming abundant and low. Tomatoes, now in from Yacaville, obtain 15c, while Los Angeles have dropped to 8¢@10c.

Wheat—Transactions in Wheat have been in small amount and within last week's range. We note sales: 2,000 cts Milling, from wharf, \$3.05; 400 do, \$3; 1,800 sks choice Milling, in two lots, \$2.90; 2,000 sks choice Milling, \$3.05; 5,700 do do, in two lots, \$3; 200 sks choice Milling \$3; 200 sks superfine Milling, \$2.90.

Wool—A better figure is now obtainable for choice bright Northern Wools, and we advance our quotations for this description; other kinds are unchanged. We note sales of 250,000 lbs at 13¢@26¢; 400,000 lbs at 13¢@26¢; 11, 629 lbs at 27¢; 7,530 lbs at 26¢; 4,000 lbs at 24¢; 4,000 lbs at 19¢; 5,500 lbs at 16¢; 10,000 lbs at 25c.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., May 9, 1877.	
Plums.....	3 @ 4
Pitted.....	12 @ 13
Prunes.....	12 @ 17
Raisins, Cal. hx.....	1 50 @ 2 50
Crab, lb.....	3 @ 5
Cherries, hbl.....	18 @ 40
do, Red, lb.....	8 @ 20
Cocoanuts, 100.....	5 @ 6
Currants.....	10 @ 15
Gooseberries.....	8 @ 10
Limes, Mex.....	8 @ 12
Cal.....	10 @ 15
Lemons, Cal M.....	10 @ 11
Sticky, hx.....	10 @ 11
Oranges, Mex.....	— @ —
M.....	20 @ 25
Tahiti.....	20 @ 25
Cal.....	15 @ 30
Pears, bx.....	1 @ 2
Pineapples, doz.....	6 @ 8
Raspberries.....	35 @ 40
Strawberries, chst.....	4 @ 7
Apples, lb.....	4 @ 6
Apricots.....	10 @ 12
Citron.....	28 @ 30
Figs, Black.....	5 @ 7
White.....	7 @ 10
Peaches.....	7 @ 10
Pears.....	7 @ 8

## LUMBER.

WEDNESDAY M., May 9, 1877.

CARGO PRICES OF PUGET SOUND PINE.	
REDWOOD.	
Rough, M.....	15 @ 20
Refuse.....	14 @ 20
Clear.....	30 @ 30
Clear Refuse.....	20 @ 20
Rustic.....	35 @ 35
Refuse.....	22 @ 22
Surfaced.....	30 @ 30
Refuse.....	20 @ 20
Flooring.....	18 @ 18
Beaded Flooring.....	30 @ 30
Refuse.....	20 @ 20
Half-inch Siding.....	20 @ 20
Refuse.....	16 @ 16
Half-inch Surfaced.....	25 @ 25
Refuse.....	20 @ 20
Pickets, Rough.....	1 @ 1
Rough, Pointed.....	13 @ 13
Fancy, Pointed.....	25 @ 25
Shingles.....	35 @ 35

## RETAIL GROCERIES, ETC.

WEDNESDAY M., May 9, 1877.	
Butter, California.....	35 @ 40
Choice, lb.....	18 @ 30
Cheese.....	25 @ 30
Eastern.....	18 @ 30
Lard, Cal.....	20 @ 25
Eastern.....	20 @ 25
Flour, ex fam, bbl.....	60 @ 60
Corn Meal, lb.....	2 @ 3
Sugar, wh. crsld.....	12 @ 13
Light Brown.....	8 @ 9
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Admte.....	15 @ 25
Soap, Cal.....	7 @ 10

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; CO.]

SAN FRANCISCO, May 9, 3 P. M.	
LEGAL TENDERS IN S. F., 11 A. M., 94¢@95c. SILVER, 56¢@57c.	
Gold in New York, 107.	
GOLD BARS, 830¢@300. SILVER BARS, 10¢@15¢ cent. dls.	
EXCHANGE ON NEW YORK, 50¢@55¢-100¢ cent. premium for gold; on London bankers, 49¢; Commercial, 49¢; Paris, five francs @ dollar; Mexican dollars, 94¢@95c.	
LONDON CONSOLS, 96¢; Bonds, 102.	
QUICKSILVER IN S. F., by the flask, \$ lb, 41¢@42c.	

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., May 9, 1877.

BEANS.		Strained		6 @ 2	
Bayo, ctl.	5 00 @ 25				
Butter.	2 00 @ 1				
California.	15 @ 20				
Red.	4 00 @ 1				
Pink.	4 50 @ 40				
Sm'l White.	2 75 @ 30				
Lima.	3 25 @ —				
BROOM CORN.					
Common, lb.	2 @ 24				
Choice.	3 @ 4				
CHICORY.					
California.	4 @ 41				
German.	61 @ 7				
COTTON.					
Cotton, lb.	15 @ 18				
DAIRY PRODUCE, ETC.					
BUTTER.					
Cal. Fresh Roll, lb.	25 @ 30				
Point Reyes.	30 @ —				
Pickle Roll, Old.	22 @ 25				
do, New.	27 @ 30				
Firkin.	25 @ 30				
Western Reserve.	16 @ 20				
New York.	— @ —				
CHEESE.					
Cheese, Cal., lb.	12 @ 15				
Old.	8 @ 12				
Eastern.	— @ —				
N. Y. State.	— @ —				
EGGS.					
Cal. fresh, doz.	22 @ 23				
Ducks.	19 @ 20				
Oregon.	17 @ 18				
Eastern.	19 @ 20				
FEED.					
Bran, ton.	25 00 @ —				
Corn Meal.	40 00 @ 46 50				
Hay.	15 00 @ 25 00				
Middlings.	37 50 @ —				
Oil Cake Meal.	40 00 @ —				
Straw, hale.	75 @ —				
FLOUR.					
Extra, hhl.	9 25 @ 9 75				
Superfine.	7 00 @ 7 75				
Graham.	8 00 @ 8 50				
FRESH MEAT.					
Beef, 1st qual, lb	6 @ 6				
Second.	5 @ 5				
Third.	2 @ 3				
Mutton.	5 @ 4				
Spring Lamb.	6 @ 6				
Pork, undressed.	4 @ 6				
Dressed.	7 @ 8				
Veal.	7 @ 8				
Milk Calves.	6 @ 8				
GRAIN, ETC.					
Barley, feed, ctl.	1 80 @ 1 85				
Brewing.	1 90 @ 1 95				
Chevalier.	1 90 @ 1 95				
Buckwheat.	1 75 @ —				
Corn, White.	1 90 @ 2 05				
Yellow.	1 90 @ 2 05				
Small Round.	2 00 @ 2 10				
Oats.	1 70 @ 2 20				
Milling.	2 25 @ 2 40				
Rye.	2 00 @ 2 25				
Wheat, shipping.	3 00 @ 3 05				
Milling.	3 05 @ 3 15				
HIDES.					
Hides, dry.	18 @ 18				
Wet salted.	7 1/2 @ 9				
HONEY, ETC.					
Beeswax, lb.	25 @ 27 1/2				
Honey in comb.	13 @ 13				
Do. No. 1.	10 @ 11 1/2				
Dark.	8 @ 9				
HOPS.					
California.	15 @ 20				
W. Vts.-Jobbing.	7 @ 10				
Almonds, hd sh l.	7 @ —				
Soft sh l.	15 @ 17				
Brazil.	14 @ 16				
Pecans.	17 @ 18				
Peanuts.	4 @ 6				
Filberts.	16 @ 16				
ONIONS.					
Union City, ctl.	1 75 @ 2 00				
Stockton.	1 75 @ 2 00				
Oregon.	2 00 @ 2 2				
POTATOES.					
Petaluma, ctl.	60 @ 70				
Humboldt.	75 @ 100				
Curley Cove.	— @ —				
Early Rose, new.	1 00 @ 1 50				
Sweet.	1 00 @ 1 00				
POULTRY & GAME.					
Hens, doz.	6 00 @ 7 50				
Ducks.	6 00 @ 10 00				
Broilers.	6 00 @ 6 00				
Ducks, tame.	6 00 @ 7 00				
Geese, pair.	1 25 @ 2 50				
Wild Gray.	1 50 @ 2 00				
White.	75 @ 100				
Turkeys, Live, lb.	18 @ 20				
Wild.	15 @ 20				
Snipe, Eng.	2 50 @ —				
do, Common.	1 00 @ —				
Rabbits.	1 00 @ 25				
Hare.	1 50 @ 2 50				
PROVISIONS.					
Cal. Ham, L't, lb.	13 @ 14 1/2				
Medium.	13 @ 13 1/2				
Heavy.	13 @ —				
Lard.	12 @ —				
Cal. Smoked Beef.	9 1/2 @ 10				
Eastern.	— @ —				
Eastern Shoulders.	— @ —				
Ham, Cal.	13 @ 13 1/2				
Armour.	14 1/2 @ 15				
Dupee's.	15 @ 15 1/2				
Davis Bros'.	15 @ 15 1/2				
Magnolia.	15 1/2 @ —				
SEEDS.					
Alfalfa.	27 1/2 @ 30				
Canary.	10 @ 12 1/2				
Clover, Red.	25 @ —				
White.	50 @ 55				
Cotton.	6 @ 10				
Flaxseed.	3 1/2 @ —				
Hemp.	5 @ —				
Italian Ryegrass.	35 @ —				
Perennial.	15 @ —				
Millet.	10 @ 12				
Mustard, White.	10 @ —				
Brown.	3 1/2 @ 4				
Rape.	3 @ 4				
Ky. Blue Grass.	30 @ —				
Italian Ryegrass.	35 @ —				
Sweet V Grass.	75 @ —				
Orchard.	30 @ 35				
Red Top.	25 @ —				
Hungarian.	8 @ 12				
Lawn.	50 @ —				
Mezquite.	20 @ 25				
Timothy.	10 @ 10 1/2				
TALLOW.					
Cruel, lb.	6 @ 6 1/2				
Refined.	7 1/2 @ 8				
WOOL, ETC.					
SPRING.					
Short Free dust.	13 @ 15				
Good F.	15 @ 18				
Choice Northern.	22 @ 26				
Burry.	12 @ 16				



## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, ETC.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND BRIDGED CATALOGUE - 128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

Address  
SPANISH CHUFA L. L. BEQUETTE,  
SEED FOR SALE. Downey City, Los Angeles County, Cal.

Trees, Plants, Spring Lists free. F. K. Puck-nix, Bloomington Nursery, Illinois.

## Nurserymen.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor

CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

**HENRY SHAW,**  
VENTURA, VENTURA COUNTY, CAL.,  
Wholesale Grower of  
ORANGE, LEMON and LIME TREES  
Geo. F. Sylvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Petaluma, Cal.

## Agricultural Articles.

## IRRIGATION and PLACER MINING



## THE SLUTHOUR PUMP

Has been thoroughly tested for irrigating purposes, and for economy in power, durability and simplicity of parts, and large results, it really has no equal, and our orders show that the farmers are at last fully convinced of this important fact. Send for circulars to

J. M. KEELER, AGENT,  
(Late of 330 Sansome Street.)

Now with MESSRS. M. C. HAWLEY & CO.,  
301, 303, 305, 307 & 309 Market St.,  
SAN FRANCISCO.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or unlatching the frame, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, *a*, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address, WIESTER & CO.,  
17 New Montgomery St., San Francisco.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street,

San Francisco.

## OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

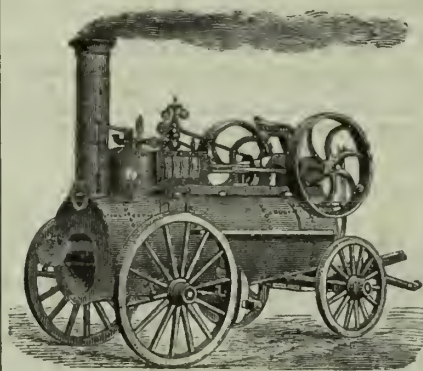
In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.  
Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

The Famous "Enterprise"  
(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,

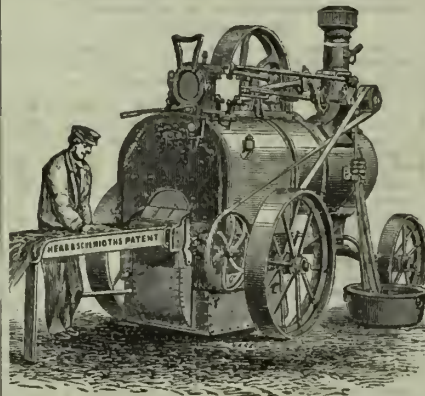
HORTON & KENNEDY,

Managers for California and Pacific Coast.

ALSO BEST FEED MILLS FOR SALE.

General Office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

HEAD & SCHEMOITH'S  
STRAW-BURNING ENGINES

At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.  
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

E. GROTKASS,

COLIMA, - - - MEXICO.

DEALER IN REAL ESTATE.

Information given free of charge. Lands procured for sale or for rents on easy terms.

\$55 & \$77 a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine.

Don't waste your time in reading cheap trash.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,

LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.

VICE-PRESIDENT.....JOHN LEWELLING.

TREASURER.....J. V. WEBSTER.

CASHIER.....ALBERT MONTEPELLIER.

SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

HEALD'S BUSINESS COLLEGE  
No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## SANBORN &amp; BYRNES



Mechanics' Mills, Mission Street,

bet. First and Fremont, San Francisco. Orders from the country promptly attended to. All kinds of Stair Material furnished to order. Wood and Ivory Turners. Billiard Balls and Ten Pins, Fancy Jewels and Balusters.

## Fraud! Fraud!!

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT.

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

**THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.**

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

### OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT)  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

### SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

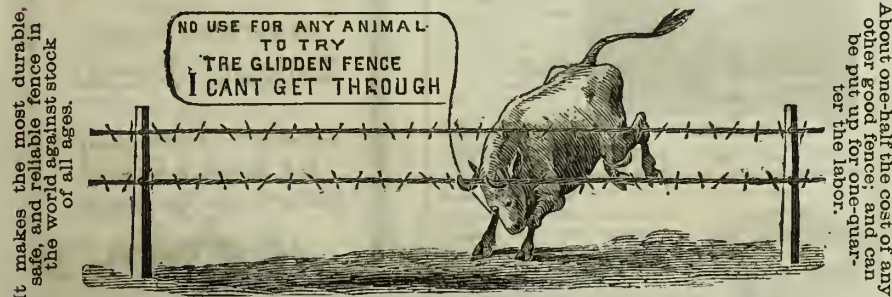
Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 7. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 8. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

### LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

### DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## Winchester Repeating Rifle.

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. W. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.



CALVERT'S CARBOLIC SHEEP WASH, \$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc. T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.

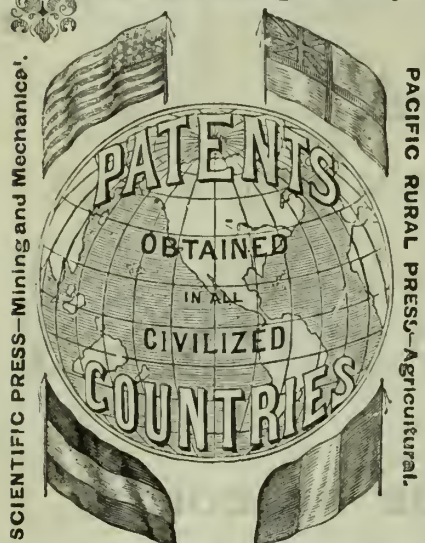
We can recommend the New York watch, of Springfield, Mass., as A 1.

35 stamp

FASHIONABLE VISITING CARDS, 15 VARIETIES, in an elegant case, with your name handsomely printed in the latest style of type, for 25 cents. Agent's outfit, 20 cents. Samples for D. F. COOLEY, BROCKTON, MASS.



# DEWEY & CO'S SCIENTIFIC PRESS Patent Agency.



Publishers, Patent Agents and Engraver,  
224 SANSOME STREET, SAN FRANCISCO.

## Canadian Patents for U. S. Inventors and Patentees.

It is only recently that the Canadian Government has granted patents to United States citizens. In consequence hereof the many immensely valuable inventions patented in this country are now patented in Canada. Patents are much sought for and are readily disposed of at fair cash prices. In our country about three-fourths of all manufacturing is based upon patents, especially in the New England States no manufacturing business of any consequence is started without being protected by such. Our neighbors across the border have not been slow in observing and learning that inventions and patents are the foundation of all prosperity in manufacturing purposes. Hence all our patents for labor saving and agricultural machinery and innumerable improvements in home comforts meet a ready market in Canada. Inventors and Patentees should therefore not delay to secure their patents in Canada; many good inventions are already pirated by Canadians, who, against law and right, appropriate United States inventions and have them patented in their own name. After a patent is granted it is extremely difficult to prove who is the first and original inventor. Therefore, inventors and patentees to be safe, you will have to secure your patents in Canada without delay. We have facilities for securing Canadian patents second to none. Our charges for securing Canadian patents are only \$65, which is from \$10 to \$20 lower than other solicitors. A model is required.

Inventors and patentees! do not delay and lose your opportunity. Things may change. With model and description of your invention remit \$25, and we will prepare all drawings and documents and forward them to you for signature. In about 30 to 50 days we can return your Canadian patent.

DEWEY & CO.,  
Patent Solicitors, S. F.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.  
J. L. THARP—San Francisco.  
B. W. CROWELL—Colusa, Butte, Sutter and Yuba counties.  
G. W. MCGREW—United States.  
A. C. KNOX—Plumas, Sierra, Lassen, Placer and Nevada counties.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMBERSON—Sonoma, Marin and Mendocino counties.  
A. U. STRONG—Lake, Napa and Solano counties.  
W. D. WHITE—San Bernardino and Los Angeles counties.  
ED. T. PLANK—Dakota Territory (Black Hills.)

Thanks for Prompt Attention.

STOCKTON, June 26th, 1875.

Messrs Dewey & Co., S. F.—  
I have received the patent for my invention in wagon brakes, which you prosecuted for me; patented May 11th, 1875—No. 163,046. Thanks to you for your prompt attention to the case; you will hereafter be my attorneys in such cases. I recommend all inventors on the Pacific coast to give you a call, which I think they will never have any cause to regret. Very truly yours,  
GEO. G. BUCKLAND,  
Stockton, Cal.

### Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the Press, Harper's Weekly and Scientific American, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, DEWEY & CO., Publishers, San Francisco.

CAMPO, SAN DIEGO CO., CAL., July 3d, 1874.

Messrs. DEWEY & Co.—Gentlemen: To-day I received the patent and other papers of my animal trap, that you so successfully worked through the patent office for me, for which please accept my best wishes. The chances are that I will have another application for you to make for me before long. I am well satisfied with your manner of doing business, and I think inventors of this coast stand in their own light when they do not put their business into your hands. I remain yours truly,  
A. M. GASS.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.



## Some Reasons for Subscribing for it.

Because it is a permanent, first-class, conscientious able, and well conducted journal.  
Because it is the largest and best agricultural weekly west of the Rocky Mountains.  
That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.  
That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.  
That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in its columns.  
That all the honest industries of our State may be advanced in connection with that of agriculture, its columns being ever open to the discussion of the merits of all progressive improvements.  
That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern friends of the Atlantic border, in aid of an increasing immigration to our sunny clime.  
Send for sample copies.

DEWEY & CO., Publishers,  
224 Sansome St., S. F.

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys of Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S. F.

THERE are many persons who do not know how to stop a newspaper. They are more awkward about it than a country boy stealing his first kiss. The way to do it with satisfaction to both sides is to address the publisher by letter if you do not live near enough to call at his office. It is no way to notify the postmaster or some one else. Four postmasters in three will fail to notify the office of publication. They look upon it as your business more than theirs. The right way is as genteel and pleasant as the other is suspicious and shabby. If you owe for a few weeks or months over time, tender the amount due. It is a little thing, but it will be a great satisfaction to your conscience, as every one is presumed to have one of some kind. Stop your newspaper like a man, and your own self-respect and the esteem of the publisher is maintained. Then you can always look him in the eye or take him by the hand, and he will feel proud to think you were once one of his most gentlemanly patrons, and wish you would subscribe again.—Exchange.

ORDERS for the GOLDEN PIANO will be received at this office, where further information can be had concerning their excellent qualities and favorable prices.

## The Best Agricultural Paper in America.

PORTERVILLE, February 10th, 1875.

TO THE EDITORS AND PUBLISHERS OF THE RURAL PRESS—  
Dear Sirs: I am going to change my residence, and I will take the RURAL PRESS again when I get settled, and will get back numbers. I can say without flattery that it is the best agricultural newspaper in America, and I will use my influence in your behalf. Yours with respect,  
JOHN MCINTIRE, JR.

SUBSCRIPTIONS to the RURAL taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.

THANK-OFFERING.—Rev. S. S. Harmon, President of Washington College, an interested observer of agricultural progress, writes: "I have just been looking over the RURAL PRESS. I am most favorably impressed with its contents. Its range of agricultural matter is wide and deeply interesting. One such number as the last is worth the price of the whole volume. It is a great, good work in which you are engaged, your audience is very large and should become larger every day. I do not know that truisms of this kind are of any value to you, but I write them as a sort of thank-offering for what I deem to be a very valuable service you are rendering to the State."

SANTA CLARA, CAL., April 6th, 1875.

Messrs. DEWEY & Co.—Gentlemen: We have just received Patent No. 160,535, for J. T. Watkins & Co.'s Mammoth Road Grader, which was patented through your Agency. It is the nearest and best that we have ever received. We feel proud of it and thankful to you for the care and attention that you have given it, and when we have anything to do in that line of business, we will surely give you a call. Very respectfully,  
J. T. WATKINS & CO.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,965, 157,124, 157,505, 164,151, 165,661, 172,760, 173,491, 173,667, 180,351, 181,433, 186,389, 187,128, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,  
P. O. Box 659, San Francisco, Cal.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,960 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE,  
Napa Co., Cal. P. O. Napa City, Box 51

## THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING

# ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

Best & Cheapest. Jenks' Portable Lawn Sprinkler, attached to water-head, is used to irrigate ornamental lawns, gardens, flower or strawberry beds, etc. A patent non-clogging distributing nozzle is used on tube, & held firmly upright, or at any angle, by PATENT SPRING.  
Order Circulars. Styles and Prices: "A" (No. 1 spray), \$3.75; "B" (all styles spray), \$5; "C" (large "B"), \$6. Weight, 5 lbs. Prepaid by mail to any part of U.S. for 18c. extra. Express C.O.D. Order of WALTHAM MFG. CO., BOSTON, MASS. of Dealers, or GEO. E. JENKS, Patentee, Concord, N.H.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

WAR MAPS, largest variety, published by E. STRICKER, 22 & 24 Frankfort Street, New York. Send for list. Liberal terms to canvassers.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.

Take the paper that stands by your interests,

## SEEDS.

## SEEDS.

### IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

Early Canada } Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel } Yellow Globe } Beet Seed.  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317, Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. \*My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## Buy N. Y. Watch Co's Superior Watches.

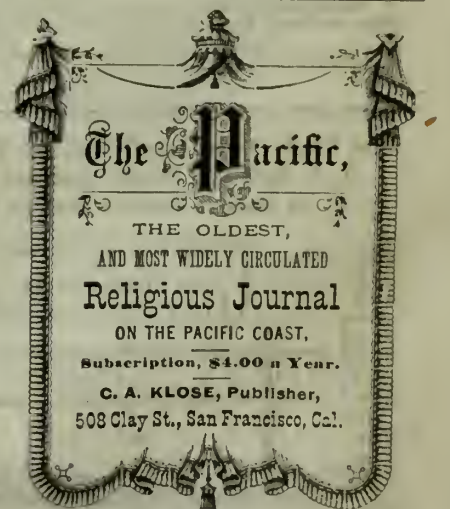
C. H. DEWEY. GEO. JORDAN.  
DEWEY & JORDAN,

DEALERS IN  
Watches, Jewelry, Silverware,  
Etc., Etc.,

No. 433 Montgomery St., near Sacramento,  
SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

## American Watches a Specialty.



THOROUGHbred FOWLS,  
BRONZE TURKEYS,  
Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

BRAHMAS } \$5.00  
LEGHORNS }

Any part of the Coast to Hatch After Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

25 ELEGANT CARDS, all styles, with name, 10 cts.;

20 Swiss Motto Cards, 20 styles, with name, 20 cts.;

20 Beautiful Scroll, 15 styles, no name, 10 cts., post paid. J. B. HUSTED, Nassau, N. Y.

Farmers, write for your paper.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, MAY 19, 1877.

[Number 20.]

## Excavating Machinery.

About a month ago we gave an illustration of an excavating machine which we saw at work in Oakland. We pursue the subject on this page by presenting a side view of another form of excavator, in which the earth is emptied from the buckets of the elevating wheel upon a draper running transversely, instead of being discharged into an earth-box, as in the one shown a month ago.

The machine is one that was built for an irrigation company in the interior, and is provided with draper attachments that will enable it to cut a canal from nine to 24 feet in width, and any depth from three inches up to six feet. By working the earth twice over, it will cut a canal 48 feet wide; and by working it three times, it would make a canal 72 feet wide; though for canals of that width a larger machine would be more economical. The machine requires four horses and one man to operate it. A plow 10 inches wide and running from two to three inches deep is used. The following is a concise and accurate description of the excavator, and if read with reference to the cut will be easily understood. The elevating wheel and the other hind wheel are each six feet in diameter. The forward or caster wheel is two feet six inches in diameter. The tire of the elevating wheel is of steel, five-sixteenths of an inch thick by 12 inches wide. Bolted to each of the spokes is a blade of iron eight by 12 inches, which form a series of buckets completely around the wheel on the inside of the tire. The spokes of the wheel are set even with one side of the tire, so that a draper can be projected far enough under the buckets to receive their contents. The buckets, it will be observed, are set obliquely across the tire, so that they will hold the earth till it gets near the top of the wheel. A segmental shield also assists in preventing the discharge of the dirt till it arrives at the apron, or draper.

The plow which throws the earth into the elevating wheel is directly in line behind the "near" horse, and is so located that it will plow close up to a vertical wall, thus enabling the machine, when used for canals, to make the banks perpendicular, if required, or slope them at any angle. The plow can be set to run at any desired depth, and is easily raised by the handle seen at the left of the driver.

The side-pieces of the carrier frame are iron pipes, the outer half sliding into the other portion like a telescope; there are also screws at the outer end by which the outer carrier roller can be moved out and in, to compensate for the expansion or contraction of the draper. The draper is 30 inches wide and is made of 12-O duck, the same as that used for making hydraulic hose. It is almost one-eighth of an inch thick. A bevel wheel 24 inches in diameter is keyed on the hub of the elevating wheel, and turns a short shaft leading to the inner draper roller, which being thus caused to revolve, gives motion to the draper or carrier. The draper runs once and a quarter as fast as the horses walk. The picture shows the machine as seen from behind. It is represented to be making a cut or canal through the top of a hill to show the form of the embankments, etc.

The draper is shown carrying the earth some-

what up hill, but it can be lowered in a moment so that the dirt runs down hill, thus assisting to run the draper instead of being carried by it. It will seldom be necessary to raise the draper higher than to a horizontal position, unless for loading carts or wagons.

The driver has little more to do than to drive his team. A little lever is touched, and the plow drops down to its work, requiring no further attention. When it is necessary to stop earth from going into the wheel, raise the plow, and the thing goes along as quietly as a wagon. Any ordinary man that can drive a reaper will have no trouble with it, for it has no more machinery than the simplest mower. The duties of the operator consist of oiling the bearings, seeing that the draper is kept at the required tension, and that his plow is sharp.

The weight of this machine is nearly 2,500 pounds, depending somewhat on the length of draper used, as it is necessary to carry a little weight on one side of the machine to counter-balance the weight of the draper, and, of course, the longer the draper the greater the weight required. The two hind wheels are four feet

OUR GLORIOUS CLIMATE.—We have spoken and listened to all kinds of praises of our glorious climate, but it seems that there is one more glory left. The doctors tell us that there can be more dissection done on a single "subject" than in any other country in the world. We read in a late circular of a S. F. medical institution, as follows: "Indeed, the opportunities for prosecuting the practical study of anatomy, in this city, are superior to those of any other known region of the globe. Independent of the advantages in climate, material for dissection (the supply of which is regulated by law), is abundant and cheap, and our salubrious breezes not only preserve the *cadaver* for an indefinite length of time, but secure the health of the student from injury in consequence of the effluvia, so constant an attendant upon dissection elsewhere. Students, therefore, of all tropical countries, and of the Southern States of our Union, as well as of the North, who are unable, from these causes, to prosecute their studies at home, will find it greatly to their advantage to repair to San Francisco." This is a

## California's Large Farms.

EDITORS PRESS:—Will you please give the size, location and name of the largest farm in California. There are several of your Oakland readers who would like to see such an item, that they could send the next issue of your paper across the mountains to friends.—OAKLANDERS.

We are not sure of the proper claimant to superior immensity in the size of California farms. Some of them are so large that we dare not trust ourselves to become familiar with the figures, lest we should get a distaste for fractions in our market reports. We cannot state exactly what our querist desires, but will mention a few facts which we have in mind. Dr. Glenn, of Colusa, has the reputation of leading in the line of grain farming, and he has now 45,000 acres under cultivation. He is making calculations on a crop of 10,000 tons of grain, against 18,000 tons last year. He has already purchased 200,000 sacks to put grain in.

Haggin & Carr, of Kern county, had 30,000 acres in their stock farm before they began operations under the desert land law, and now they have perhaps as much more which they will bring under irrigation. The crops this season are 2,000 acres of barley, 1,000 acres wheat, 175 acres corn and 3,000 acres alfalfa. The stock consists of 10,000 head of cattle, 20,000 sheep, 500 head of horses and 1,000 hogs. The working force at the present time is 625 men.

The San Francisco Post says: "James Irvine is the fortunate owner of the San Joaquin and Lomas de Santiago ranches in Los Angeles county, containing 95,000 acres, and of 12,000 acres in the South Ana ranch adjoining. In other words, he owns 107,000 acres of as fertile soil as is to be found in southern California."

The Butte Record says: "Hill, Boggs & Reavis have now on the ranch in Kern and Los Angeles counties, 10,000 head of cattle and 50,000 sheep, all in excellent condition. Mr. Hill says he will put 1,000 head of beef cattle into market the first of the month.

This ranch, belonging to General Beal, our present Austrian Minister, is 96 miles in extent, and situated in Kern and Los Angeles counties, and in the dry season of 1864 carried 200,000 head of stock without loss."

We give the above statement which we have at hand in answer to our querist. We have more real interest in the lauding of small farms than large ones, and should like better to know who succeeds best on the smallest farm, than who controls the greatest number of acres. Not that we like large farms less, but small ones more.

NOT A ROSE.—A lady in Oakland sent us samples of what some have termed a bridal rose, from a bush which was considerably whitened during the winter with blossoms of about one inch in diameter, appearing much like a minute rose. It is an early and almost constant bloomer during the shy bearing months of other ornamental shrubbery. Its leaves, light green, resemble the raspberry in form. Our botanist carefully describes it as follows: "*Rubus (spectabilis?)* Ought to have large raspberry, either salmon or pink colored. Some call them 'salmon-berry.' It is not a rose; but is like the blackberry or raspberry. The flower is double in this case, and is larger than usual. Sometimes the center is of different color."



THE PRICE EXCAVATOR WITH DRAPER.

six inches apart from center to center.

This machine, like the one we illustrated before, is manufactured at San Leandro, Alameda county, and the city agency is at the headquarters of the Price Press Company, with Baker & Hamilton, No. 17 Front street.

USES FOR GRAPES.—As the grape crop is coming on, the question of uses to which it can be profitably devoted is again pertinent. Mr. T. L. Grigsby, of Yountville, tells us that there is prospect of a large yield this year in Napa county. He, like many other vineyardists, has a large quantity of native grapes which he would like to find profitable use for. He wants to know the best methods of making syrup, paste, or sugar, and what uses they can be put to when made. What has become of the Los Angeles inventor who applied last fall, according to the newspapers, for a patent on an improved method of making grape sugar? In Germany, it is said, they make and use a sort of pasty sugar. The syrup can be used to advantage for sweetening candies and confectionery pastes. We would like to have some one who has information on this subject to enumerate more uses to which the product of the native grape can be put, and give methods for manufacturing and preserving the substances. Full information in these lines would be very timely and would be widely useful.

new claim upon the attention of the world, another feather in our much-decked climate's cap. Come hither ye heroes of the scalpel. It is a splendid climate. We have plenty of cadavers of the "everlasting" variety.

CALIFORNIA MILITARY ACADEMY.—We have received a programme of the annual examination and closing exercises of the twelfth year of the above named institution, which as our readers know, is located in Oakland. The circular details the studies of the year, and is an interesting showing. The thirteenth academic year of the institution will close May 22d. After a vacation of eight weeks, the fourteenth academic year will begin on Wednesday, July 18th, 1877. Rev. D. McClure is the President of the academy.

HOG RINGER.—We have had several inquiries of late concerning some contrivance for ringing hogs quickly and easily. The great need for such an appliance has led to inventions, and an excellent one is presented for public patronage in the advertisement of James E. Gordon in another column. This information will, we trust, meet our querists' needs. The tool known as Hill's ringer we have seen in use at East, and regard it as fitted for the desired purpose.



## CORRESPONDENCE.

### Food Plants—No. 1.

EDITORS PRESS:—The topics of the origin and distribution of plants are among the most interesting presented to man. Especially interesting is the history of those plants which have been used for food, and have therefore accompanied men in their outflow from the Asian centers. The culture of centuries and the varied climates through which man has taken his favorites, has often changed their size, texture, character and chemical constituents, making the cereals and tuberous plants more nutritious and improving the flavor of the vegetables and fruits. The turnip, parsnip, radish and carrot, and such fruits as the grape and strawberry, show what has been done by the agency of man.

Philosophers have attempted to prove that the bloodless food derived from the vegetable kingdom has had a powerful influence in changing the nature of the savage, who, in the peaceful search for grains, roots and berries, himself became peaceable. Since the vegetable world gives its best gifts without a deadly struggle for existence, we may easily believe that when savage nations become tilters of the ground one great upward step is taken.

No portion of the earth's surface was originally entirely without food plants, though their natural distribution was very unequal, and the greatest number and most important have been derived from one particular district, encircled by the great inland seas of the earth. Armenia, Persia, Mesopotamia and Syria, girded by the Caspian, Black and Mediterranean seas, and by the Arabian and Persian gulfs, are the natural home of our best fruits and cereals. We may, however, observe that almost every region has had its own breadstuff, which modified the life of its inhabitants. Europe was the home of oats, Northern Asia of wheat, Southern Asia of rice, Africa of millet, and America of Indian corn. These cereals are, then, the most important, and should be first considered.

The common oat (*Avena sativa*) is probably a native of the region along the Danube, and was cultivated by the Celts and Germans 2,000 years ago. Pliny speaks of it, and it formed part of the early Briton's tribute. When wheat was introduced, the oat was banished to poorer soils and colder regions.

The true home of barley (*Hordeum vulgare*) has been much discussed. The two-lined or common barley has been found wild near the famous oil wells of Baku, and also in South Persia. The six-lined barley was cultivated by the Egyptians, Jews and Hindus, and grains have been found in the mummies and in the rock temples of Elephanti. Homer speaks of horses champing their oats and barley. The Romans had two kinds of barley, and paid much attention to its culture.

The rye (*Secale cereale*) is a native of the region between the Alps and the Black sea. Its culture extended north and west, into Macedonia, Greece, Northern Italy, Sicily and Central Europe. Its northern limit in Europe is 60°.

Wheat (*Triticum vulgare*) has been found growing wild on the banks of the Euphrates. It has become the most important of the cereals, and is the leading food plant of civilized man. Its culture reaches back to the times of earliest record. The emperor Chin-nong introduced wheat, rice and millet into China 3,000 years before Christ. Egyptian wheat fed the world in the days of Joseph. The Aryans raised it in their earlier home among the Himalayas, and carried it with them in all their subsequent wanderings. Wheat can be cultivated over a broader region than rye, barley or rice, and it is richest in gluten, so that it will always keep a foremost place.

Rice (*Oryza sativa*) is a native of Farther India, and has extended over the southern half of Asia, a portion of Africa, and the tropical regions of America. In China and Hindostan it is almost the exclusive food of the people. The Sanscrit name was "Arunga."

Indian corn (*Zea mays*) is purely an American product. It was known to the Indians of both continents. It is probably indigenous to Central America, having spread north and south. The Mexicans had a goddess who took especial care of the corn fields, and the first ripe ears were offered on her altar. The Puritans, it will be remembered, found stores of maize, hid by the Indians. It broke into its present well known varieties at a very early period. The first Jesuit missionaries in the valley of the Amazon, found the Indians cultivating red and white corn, both dent and flint.

The common millet comes from the East Indies. The Gauls cultivated it in the days of Strabo, and it is a favorite crop of the Slavonians. The Romans called it *Panicum*, whence we derive its botanical name.

The Indian millet (*Sorghum vulgare*) is raised in Africa through Soudan and Abyssinia, also in Southern Europe. It appears to be identical with the doura or durra of Egypt. The Chinese sorghum (*S. saccharum*) is a variety.

Buckwheat began among some of the Tartar tribes of North-central Asia, gradually spread to the Mediterranean and was extended by the Saracenic armies, but did not reach Europe until the 16th century.

Among minor cereals are the tef, a monitainous plant found in Abyssinia, which makes

the favorite bread of the natives; the brush grass (*Pennisetaria*), similar to the millet, and used by the negroes of Nubia; the Croix laeh-rina, eaten by the Tongan islanders; and the quinoa (*Q. chenopodium*), a native of Peru and Chile. Many varieties of grasses are gathered by savage nations, some as a regular supply and others only in time of famine; but it is not the purpose of this article to consider these comparatively valueless seeds. The edible roots will be next discussed.

CHAS. H. SHINN.

Niles, Cal., May 7th, 1877.

### Placer County.

EDITORS PRESS:—I am glad to see the C. P. Railroad Co. active in prosecuting trespassers upon their timbered lands, and more pleased yet would I be if the Government would use equal exertion in the protection of its timber. The law allows the cutting of timber on mineral lands for mineral purposes, but these lands are being stripped almost entirely for other purposes. The black and live oak are sought out for the market, while the inferior white oak is left for the benefit of actual settlers. The railroad company has recently had an agent looking after trespassers hereabouts, who found quite a number and brought most of them to terms, I believe. Some of these men have a fair amount of timber on their own lands, but choose to cut it outside and take chances. Personally, I have naught against these men, for most of them are good neighbors and citizens. It is only the great injury suffered by the country in thus denuding its lands which prompts me to speak out. Most of the railroad land has more or less timber, and those who purchase from the company at \$2.50 to \$4 per acre can at least reserve a timber lot for use a generation to come, while those who buy from the Government must pay \$2.50 per acre, which is the price in railroad limits, and seldom get more than sufficient wood for present domestic purposes.

Nearly every acre of these lands in the vicinity of Auburn are well adapted to

### Fruit Growing.

Several men of capital and enterprise have located in the vicinity of Auburn and New Castle this season, for the purpose of farming and fruit growing. Much new land is being cleared, and next season promises a large addition to the amount of our cultivated land. I would name individuals deserving of mention in the PRESS for their enterprise, but as I am busy clearing land, and a new resident, am not yet enough informed to give all proper notice. By-and-by particular notice will be given some of our progressive farmers.

Many flocks of sheep have passed through here the past few weeks. They are from the lower counties bound for the upper counties. It is very noticeable, and particularly annoying to our farmers, that these sheep are only driven from two to four miles a day. The sheep are poor, and the good grass of this section tempted the herders to go slow and recruit.

Our hay is mostly wheat and barley, with some oats and alfalfa. Little wheat is harvested, hay paying best. We get our flour by rail from Wheatland, Sheridan and Sacramento, which are near by. Several of our farmers have sown alfalfa this spring, which is doing well so far as I have learned. Our farmers will make well out of their hay this season; in fact they do well every year, but it will be a little extra this time.

Those who summer-fallow here get by far the best crops. Some few of our farmers seeded their summer-fallow just before the first fall rain, and I assure you their grain is equal to the best in the Sacramento valley. Dry sown grain this year is certainly ahead of that sown after the first rain on summer-fallow land. Here are fields which have been sown to wheat and barley for upwards of twenty years, never failing to produce good crops, even during the great drouth of 1864, and too without irrigation. The owners inform me that they see no perceptible difference in the yield of this old land; and that most of the time a crop was grown yearly, but they have taken to summer-fallowing of late years. There are still many who follow the lazy, behind-the-age practice of scratching over their land. They appear to have a dread of thorough plowing, and persist in having their land tilled every year. The result is both land and farmers become impoverished. The other day I noticed one of these farmers who had become impressed with the necessity of summer-fallowing, and was at it. He had put the work off too late. The soil was too dry, and weeds and grass up high; his plow ran in and out, until at last worn out and sore he vowed to plow no more. Somehow these slack farmers usually make hard work of it when they do attempt to go ahead.

There are a few bearing orange trees in this vicinity, and quite a number of young trees. In Auburn there are growing upon a high hill as thrifty orange trees as I have seen, and I am told they were never irrigated. Grape vines do not require irrigation. The raisin grape is all the rage now. Peaches and almonds thrive on our best hill lands without irrigation. There are several small almond orchards here. Some of our fruit growers contemplate planting largely of these trees next season. The Languedoc is our best regular and prolific bearer. The trees hang full. This scope of country certainly cannot be excelled for almond culture.

H. W. HULBERT.

Auburn, Cal., May 7th.

### Our Industrial Condition.—No. 2.

EDITORS PRESS.—Reliable and successful physicians never prescribe without thoroughly diagnosing the disease they are called upon to treat. Why should not the people, the great body politic, receive the same consideration at the hands of those elected to prescribe for their interests and provide for their wants and necessities. The citizens of these United States claim to have a republican form of Government; one in which the ruling power is vested in themselves; if this assumption is valid, why are they such sufferers? Why in so deplorable a condition and unable to extricate themselves? Simply because they do and will not exercise the means God has provided mankind with for protection, (brains,) but allow a few to think for, act for and direct them. These representatives, with selfishness uncontrolled, in seeking to benefit themselves only, work injury to the masses. Government is an acquiescence expressed or implied to laws, regulations or commands on the part of the governed, who should not in justice, suffer by surrendering individual rights to promote the welfare and strength of the society or community of which they are members.

The vast and intricate machinery requisite for a structure to accommodate 40,000,000 sovereigns in their own right, is more readily imagined than designed. A century has gone upon the records of the past, in our existence as a nation, without much progress. The impossibility of being instructed through the experience of others, is proven in the every-day life of individuals, as also in the voluminous history of nations. In this age, however, with a people claiming to be most enlightened, to be fartherest advanced in the arts and sciences, it is unnecessary to repeat the follies or revive the barbarisms of the ancients.

In previous letters reformation was suggested. A radical political change, (not in its partisan sense,) but in the true meaning of the word "good government." The way was outlined for securing it, which will here be repeated, and is:

"For the united and immediate action of all desiring to correct the evils affecting them so seriously, which are:

First. Unequal and excessive taxation. Second. Congressional and Legislative donations of lands and money to corporations and individuals, granting in addition special rights and privileges, creating thereby classes and social conditions at variance with the spirit of our institutions and a republican form of government.

Third. Compelling the creative and productive interests of the country to bear the burdens of government, by exempting from taxation foreign and domestic capital invested in bonds and mortgages.

Fourth. The want of economy and consideration of the public welfare in every department of State and federal service, by creating sinecures and continuing excessive salaries and exorbitant fees to officials of every grade.

Fifth. The unjust and iniquitous use of the ballot-box, which is prostituted to partisan purposes."

Unity of action coupled with the resolution to nominate and support for office such men only as are competent and honest, non-partisan, yet loyal to their constituents (the people); men who will be pleased in serving rather than deceiving them. Those who recognize the necessity of guarding safely the electoral franchise; surrounding it with safeguards in the way of qualifications which will render its exercise impossible by those not directly interested in the results they are called upon to decide.

With these planks in our political platform, resting upon a broad and solid foundation of truth, justice and universal education, there would be no cause for complaint. The hopes and anticipations of the Revolutionary patriots, who secured emancipation from British tyranny, would be realized. Doubts would no longer exist as to the ability of a people to govern themselves, or the strength of a nation maintained without standing armies, and navies and hordes of police.

In a letter of this kind it is not possible to enter into the details of the needed reforms. The exigency of the case warrants a few suggestions respecting taxation, which it is trusted will prove acceptable:

The aggregate State and county tax of California for 1875, was \$11,608,314.92, equal to \$14.67 for every man, woman and child in the State; Indians, Mongolians and all classes included; or \$67.33 tax for every registered voter. If to this we add the district or town, school and poll—all absolute taxes—we find it \$79.35. There are still to be added federal taxes, licenses, etc., but of these no account will be made, as they are not computed in the amount given. From the 172,128 registered voters, one-fourth can safely be deducted as possessed of no property and who pay no tax. We will, however, call it one-fifth, and we have \$95.22 as the amount paid by every citizen of substance (owner of a cow, calf, sheep or goat), for the privileges of an existence in the community of which he is a member by virtue of inheritance, a membership that is as necessary to the existence of the community as it is advantageous to the individual.

Political economists, rulers and legislators in all ages have vexed themselves in attempting the solution of the taxation problem. A perfect system has never and perhaps never will be adopted. Experience proves that under certain conditions and restrictions, the special tax system works most advantageously; that is, a tax upon business, professions and corporate interests (and not upon real estate), according to valuation or property employed in developing the resources of the country. This tax falls

upon peddlers, auctioneers, brokers, merchants, commission men, lawyers, doctors, professionals of various kinds, theaters, showmen, jugglers, tavern keepers, hotels, grocery keepers, liquor dealers, toll bridges, ferries, insurance, telegraph and express companies, persons and corporations using franchises and privileges, railroads, etc., uniform as to the classes upon which it is imposed.

No State in the Union needs a change in their revenue laws more than California. Through ignorance or design her code is fearfully at variance with what is required for the best interests of her citizens.

G. C. PEARSON.

South Vallejo, May 14th, 1877.

### The Tide Returning to the Foothills.

EDITORS PRESS:—You have often been reminded of the forlorn and dilapidated condition of the Sierra foothills, where California and the world procured its millions of minerals. When the flush times of mining prosperity began to wane, the interest and industry was transferred to the great San Joaquin valley, and farming valleys generally, in which prosperity certainly has attended industry and frugality. But nature in this climate is capricious and will not attend to the wants of the husbandman when most needed. The consequences are full of disaster at the present writing, and many disheartened farmers are again heading towards the green hills, cosy valleys and sparkling springs of the foothills.

It is sad to learn that men of energy and industry should cultivate and seed from hundreds to thousands of acres and not realize enough to fill a bushel basket. In Tuolumne county ranches are changing hands to some of those disappointed farmers, who will hereafter be satisfied with a steady and permanent source of realizing home comforts, without the excitement of witnessing his all swept away by crop failures or mortgages for common expenses. There is certainly a good demand for agricultural property among the foothills and by men who would have spurned the idea a few years ago.

More especially is this apparent with those who have animals to feed and to pasture, willing to pay from \$10 and upwards for one night's pasture, on their way to the higher Sierras.

The misfortunes of our neighbors of the plains will have a tendency to advance the price of property all over the foothill region. Settlers will be encouraged to make permanent improvements. The real value of our manifold blessings become apparent by contrast. Variety is our salvation, and as no hay will come from the Dry creek country, the foothill farmer will realize a handsome profit for his really good crops. Sixty tons of surplus hay is not uncommon with the farmers around Sonora, and on the Mono road, realizing from \$25 to \$30 per ton. Then there is the orchard with its wealth of fruit, and the dairy with its weekly sales of butter. Poultry adds to the exchequer and to the table, and thus the farmer's home is abundantly supplied with the comforts and necessities of life.

When wheat fails on the plains there is a failure all through the calculation. Credit or borrowing is the only resource left to stem the tide until another attempt at wheat-raising decides for life or financial death. It is then the disappointed farmer turns his eyes towards the higher altitudes. Ambition is now satisfied with a small beginning and a hopeful future. By just such accidents will these foothills bloom with fragrance and beauty. Water and climate, conditions and variety will establish happy homes in the midst of barrenness. The drone will be rooted out. Muscle and energy will overcome obstacles. The old placer beds will be leveled off, and a wealth of fruit and grain cheer the eye of the dried-out farmer, and he will send his varied products all over the world for a market by rail or by steam.

It is presumed that the failures of the plains is not universal. But it cannot be denied that a very large area of the southern portion of the great valley is a total failure. A few farmers are fortunate in having wheat enough on hand to make good for a three years' crop at ordinary prices by the present quotations. But the less fortunate, who were compelled to sell at the low figure, find themselves bankrupt, and far worse if they ever intend to procure seed for another season. Surely moneyed men should deal generously with struggling men. Men who are the bread creators for bread consumers. Let stocks and stones alone while attending to the real staff of life. Supply, on liberal terms, the means to enable the industrious farmer to tide over this memorable year of '77, and the investment will return in many days.

JOHN TAYLOR.

Mt. Pleasant, Tuolumne Co., May 7th.

CORRECTION.—EDITORS PRESS:—In my note recently sent you from Santa Barbara county, I wrote hastily. I don't wish to overdraw the picture about Mr. Cooper's Santa Rosa ranch. I did not mean that he would keep all his large herd of fine sheep on the ranch till next rains, but that, with what he would sell for butchering, etc., at times, he would get through and not have to kill any to save the rest. He tells me he believes he can retain 11,000 till new feed comes on his 16,000 acres.

J. W. WEBB.



## ARBORICULTURE.

## Answer to Queries on Fruit Growing.

EDITORS PRESS:—Since the publication of my communication in the RURAL of April 21st, I have received a number of letters from different parts of California asking further information in regard to orange, lemon, lime and almond culture. I would cheerfully answer all of these inquiries to the best of my ability, were it not that the farmers have engaged the RURAL PRESS to instruct us in the best mode of farming in California, and I deem it right and proper they should do the work. Therefore I propose to shuffle this little job off on to your shoulders by sending you the letter I had written in answer to Mr. D. W. Shepard's letter to me. Mr. S. is the owner of a farm in the Fresno colony, and if you see proper to publish my letter to him it will be an answer to all the others as well as to Mr. Shepard; as the questions asked are about the same in all.

Mr. Shepard's first question is: Is the climate of Central California colony of Fresno suitable for the production of oranges, almonds, etc.? I do not know the exact location of the Central colony. I had a residence of a little over one year in Fresno county, but that was 20 years ago. I went there with a band of cattle in 1857 and located on the San Joaquin river, 15 miles above Firebaugh's ferry, and 35 miles below Fort Miller, and about seven miles from the present Fresno City. That portion of California was sparsely settled at that time, there were not more than a dozen settlers in a range of 60 miles square (all cattle men). My cattle ranged from the Chowehili to the Kings river. The plains that are now covered with wheat and barley, were then the range of large bands of wild horses, antelope and occasionally small bands of elk. Farming was unknown in that locality, therefore I paid little attention to climate or soil. My cattle fattened on the rich alfalfa, and good pasture was all we cared for in those days. But as near as I can remember the climate, freezing nights were common from November until March, but the degree of cold I do not know. The hot, dry, summer weather of Fresno (where you have plenty of water to irrigate) would be splendid for the growth of the orange, lemon and lime, and if the trees are not injured by winter freezing, would probably produce excellent fruit. You can easily test the matter by setting a few trees of each of the above varieties, this present summer.

I believe three years old the best age to set orange and lemon trees, and two years old for lime trees.

If you set in July your trees will make a good growth before cold weather. A warm sandy soil is best. After your trees are set in the ground, let a stream of water run past each row for an hour or two (and no longer). The water will settle the earth around the roots of the tree and also settle the tree an inch or two, and then when the ground is dry enough, work the surface soil and spread a little dry earth around the tree to retain the moisture and prevent baking.

I set orange and lemon trees 20½ feet apart, or 100 trees to the acre; limes 12 feet each way, as the lime tree does not grow much larger than a bush. I set almond trees the same as orange. The almond tree should be transplanted between the first of November and last of January, as it is the first tree to start in the spring, and is generally in full bloom in February, therefore the almond crop is unreliable in localities where there are spring frosts, but the tree will bear in three years from the nut and it would cost but little to try the experiment.

Mr. T. A. Garey, of Los Angeles; Mr. Dana B. Clark, of Santa Barbara, and Mr. Henry Shaw, of Ventura, are, I believe, all reliable nurserymen, and there are probably others. There are many books for sale which treat on orange and lemon culture, but as a rule they were written for other climes and are more apt to mislead than to instruct. Our best educators are experience, and good home agricultural journals, such as the RURAL PRESS.

ROBT. LYON.

Ventura, Cal., May 3d, 1877.

[If we are not mistaken orange trees have fruited well already in Fresno county, under conditions similar to those at the locality named. Mr. Lyon's recollection of the region is interesting, and will aid many to draw a sharp contrast between the county 20 years ago and now.

A good book on the cultivation of semi-tropical fruits in California is one of our greatest needs. It is true that there are many points yet to be learned about the adaptation of our State for these fruits and the best ways to accomplish the cultivation. Any book which might now be written would probably be subject to many emendations, as experience teaches new facts. Meantime, as Mr. Lyon says, the RURAL PRESS stands ready to catch all the points disclosed by progressive experience, and it will put on record, for present and future usefulness, all the facts which practical men will communicate. Let each grower report his own experiences, and thus each may be profited by the researches of all.—EDS. PRESS.]

## THE APIARY.

## The Los Angeles Bees Suffering.

N. Levering writes the following for the Los Angeles Herald: What shall we do with our bees? is the question almost daily asked us by many. We can only advise feeding or removing your bees to some section of country where pasturage is sufficient to sustain them. This is something new in the history of bee-keeping in southern California. The losses that we have reported are truly alarming. We are informed of one party who lost 119 colonies out of 125, and of others whose losses are not so great but are continually losing. We would advise feeding honey if you have it, if not sugar—coffee A is the best; we have always found less impurities in it. The cheap grades are sometimes liable to produce disease in the bees, on account of impurities in it. To feed honey, if candied, spread a little on the top of the frames, spreading a cloth over; then place the top of the hive on, and see that it fits closely so that bees cannot enter from the outside, or robbing may be the result. If the honey is in the liquid state warm it or add a little water to it so that it will run freely, then take a nail or some other pointed instrument, punch a few holes through the bottom; lay the empty comb on the side and with the honey in a pitcher pour it into the cup which must be held two feet or more above the comb. In this wise you will be more certain to fill the cells, as the velocity will force it into the cells. When sugar is fed it should be prepared as follows: To each quart of sugar add one pint of water, heat to boiling point and skim; or to every three pounds of sugar add two pounds of water. As soon as it has cooled so as not to melt the comb it is ready for use, and may be put into the comb in the same manner as the liquid honey. When feeding is commenced it should be kept up regularly until the bees are out of danger. Feeding will at once stimulate the queen to laying and give new life and vigor to the whole hive. We have only been feeding about a week, and find our queen laying prolifically; her subjects building comb and storing honey, and the cheerful hum of prosperity prevails in each colony.

Bees in the dry districts, where it may be too expensive to feed until the return of a more prosperous season, should be removed to the moist lands, or where the lands are irrigated, where they will find sufficient feed until the return of a more favorable season.

Many will now become discouraged and retire from the business. We see no good reason for this, as failures occur now and then in every branch of industry. Failures are often attended with good results, especially to those who have the pluck to continue in the even tenor of their way, making the best they can of results as they turn up; and they are sure to win.

## THE DAIRY.

## A California Milk Dairy.

We find in the Chicago Live Stock Journal a statement from our contributor, Robt. Ashburner, of the milk yield of his herd for one year, together with some points in his dairy management which will be of interest to California readers. He writes:

Having always contended that Short-horns can be profitably used as dairy cattle, and having seen several statements in the Journal in regard to the milk and butter yield of different breeds of cattle, has put it into my mind to make a calculation of the average yield, in milk, of the cows in my dairy, during the 12 months ending March 31, 1877, and give you the results for publication, should you think proper to do so.

I do not weigh my milk, neither do I measure the whole of it, every day; but hope the explanation given of the way in which I get at the whole number of quarts of milk produced during the year will be satisfactory.

Milk sold wholesale during the year..... 144,540 qts.  
Butter made during the year, 1,870 lbs., reckoning 12 quarts of milk for 1 lb. of butter..... 22,440 "  
New milk for 66 calves, 20 days each, at 8 quarts per day each..... 10,500 "

Divided by number of cows that had calves . . . 60 177,540 "

Average yield of milk for each cow for 1 year. . . 2,900 "

This does not include milk and cream used in the family, nor any milk wasted or spilled at milking time, which will occur in any large dairy occasionally, though very rarely in my case. I find 12 quarts of milk about the quantity required for one pound of butter. The estimate of new milk for calves is rather under than over the quantity used, because for the pure-bred Short-horn bull calves that I raise I use milk fresh from the cow altogether till they are from three to four months old, after which they have skim-milk mixed, and gradually increased, till only skim-milk is used by the time they are six months old. The heifer calves are treated in the same manner, comparatively. The skim-milk process commences at the age of three or four weeks instead of three or four months, more or less new milk being given till the calf is about six weeks old; and if there are any calves that do not get on so well as the rest they have part fresh milk for a few weeks longer, always taking care to keep up a healthy growth.

The greater part of my cows are high-grade

Short-horns, with from one to five crosses, together with a few pure-bred Short-horns. I never allow any calves to suck the cows. The grade bull calves are either fed for veal or sold to neighboring farmers and dairymen, who may want to improve their stock without going to the expense of buying a pure-bred bull. For this purpose, I am careful to let none go but such as I think will give entire satisfaction; if they are not bespoke beforehand, they invariably go for veal, as I raise no grade bull calves or steers, requiring all my skim-milk for the heifer calves. Of the whole number of cows that calved during the year, there were 14 two-year old heifers, 17 three-year olds, 15 of which had their second calf; the remainder being of various ages, up to 16 years old. My average daily number of cows milking for the year is 55; the cows, as a rule, running dry for them four to ten weeks, seldom more, except in cases of irregular breeding.

On page 170 of the April number of the Journal, you say, "300 days is quite the average number of days that cows give milk in a year;" on which basis I will calculate the average number of quarts per cow, per day, of the whole herd, for the 12 months. Fifty-five cows, milking 300 days, gives 16,500 milking days for the year. The whole amount of milk is 177,540 quarts, which, being divided by the number of milking days, 16,500, gives 10,751 quarts per day, as the average daily yield of the 55 cows in milk for the whole year.

I came to this farm five years ago last December; for the first two years after that time the average daily number of cows in milk was under 35. Last year I sold out all unprofitable cows, or irregular breeders, and the worst of my heifers, so that I have nothing left that is not from first-class dairy stock, in consequence of which I hope to obtain a larger average yield of milk hereafter than I have ever done.

For the dairy I am in favor of short-legged, large, roomy-bodied cows, as being the most profitable for the food consumed. I was careful to select only such cows for the foundation of my herd, and have only used Short-horn bulls of good milking families, nor would I think of using any other.

## THE STOCK YARD.

## Cattle Sale in Butte County.

EDITORS PRESS:—In answer to your letter of inquiry I write that our sale was well attended, but prices were low. My thoroughbred bulls sold as follows: "Orlando" sold for \$200 to W. W. Cameron, Oakland; "Pacific," \$120, W. W. Cameron; "Lord Nelson," \$150, W. W. Cameron; "Paterson Drake," \$100, Mr. Pittes, Butte county; "Bell of Butte the Second," (one year old), \$100, W. W. Cameron; "Maggie" (six months old), \$50, W. W. Cameron.

The grades sold from \$40 to \$65. My horses sold from \$50 to \$205 each. Preston's grade bulls sold from \$35 to \$40. Bener's common cattle sold at an average of \$22 per head for 160 head.

As no thoroughbred buyers were here my cattle sold cheap, but the cattle which I sold I had to spare. I did not sell any bull calves, as there was no buyers for bulls of that age. I have on hand a fine lot of bull calves, which I will have for sale next spring; also 30 head of very fine females, which I am breeding to my Louan bull, "Golden Louan Duke." He is proving himself to be a very fine breeder. I think he can show as fine a lot of calves as any State can. M. WICK.

Oroville, Butte Co., May 1st.

## HORTICULTURE.

## Los Angeles Fruit Growers' Association.

## Shall the Orange be Budded?

As briefly noted in the PRESS last week there was a Fruit Growers' Association organized at Los Angeles during the last week in April. Thomas A. Garey was named for temporary Chairman, and L. M. Holt, Secretary. A committee was appointed to draft a constitution, etc., and take steps for making the association permanent. After this business the meeting, which we are informed was large, entered upon a discussion of the relative advantage of budding the orange or growing the trees from the seed. Opinion among the prominent growers present seemed to be varied, and we shall extract from the report furnished us by the Secretary such parts of the discussion as seem to us of general interest:

Thomas A. Garey

Opened the discussion in favor of budding trees by exhibiting a large variety of budded fruit. It would pay to bud the orange the same as it would pay to raise fine stock or fine fruits of other varieties. The rule applies to the orange, only not to so great an extent. The orange is more true to itself when grown from the seed than any other known fruit. Good seed or seed from good oranges will generally produce trees that will produce good fruit, but not always.

Nurserymen get seed from the poorest oranges generally because these oranges contain more seed; but those seeds will produce trees that will bear an inferior fruit unless budded. Fruit from Wolfskill's Best is a very superior fruit; and if trees are budded from that fine tree all of the oranges will be as good as this Wolfskill's Best. We put down too many poor oranges in the market. If all oranges were as good as Wolfskill's Best, the market would be much better and prices would rule higher. One advantage of budding is early bearing, budded trees producing fruit three or four years earlier than seedlings. He showed four oranges taken from a tree four years old in May, 1877, from the bud, and the bud was put on a two year old China lemon root. The tree produced about sixty oranges this year, and it stands in a place where it has not received extra attention. Last year the same tree produced fourteen oranges, and two years ago it produced two. This variety—the Mediterranean Sweet—is a large, fine orange, and the tree is entirely thornless. A six-year-old Mediterranean Sweet, on China lemon root, measures seven feet high and is otherwise as large in proportion, showing no signs of being a dwarf. An imported tree six years old is seven feet high, from six to seven feet through the top, and branches come out one foot from the ground. Last year it produced over a hundred oranges, all of which were large and fine. The following estimate was submitted: Plant two-year-old budded trees, about 75 to the acre. In four years from the bud or two years from planting, the trees will bear from 50 to 60 to the tree, which at one cent each will yield per acre \$37.50; five years from bud or three years from planting, will yield per acre, \$75; next year, \$150 per acre, or a total of \$262.50 in three years. An orchard planted in seedling trees at four years old in three years from planting, with trees seven years old, seldom shows fruit. An acre of seedling four year old trees will cost, at 25 cents each, \$18.75; an acre of budded trees at \$1 each will cost \$75; difference in favor of seedling, \$57. The first three years of return from the budded orange orchard will pay the difference, and leave a balance of \$205.50 in favor of budding.

## Discussion.

Dr. Conger, of Pasadena, opposed budding; stated that in Lower California budding had been abandoned; they even planted the seed where the orchard was to stand, thus saving the tap root, which was essential. The public demanded a large orange and did not care so much for its flavor. If a growing tree bears early, the fruit is produced at the expense of the growth of the tree. Will a tree thus dwarfed ever catch up with a seedling tree that more really gets its growth before fruiting? We must have a tree before we can get the fruit. He considered the budding of fruit an experiment, and was willing to let well enough alone so long as Rose and Wilson can raise as good fruit as they do at present. All budded fruits are dwarfs, including the deciduous fruits. In conclusion, he favored large fruit regardless of quality.

Mr. David Lewis exhibited a large orange, grown on a seven-year-old tree.

Mr. Richardson, of San Gabriel, gave an account of a tree that bore but few oranges at seven years of age, but 1,000 at nine years of age.

Dr. Edwards argued against the budded tree being short-lived, as the root was seedling and supplied the growth power.

Mr. Fisher had Mediterranean sweet buds, one year old on two-year-old roots, which are this year in bloom.

J. de Barth Shorb

Continued the subject with the presentation of an able speech in favor of budding, from which we take the following points: The time is not far distant when the production of oranges in this county will be enormous; when other markets will have to be sought to consume our surplus, and when this time does arrive, as it surely will, we may only hope to sell at remunerative figures the oranges of the best varieties, well grown. To obtain them, we must plant only the best varieties; and to obtain the best varieties, we have the only method by budding.

As to the fact that budding shortens the life of orange trees, that belongs only to time to solve. But, granting that it does, will not the fact that it brings them into bearing earlier more than compensate for this. Nearly every orchardist would succeed, even on very limited means, if his trees could be made to yield him a return in three or five years, who would otherwise go down into ruin and bankruptcy if he was compelled to wait seven or 10 years for his income. I believe it is universally recognized that budding shortens the period in fruiting. Is not this, then, a strong reason financially why we should adopt the budding system. To leave generalities: My own experience teaches me the necessity of budding. I cannot see the dwarfing tendency or results. On the contrary, my budded trees are larger than seedlings of the same age, and the fruit is certainly as good; nor have I been able to observe that the production in numbers is less.

In conclusion, I will say that budding enables us to grow a uniformly good fruit, and of different chosen varieties, not obtainable otherwise; it shortens the time of fruiting and relieves the orchardist from several years of expense and care and oftentimes grinding poverty. In the meanwhile, it cannot work any detriment, excepting possibly in shortening the life of the

Continued on page 314.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### Worthy Lecturer's Visits.

**EDITORS PRESS:**—My last letter left us at Rio Vista. My next appointment was at Walnut Creek.

In Contra Costa county, and the Sacramento boat having gone some two hours or more before, left us without public conveyance to reach our next day's appointment, but our Rio Vista Grange, like all other live Granges, knowing no obstacles that cannot be overcome, at once put aside every difficulty by chartering the beautiful steam tug *Minnehaha*, and in charge of one of the brothers and his Grange family to accompany me, I was by this charming arrangement, and in company so pleasant and so thoroughly joyous, conveyed to Antioch, where, by taking the steamer *Parthenius*, I could reach Martinez next morning by 7½ A. M., and when at Martinez I should be met with a carriage sent out by Walnut Creek Grange to carry me to their hall, so as to arrive at 10 A. M., the time of meeting for their private work.

Such is the condition of the Granges I am visiting, fully alive to our glorious work, and ever ready to help in every needed duty.

At Walnut Creek Bro. Nathaniel Jones had promised us a glorious meeting of live Grangers, and had also assured us that we should have the assistance of our eloquent Past Lecturer, Bro. Wright. So we felt that here, as it should be, our last appointment, would be the crowning one of this particular trip.

According to these worthy Grange allotments, all things came out as promised. At Martinez we found another Bro. Jones, with two noble roadsters hitched before a comfortable buggy, in readiness, awaiting our arrival, and at once, without so much as a chance to see a single brother Granger at Martinez, hurried us off to fill our day's appointment.

At Walnut Creek we found a live Grange already pressing into the service every working aid, in a most orderly, efficient and most admirable manner, had everything in readiness for the day's work.

After salutations, the Walnut Creek Grange was called to order by its Worthy Master, Bro. Gray, for the purpose of conferring the third and fourth degrees on four brothers and three sisters, making an addition of seven members. This work was done in such an impressive and strictly correct manner, assisted as he was, by his most efficient corps of officers, that we were forced to the declaration that so far as our knowledge went, Walnut Creek Grange might, for efficiency, correctness and every possible effect that our beautiful ceremony insures, be called the banner Grange of all I had visited.

After the closed Grange meeting work was done we adjourned to Central Oak hall, where was spread truly a feast of fat things. No luxury was apparently wanting to make the feast a complete success, and notwithstanding the numbers were legion, and the large hall crowded to almost excess, yet all were waited upon and all and everybody accommodated.

In the very midst of this peculiar Grange enjoyment, where all was comfort and joyousness, a cry was heard and a shout of still greater joy expressed, announcing the arrival of our eminent Past State Master and Past State Lecturer, Bro. Wright. Our joy was complete, all was fulfilled that Bro. Jones promised, and a complete success promised for Walnut Creek Grange May meeting, with the visiting Grangers from all the surrounding Granges in the county.

The harvest feast over, and most thoroughly enjoyed, an adjournment to the church was announced, to hear a lecture from the State Lecturer and the Past State Lecturer on the "Grange History, Objects, Aims and Purposes." This assembly constituted what we call our open meetings, for the purpose of ventilating the true work of the Grange; and our Worthy Master, Brother Gray, presiding, after more suitable preliminary remarks, introduced the State Lecturer as the first speaker, to be followed by Brother Wright. The subjects mostly dwelt upon by us were: Equal taxation, as called for by the organic act, the constitution of the State of California, and how that was to be effected under the auspices of the Grange in behalf of the whole labor and producing element of the State; and secondly, the necessity of an industrial as well as a text-book education for our children. Brother Wright also ventilated, and in a most eloquent and efficient manner treated, the subject of co-operation as it has succeeded in England and its applicability to this country. There was also discussed the necessity of a practical agricultural education in California. Full three hours were taken up with the lectures, during which time the very greatest attention was given and such rounds

of applause greeted the speakers as to show complete sympathy with the subjects and matters discussed.

This Walnut Creek May meeting, to accommodate all, was held on the 5th instead of the 1st of May, and must be pronounced a complete success; and Contra Costa Grangers declared fully, not only alive to the Grange work, but as fully ready to meet the work of every Granger who can make sacrifice of partisanship for principle and the great general good to the greatest number.

B. PILKINGTON,  
State Lecturer.

### Action by Fairview Grange.

**EDITORS PRESS:**—At a regular meeting of Fairview Valley Grange, No. 97, P. of H., held April 28th, the following resolutions were passed:

1. That Providence has made ample provision for all who make an honorable effort to provide for themselves.
2. That few things are impracticable in themselves; that it is for want of judicious application that men fail of success.
3. That dry seasons are the general rule, and good crops the exception.
4. That Providence has provided an abundance of water now running to waste to keep every valley in this State in perpetual bloom.
5. That at least one-half of the wealth of this State is now running to waste down her water courses.
6. The various amounts of money now spent on artesian wells, windmills, pumps and other devices, for the purpose of raising water, would pay the interest on State bonds sufficient to construct canals to take water from its courses and irrigate the most of the land in this State fit for cultivation.
7. That it is the duty of States to make laws that will do the most good to the greatest number, with justice to all.
8. That the Legislature of this State should inaugurate some plan by which the water could be utilized for agricultural purposes.
9. That all water franchises for irrigating purposes should be vested in the State and not in corporations.
10. That the city of San Francisco can furnish her citizens with water in conjunction with the State for much less than they now pay a corporation.
11. That these resolutions be entered on the minutes of this Grange, that a copy be sent to the county papers, the *PACIFIC RURAL PRESS* and the *California Patron* for publication.

T. A. GALLIOT, Sec'y.

### Grange Picnics.

Many days are now being made memorable to the Subordinate Granges by the enjoyment of picnics and excursions. We find in our interior exchanges descriptions of these interesting occasions, from which we clip a few notes of each:

#### Sycamore Slough.

The grounds were about a quarter of a mile down the slough from Davis' store, and for such a day a better selection could not have been made. There were large, spreading oaks that cast dense shades over the grounds, and between and among them were any number of smaller oaks. No effect whatever of the norther could be felt on the grounds, so that visitors felt even more satisfied on reaching the shelter than if they had gone there on a calm day. A grand stand had been erected for the speaker and officers of the day, and seats provided for such as chose to listen to the exercises. At about half past 11 o'clock the Grangers formed at the hall at Sycamore, and marched in regalia to the grand stand. The following were the officers of the day: Committee of Arrangements, C. J. Diefendorff, Chairman; J. R. Totman, H. A. Logan, H. D. Strother, R. Jones and Mrs. H. D. Strother; President of the Day, J. R. Totman; Marshal, R. Jones; Master of Ceremonies, Jacob Myers; Chaplain, Rev. T. H. B. Anderson. Mr. Myers introduced the President of the Day, who made a few appropriate remarks, after which the choir of the Methodist church, Colusa, sang "The Harvest is Plenty and the Laborers are Few." Prayer by the Chaplain, followed by "What Shall the Harvest Be?" by the choir. J. W. A. Wright, Past Grand Lecturer of the Order, was then introduced and spoke for over an hour and a half, interesting his audience throughout. By request of a large number of persons present, he was prevailed upon to prepare a copy of the address for the next issue of the *Sun*; and as we shall give it in full, or pretty much so, next week, we will not attempt a synopsis now. After the speaking we had the song, "We are Coming Brother Grangers" by the choir, a short address by Rev. Mr. Anderson, the song "America," and benediction. After this, all who had brought lunch with them began to spread out the eatables. There were some 1,200 or 1,400 persons present, and every countenance wore a bright smile. We never in our life saw a more complete enjoyment.—*Colusa Sun*.

#### Farmington Grange.

The picnic held on Thomas creek by Farmington Grange, P. of H., last Saturday, was one of the most pleasant affairs we ever had the good fortune to attend. Arriving on the ground about 11 o'clock, A. M., we found the speaker

stand occupied by Rev. G. W. Flomming, who had just commenced what proved to be a very able address. The speaker, although not a Granger, and not familiar with the workings of the Order, succeeded in dispelling many of the petty prejudices existing against the organization, and established the conviction that the Order was a mutual and individual benefit to the producers of the soil. The reverend gentleman was followed by Mr. Turner, a rising young lawyer, who very ably brought to bear the paramount importance of the agricultural interests of our State over that of stock raising. The speakers were listened to throughout with marked attention. After the speaking the committees applied themselves to arranging the table, during which time the Tehama string band discoursed lively music for the benefit of those who felt inclined to "trip the light fantastic toe." Dinner was announced at 1 o'clock and we do not hesitate to announce it the richest collation we ever saw at a picnic, and too much credit cannot be given the managers for the hospitable manner in which they entertained their friends. The afternoon was devoted to various amusements.—*Tehama Tocsin*.

### Women in the Grange.

**EDITORS PRESS:**—I am glad to see so many women interested in the Grange cause as is evidenced by their letters. I believe with Sister Kimball, we should do more to make the Grange department interesting. But if all the silent pens were suddenly to awaken to activity I fear it would necessitate the issuing of a supplement to both *PRESS* and *Patron*. But so far the spirit seems to move but few in that direction.

It certainly was a wise forethought to admit woman to the Grange, for it is universally acknowledged that she is a valiant champion of all bloodless contests, never retiring from the field until the last foe is silenced. Narrow streams hurry on with more impetuous fury than broader, more expansive ones. So woman, often shut out from the more frequent interchange of thought, and narrowed down more or less by education, strikes a quick and vigorous blow. She may not always hit the mark aimed at, any nearer than she would a post throwing at it with a stone. She may not comprehend the whole subject, but she has an exhilarating consciousness that she is on the right side, and an enduring faith that the end will be accomplished. Euthusiasm has a power unknown to logic. Did you never hear a song begun in a crowd by one who had perhaps more of the spirit than the understanding of the music, but throwing his whole soul into his voice, one after another caught up the strain; the critical forebore to smile; the timid, under cover of the general enthusiasm, ventured their quivering notes and the coldest heart felt a thrill of genuine emotion as they too, at last, joined in the full chorus. With a just cause and grand and noble end in view should we not feel enthusiasm; shall we not sing the song until the dry bones are stirred with new life. To make good the boast that all are equal in the Grange, all offices should be open to either. But in the eternal fitness of things I believe women would very rarely fill some of them.

It is very gratifying to learn that the Worthy State Lecturer meets with so much enthusiasm and good feeling among the Granges. When I emigrate recommend me to a locality where there is a live Grange, for there I would expect to find an intelligent and social people. The Grange, after its first organization, grew so rapidly it seemed at once bursting into flower. But not so; only a few green leaves have as yet appeared. If, however, while our brothers dig deep and strive in financial prosperity to firmly plant the roots of the fair tree, we carefully guard the tender buds from the scorching heat of selfishness, and the frosts of indifference, the glorious perfect flower will yet expand and shed its fragrance on the air.

We of West San Joaquin, feel that we have gained a grand victory and hope our brothers and sisters will all rejoice with us. After a four years' struggle we have triumphed over money kings and land monopolists and secured the farmers' canal. "The mills of the gods grind slowly but all the more surely." Our grist is in and it will be ground.

SAN JOAQUINER.

### Farmers and Grangers.

Open Meetings—Invitations Extended to all—Further Appointments.

The good results realized from the work of Bro. Pilkington, the Worthy Lecturer of the State Grange, have induced the following further appointments for June and July:

It would be more satisfactory to me if I could consult the convenience of the Granges that are to be visited by the Lecturer, but that course seems to be impossible, as half a dozen Granges might want him on the same day, and at widely separated places. The Grange will therefore excuse what would otherwise seem to be arbitrary appointments.

It is hoped that each Patron will exert himself to bring to these meetings not only the lukewarm brothers, but all farmers and others who are interested in the success of our Order,

which is synonymous with the success and prosperity of our country.

Special invitations are extended to farmers who have been skeptical of the beneficial effects of our Order, to attend our meetings and listen to Bro. Pilkington, an able and eloquent speaker.

While the various Granges visited will not be called upon to bear any portion of the expenses of the Lecturer, it is expected, however, that individual members of the Order will manifest their well-known liberality by meeting Bro. Pilkington at the depot, and extending to him the hospitality of their homes.

Sonora, Tuolumne County.....	Saturday June 2d.
Oakdale, Stanislaus County.....	Tuesday, June 5th.
Lathrop, San Joaquin County.....	Tuesday, June 5th.
Modesto, Stanislaus County.....	Wednesday, June 6th.
Waterford, Stanislaus County.....	Thursday, June 7th.
Turlock, Stanislaus County.....	Friday, June 8th.
Cottonwood, Merced County.....	Saturday, June 9th.
Merced, Merced County.....	Monday, June 11th.
Fresno City, Fresno County.....	Wednesday, June 11th.
Centerville, Fresno County.....	Thursday, June 14th.
Kingsburg, Fresno County.....	Friday, June 15th.
Grangeville, Tulare County.....	Saturday, June 16th.
Hanford, Tulare County.....	Monday, June 18th.
Visalia, Tulare County.....	Tuesday, June 19th.
Farmersville, Tulare County.....	Wednesday, June 20th.
Soda Springs, Tulare County.....	Thursday, June 21st.
Tulare City, Tulare County.....	Friday, June 22d.
Glennville, Kern County.....	Saturday, June 23d.
Bakersfield, Kern County.....	Tuesday, June 26th.
Tehachipa, Kern County.....	Thursday, June 28th.
Los Angeles, Los Angeles County.....	Saturday, June 30th.
Compton, Los Angeles County.....	Monday, July 2d.
Anaheim, Los Angeles County.....	Tuesday, July 3d.
Westminster, Los Angeles County.....	Wednesday, July 4th.
Azusa, Los Angeles County.....	Thursday, July 5th.
Rincon, San Bernardino County.....	Friday, July 6th.
Riverside, San Bernardino County.....	Saturday, July 7th.
San Bernardino, San Bernardino Co.....	Thursday, July 12th.
San Bernardino, San Bernardino Co.....	Saturday, July 14th.

Appointments for San Diego and other counties will be made in next week's *RURAL*.  
AMOS ADAMS, Sec'y State Grange.

### Temescal Grange on the Thistle Law.

At a regular meeting of Temescal Grange, held at Oakland on the 5th, the "thistle law" was brought up for consideration. The law was approved and a resolution passed declaring that it ought to be enforced. The Secretary was instructed to lay the matter before the Board of Supervisors, and ask that the road overseers be reminded of their duty and the \$100 penalty for neglecting it.

Several farmers spoke of the progress which the Scotch thistle has made in Alameda county of late, and of their experience in fighting it. Attention was called to the distinction between the two thistles mentioned in the law, the Scotch and the Canada. The former is a coarse plant, with green and white leaves, and not as difficult to deal with as the Canada thistle, which latter has, we believe, been reported from only one place in the State, San Joaquin county.

If the plant is of considerable size, and has bloomed, cutting it up will not always prevent the seed from maturing. As with corn, the seed will fill from the juice in the plant when cut. If the head were severed from the stem, of course this would be prevented. It would be well to burn the weeds as soon as dry.

The Scotch Thistle in Alameda County.]

**EDITORS PRESS:**—The action taken by Temescal Grange in regard to the enforcement of the thistle law is certainly timely; and it is to be hoped that the good resolutions taken will not in this case serve only the purpose in road-making, which is said to be the sole result of so many in this imperfect world. It is, however, especially with regard to our sublinear roads, that the law needs to be enforced. Few owners of land, comparatively, will allow the pestilent weed to flourish on their ground. But when it comes to the public streets and waste grounds, it seems to be nobody's business to see that the thistle does not go to seed and so spread over the whole neighborhood. Between Oakland and Berkeley some of the highways, and a great number of by-ways, are lined with the handsome variegated foliage of our Scotch friend, and the prickly heads are shooting up by thousands, ready to scatter a few millions of seeds within two or three weeks to come. If anything is to be done about it this season, it is high time it were attended to an once.

E. W. HILGARD.

University of California, May 12th, 1877.

### Co-Operation.

The meeting that was called for Tuesday evening, May 15th, to consider the subject of co-operation, is unavoidably postponed until Tuesday, May 22d, at 7:30 P. M., at Golden Gate Grange.

Bro. J. W. A. Wright, who has familiarized himself with the Rochdale system of co-operation as conducted in England, has promised to be present and give us the result of his observation of its workings while in England. It is believed that this system of trading can be successfully adopted at many of the Grange centers throughout the State, therefore Granges and Grange stores should be represented at the meeting.

Let it not be understood that this is wholly a Grange movement; it is particularly in the interest of the consumers, and affects those living in cities and villages to a much larger extent than it does the producers. We therefore invite all consumers to be present to listen and take part in the meeting.



## AGRICULTURAL NOTES.

## California.

## AMADOR.

**CROPS.**—*Ledger*, May 12: The oldest settlers unite in saying that the crops harvested throughout the county this year will be heavier than at any previous season. Every year there have been places here and there where the yield has, perhaps, equaled the crop now being gathered; but this year they are uniformly heavy. Light crops are the exception. Hay harvest is in full blast around Jackson. Frank Hoffman will reap an average of over two tons to the acre. The grain in several parts of his field stands close on five feet high. Froelish will also take in an enormous quantity, between two and three tons to the acre. Amador county will have a large surplus over her own requirements, and as the price of hay is likely to be high in the valley, it is not improbable that it will pay our farmers well to ship it below.

## CONTRA COSTA.

**TULE FARMING.**—*Antioch Ledger*, May 5: San Francisco is filled to overflowing with idle men of all classes, laborers, clerks and mechanics, who have no idea they might be profitably employed and accumulate property if they would but help themselves. As illustrating this point we give below the partial results of the labor of three young men named Drury, Burgess and Williams, who last spring left San Francisco, to experiment in Contra Costa tula farming. They rented 100 acres of tule land a few miles from Antioch. Of this they to-day have 70 acres in wheat and barley which they propose cutting for hay, and which will yield three tons per acre; 210 tons of hay at \$20 per ton, \$4,200; 10 acres in potatoes, 1,000 sacks, at 50 cents, \$500; five acres in beans, \$500; making \$5,200. Besides this they have five acres in corn and the balance, 10 acres, in vegetables. Mr. Drury says their vegetables from the 10 acres, together with their poultry products will pay all expenses, thus leaving a handsome profit for the year's labor. In addition to the above they will grow a second crop of hay which with prospective prices will somewhat swell the receipts from the 100 acres during the present dry season. What these three young men have done this summer, hundreds of others might have done, who are vainly endeavoring to retrieve their lost fortunes in California street stocks. Honest labor properly applied on the tough tules will yield a far surer reward than can be possibly hoped for by those who persistently endeavor to live by taking advantage of the rise and fall of the bonanza stocks.

**ALFALFA FIELD.**—Mr. Biglow, one of, if not the oldest resident of Sherman island, and one of the most successful tule farmers in the country, informs us that he has something over 100 acres in alfalfa, from which he has cut the first crop, and which will yield him two additional crops this season, in all six tons of hay to the acre. This, well baled and cured, at present market rates will give an income of \$110 per acre, or say a net profit of \$75 per acre. Of course this is an exceptional year as regards the price of hay, but for dairying purposes it is doubtful if the tule land can be more profitably utilized than to sow alfalfa. It is said that hogs will fatten upon the dry hay. With the railroad completed, farmers, especially on the 50,000 acres of tule in this county, bordering the high land will be able to send their fruit, vegetables and dairy products daily to San Francisco market.

**THE GRAIN IMPROVING.**—*Gazette*, May 12: The cool westerly winds continue to have a beneficial influence upon the growing grain, and it shows great improvement, noticeable from day to day. Most of the summer-fallow and early sown grain promises well, and there are many pieces that will almost certainly turn out finely. Moraga valley will make a better crop this season than for many years before. The grain in Taylor valley promises well as a general thing, and the same is to be said of the San Ramon; further than this it is only exceptional pieces of which much can be expected.

## KERN.

**MOHAVE.**—*Courier*, May 10: Mr. Glendenning, who has charge of the Buena Vista ranch sheep, some 10,000 of which are now on the Mohave desert and as many more at the Buena Vista ranch, informs us that he cannot keep those on the Mohave much longer. There is plenty of old feed but no water, and his efforts to get water have not been successful.

**AGRICULTURAL ASSESSING.**—Deputy Assessor Caldwell, of Linn's valley, was in town this week. He reports excellent prospects for crops in the valley, the season of which is a month or more later than that of the great valley. Grain is looking very well and the rains have already been sufficient to ensure crops. Farmers are now busy planting potatoes, of which a large quantity will be seeded. Linn's valley is renowned for the quality of her potatoes. The soil and climate of that section is much better adapted to this product than that of the valley, and a large share of the product finds ready sale here after being hauled 40 miles. The grass in that vicinity is short but thick and nutritious, the alfalfa though not growing very high, being sufficiently advanced to produce seed, and the ground in many places bristles with the spear-pointed seed pods. In the mountains, however, the grass is an entire failure and the wild feed will soon be exhausted. There will

be a large falling off in the assessment of live stock this year compared to last. Many of the sheep and cattle are dead, while many more have been driven off in search of feed. There was absolutely no increase to make up for these losses. Sheep are assessed at 50 cents per head for short woolled and 75 cents for long woolled and there is no separate assessment of wool. Mr. Caldwell thinks, notwithstanding the deficiency created by disasters in the stock interest, it will be made up by the assessment of railroad lands, so that Linn's valley will hold her own on the assessment roll of the county. We trust so.

## LAKE.

**A SHEEP RANCH.**—*Democrat*, May 12: Last Wednesday morning, Mr. Lindsay Carson kindly took us out for a drive to Mr. Woolridge's house. Here we found them busy shearing sheep, which they pasture for Mr. Carson on shares. They have a very good range, and as the sheep are thoroughbred Spanish Merinos, they are a very profitable investment for both parties. Wool is bound to bring a good price this year, and wool growers, we understand, are in no hurry to sell their newly shorn fleeces. The land on which Mr. Woolridge has settled is very hilly, looks barren, but from the looks of his garden is most productive.

## LOS ANGELES.

**COST AND PROFIT OF ORANGE CULTURE.**—*Herald*: Mr. J. de Barth Shorb has calculated that about 300 gallons of water a year are ample for an orange tree. The farmer in southern California, therefore, who owns his 10 or 20 acres and a five-inch artesian well, can set aside two acres for an orange grove. That would give him, say 140 trees. While they are coming on he can grow potatoes and other vegetables between the rows. He can put out five-year old trees; and, at 12 years, they ought to yield him at least \$10 a tree.

## MONTEREY.

**CROPS.**—*Democrat*, May 12: As was expected the cool spring, made so on the coast by the heats of the interior, has measurably counteracted the effects of the drouth upon the crops. There will be some wheat harvested in the range of country which embraces the uplands of the Alisal and Chualar ranches, a good quantity of hay will be cut, and there will be scattering harvests of barley to no inconsiderable amount. It is not a question of abundance with us, of course, but we may fairly claim though the "wolf is at the door" he will not enter it. Summing up, there will be a little wheat harvested—not enough to seed the whole valley—and barley and hay enough at least to furnish forage for necessary animals until next year's harvest. The crops in the vicinity of Santa Rita, although somewhat "short," are not by any means totally worthless. On the contrary, all of them, with but few exceptions, will make good hay, and some a partial yield of grain. On the low lands along the *bolsa* especially is this the case, and the farmers look hopeful despite the gloomy forebodings. Good crops of barley are expected from Bardin's sand-hills; ditto from the low grounds on the south bank of the river in the same quarter, and, as we also hear, from several tracts on this side of the river.

## NAPA.

**RUTHERFORD.**—*Star*, May 11: The farmers are all busy with their hay, and preparing for grain harvest. There is not very much hay in this vicinity, but enough for our own consumption. T. B. Edington has quite a large amount cut; Mr. Konig also has some fine hay. As far as I can ascertain, frosts have done very little damage in our immediate neighborhood, but down about Oakville it has seriously hurt two or three vineyards, still they will have some grapes. The corn looks very weak, and is likely to be very light.

## PLACER.

**CROPS.**—*Herald*, May 12: A trip during the early part of week through parts of the grain producing sections of Placer, Sutter and Yuba counties, convinces us that the cereal product of these counties this year will be nearly an average, provided the weather between now and harvest remains sufficiently cool to cause grain to fill well. Late sown grain in most cases is short and thin and will produce less than late sown grain usually does, but to counterbalance this deficiency the summer-fallow, which is a great deal better than usual, the early rains not having been sufficient to drown it out in low places, as in the case in average wet seasons. These low flat places which are common on all the plains land in the valley, and which in wet seasons produce nothing, contain this year the very best grain.

## SAN BENITO.

**CROPS.**—*Hollister Enterprise*, May 12: The facts are that in this locality, like many others, there is, generally speaking, a complete failure of crops, but in many places there will be raised some good grain and hundreds of tons of hay; enough of the latter, if evenly distributed, to supply the home demand for another year. On the Gabilan and Coast Range mountains within from five to twelve miles of Hollister there is now and will be for some time to come, plenty of feed for the stock that are there. A great many stock, the large bands particularly, have been driven elsewhere, but those remaining look well, and we have heard of comparatively none dying. Flint, Bixby & Co., and others have killed a few of their old and valueless sheep, and fed the carcasses to their hogs, in order to save the feed for good stock; that is all. Several sheep owners who are grazing their flocks within the confines of the county have hundreds of

mutton sheep as fat and fine as any in the State. The main danger to stock men in this section lies in the future, instead of the present. It is believed that there is not sufficient moisture in the ground to mature the grasses, in consequence dry feed in the late summer and fall months will be so scarce that stock will not be in condition to endure the cold rains which are likely to fall in October or November, hence losses will follow.

## SAN DIEGO.

**THE BEES AND SHEEP.**—*World*, May 12: A conversation with some of our apiarists, within a day or two, convinces us that the present outlook for a honey crop is good. These gentlemen agree that another shower or two would prove of vast advantage; but with what we have had a fair crop is pretty well assured, unless something should interfere beside a want of rain. This is gratifying. We think the prospect has been improved over a month since at least 50 per cent., and our county cannot fail to go over the crop of year before last (500,000 pounds), though it may not go up to the last crop of one million three hundred thousand pounds, and yet that is not by any means impossible, though perhaps not probable. Sheep shearing is going on rapidly at present. We hear that there is much poverty of flesh on the sheep, but we do not hear so much talk of removing them to distant pasture fields. The price of wool still rules low.

## SAN LUIS OBISPO.

**ITEMS.**—*EDITORS PRESS*:—At Arroyo Grande they are irrigating the low willow land, and will raise bountiful crops for which the present scarcity south will bring them good prices. Sheep and cattle are being taken north to Mendocino and other counties on shares, by men who have pasture. In most of San Luis Obispo county, on the western slope of the hills, feed is said to be but little inferior to an ordinary year, and stock doing well, while east of that the ground is parched and bare except in favored spots.—J. W. W.

## SONOMA.

**MAKING HAY.**—R. Corbaley, in *Russian River Flag*, May 12: Some men are careful in taking care of their hay as soon as it is sufficiently cured, and do not suffer the sun to bleach half the strength out of it. Others, however, cut their entire crop of hay down before putting any of it in shock or stack. Very frequently, after bleaching in the sun for a number of days, a rain comes on, and the result, all know—the crop is damaged. What is called the "hay rain," is expected each year. Sometimes the hay has been put in bulk to be convenient for baling, and this stack, as it is called, is left flat on top, so that if the rain comes before the baler does, the hay is wet in proportion to the extent of the rainfall. But sometimes the hay is baled, and the bales are left lying about loose or piled up promiscuously, and left without shelter, and receive the rain. Last fall my attention was called to some hay that was wet by the hay rain. It presented a fair appearance on the outside, but the weight created suspicion on the part of the purchaser and on opening a bale the hay was found to be worthless. Now, the practical question is, will it pay to continue this practice? Hay this year is, or rather will be, scarce, and good hay will command high prices. Therefore, let us all look for the "hay rain."

**HOP PROSPECT.**—*Flag*, May 12: Last Tuesday we visited the Richardson hop-ranch, southeast of town, and found the proprietor engaged, with six assistants, in looking after the vines to see that all were climbing properly. While at Hopland, near the northern limits of the county, they were setting the poles two weeks ago, Mr. Richardson was turning the vines, in many places, on to the strings at the top of the poles, showing the hop to be much earlier here than elsewhere. However, they are in advance of last year about a week.

The cut-worm (the common corn cut-worm) has injured the vines by cutting them near the ground, but not to a serious extent; another kind of bug has, in many instances, nipped the ends of the vines even after they have reached four or five feet from the ground, and they had to be cut down and new sprouts started. The yield last year was 10 tons from his 14½-acre field, and he thinks the product this year will be as good as it was last.

Amongst the other yards in this vicinity are Grant's, of five acres, Schmidt's, of three, Alderson's of 22 or 23, all of which are doing well. It is gratifying to know that Healdsburg hops are a favorite in the market on account of the superb manner in which they are cured. Richardson's yard, although containing less acres than some of the others, contains 120 or 130 more vines, as they are planted closer together.

**CROP PROSPECTS.**—Nothing has transpired during the past week to give the least unfavorable aspect to the crop prospects in this county. On the contrary, all the indications are rather more favorable than they were a week ago. The heavy fogs which prevailed for some days were beneficial. Wheat is already heading out finely in many fields, while that later sown is growing well and shows but little sign of injury from mildew or blight. We believe it may be safely calculated that Sonoma county will produce a full average crop. Barley is already ripening and the general impression is that a full crop will be raised. It is a week or two earlier than usual. Corn on many farms has come up well and is growing finely. It is too

early yet to calculate what the yield will be, but with the usual number of fogs there is every reason to believe an abundant crop will be made.

**THE CLIP.**—Tennessee Bishop informs us that the clip in his section will be light, on account of the exceeding cleanliness of the wool. The weather has been cool, and as the wool was of course free from oil, no dirt accumulated in it. This will be good for the buyers but not so good for the sheep-raisers. Sheep are in good condition and no disease prevailing. He has sheared 876, which averaged about three and one-half pounds to the sheep. His neighbors, Thing & West, began shearing this week their band of 2,200; Sibbals shears 1,100; Van Allen, 750; Samuels, 750, approximately. Wool is now worth about 25 cents, a paying figure. The clip cannot, however, be bought at that.

**A FINE FARM.**—*Democrat*, May 12: The Knights valley ranch, now the property of the Steele Bros., is under the management of Mr. E. Ewing. It is one of the most beautiful, as well as one of the most valuable estates in California. It contains about 7,000 acres of land, which lies at the foot of St. Helena mountain. For fertility of soil it can nowhere be surpassed. Mr. Ewing has in cultivation this year 1,200 acres of barley and wheat which is looking splendid. "I have," says Mr. Ewing, "100 acres of barley that will average 50 bushels to the acre." One thousand fat hogs will be sold from the farm this year. There is also a dairy on the place now supplied with the milk from 100 cows, which will be increased this week to 150 head of cows. Taking it all together it would be hard to find another such place as the Knights valley ranch.

## SUTTER.

**GOOD GRAIN.**—*Banner*, May 12: Mr. W. C. Deputy informs us that his grain crop is going to be very good. Some summer-fallow land he assures us, will have a better crop upon it than has been raised in the last five years, and in all these seasons a fair average crop was gathered. This is a flattering prospect, and we are able to assert that throughout almost the entire county excellent crops will be gathered. We think, in the light of all the surroundings, that we are justified in claiming to be the banner grain county this season. If not, why not?

## TULARE.

**DISEASE AMONG HORSES.**—*Delta*, May 12: What is supposed to be a new disease has broken out among the horses of several farmers in Fresno county. They are taken with swelling commencing in the legs and extending to the body until their size becomes a wonder to the beholder, and death comes to their relief, in many cases. A farmer a few miles from Kingsburg has had two or three cases, neither of which proved fatal. He tells us their legs swelled to about the size of a small man's body, and that the case was supposed to be poison in the form of weeds, but that it was the opinion of some that they might have been bitten by tarantulas or other venomous reptiles. A number of them being affected at the same time is rather against this theory.

## VENTURA.

**A SMALL FARM.**—*Free Press*, May 12: About a mile from town, on Ventura avenue, is the small and well-tilled farm of L. D. Chillson. On a portion of it he has a fine orchard and a small vineyard, and from the sale of fruit last year he cleared the nice sum of \$1,500. That portion of the farm which has been devoted to cereals has produced crops as follows, without irrigation: The first year it was well plowed and sown to barley, and produced five tons of hay to the acre; for two seasons following the same ground yielded volunteer crops, the first year four and the second year three tons to the acre of hay; then it was plowed and planted to corn, and produced a heavy crop; and the fifth year it again volunteered a crop of three tons and a half of good hay. Now, there are a great many well-meaning people who may be inclined to doubt these statements, and to those we will say, call on Mr. Chillson or any of his neighbors for their verification. They are pure, unadulterated, uncontroversial facts, and prove conclusively that there is money to be made by the careful cultivation of a small farm in a favorable location. Three volunteer crops in five years would astonish an Eastern farmer.

## YOLO.

**COMING OUT.**—*Mail*, May 12: Notwithstanding the incessant north winds which continued for over a week and until Sunday last, the wheat fields of Yolo county have made a surprising advance for the better, and it now seems that the yield will be much greater than has been anticipated for over two months. We have seen some fields of summer-fallow that never were surpassed in Yolo county, and the winter sown is looking now as though the greater portion of it will be worth cutting. We do not know just to what peculiar atmospheric ingredient we can attribute this change for the better. It is certain that rain has not caused it, for we have not had a drop for a month, and but little south wind. Can it be that it was the north wind which was needed all the time.

**HUNGRY HOLLOW.**—*Democrat*, May 12: A letter received from this locality too late for publication, informs us that heading grain has commenced in that favored locality, both of wheat and barley, and that there will be about as much grain there this year as usual. The north winds are ripening it rapidly, but nothing is said about shrinkage, so it is probably all right. One field of Sonora had suffered somewhat from being blown out.





### A Spring Poem.

What are the dearest treasures of the spring?  
The rosy haze that veils the forests bare;  
The vague sweet fragrance in the balmy air;  
The twitter of the swallows on the wing;

The tender beauty of the wavering light;  
The rains, as swift as tears in babies' eyes;  
The sudden sunshine in the changeful skies;  
The softened brightness of the star-lit night;

The freshening emerald of the bladed grass;  
The sparkle of the myriad-dimpled sea;  
The rush of mountain brooks, once more set free;  
The sense of early bloom so soon to pass.

These are most fair, but more than these to me  
The wakening memories of the vanished years,  
Tender regrets, grown dim 'neath many tears,  
And sorrow softened like a rainy sea;

Swift recollections of forgotten bliss,  
Thrilling the heart with dreams of joy again,  
An ecstasy of pleasure shot with pain,  
As when the sunbeams and the rain-drops kiss;

Reluctant hopes, that come like snow-drops white,  
The faint frail harbingers of happier days,  
Filling the heart with tremulous anæsthesia  
That hardly dares to call itself delight.

—Harpers' Monthly.

### "Only A Joke."

#### A Bit of Good Advice for Young Husbands.

"A difference of tastes in jokes is a great strain on the affections."—GEORGE ELIOT.

"I was always fond of a joke," said Uncle Moses Fuller to the friends who had assembled to commemorate the golden wedding of his good wife, Aunt Patty, and himself. "But jokes have their proper times and places, and that reminds me of a little story that I will relate to you, young people, while mother is in the other room taking down the old china.

"Some of you are married now, and some of you are likely to be at no distant day—if there is any truth in signs or hearsay—and none of you will object to receiving a mild lesson from an old man.

"I was always fond of a 'joke,' as I was saying, but I never 'joked' my wife but once. That was after we had been married about a week, and had got nicely to housekeeping. The old minister who had married us, and who had known us both all our lives, and his wife, came to make us a call, and Patty urged them to stay to tea. They accepted the invitation so cordially given with evident pleasure.

"As they were our first visitors, Patty wanted to put her best foot forward, of course, so she made hot biscuit for supper. I remember it as if it were only yesterday, how pretty she looked in her blue home-made gown and clean freshly-starched checked apron, as she was stepping around in her shy, quiet, womanly way, making the biscuit, looking at and turning them in the tin baker before the open fire-place, setting the table and pleasantly talking with her guests at the same time, for we had no parlor then.

"I felt quite proud of her, I assure you, when we drew our chairs around the neatly spread and bountifully loaded table, and just at that moment I thought more, I fear, of Parson and Mrs. Baneroff's opinion of Patty's cooking and housekeeping than I did of the grace he was saying. Both of our guests praised the light, short, properly browned biscuit, and Patty's girlish face flushed with genuine pleasure as she shyly glanced up at my face for her husband's approval.

"But I did not speak, and presently she asked timidly: 'I hope you like them, Moses, for they are the first biscuit I have made since—since—' 'Since you have become Mrs. Fuller,' said the parson's wife, considerably helping out her speech.

"Oh, yes," I replied flippantly, thinking it would not do to praise my wife before company, and not relishing the possibility of losing the opportunity to get off one of my 'jokes.' 'I like them, to be sure; but I should hate to have anybody throw one of them at my head for the consequences might be serious.' Patty's countenance changed as if she had received a blow; and wife-like she tried to throw off her ill-concealed mortification at my thoughtless speech. Although I could find no fault with the way she performed her duties as hostess, I notice she ate very little of the supper.

"Mr. and Mrs. Baneroff started for their home just before dark, and as I was tucking them up in their comfortable old chaise I thought what a happy, contented old couple they were. When I handed the parson the reins, after everything was ready, and they had bidden Patty 'good night,' and she had gone back through the gate into the yard, he leaned down toward me, and putting his trembling hand on my shoulder, said: 'My son, hear in

mind that pure, burnished gold even may be scratched and defaced by rough usage.'

"I felt like a brute all the time I was getting the cows and milking and doing the chores. When I carried into the kitchen the brimming pails of milk, Patty was washing and polishing and putting away that very china she is now taking down, and I could see in the gathering twilight that she had been crying. I kissed her impulsively with my heart in my throat, and catching the empty milk pail started for the well. I didn't make any promises to anybody but myself.

"The moon was shining high in the heavens, and as I ran down the bucket, I saw it reflected in the clear water at the bottom of the round, deep well. I felt as if it might be Patty's love going down, down, far beyond my reach, slipping away from me forever. As I drew up the brimming mossy bucket, the brilliant harvest moon was reflected upon that, for, in broken flashes of light, shining up curiously from the dark depths of the well. I hurriedly drew up the smooth pole, feeling that I was gaining what I had come near losing.

"I set the overflowing bucket down upon the soft, green grass, and let it be until the perturbed water became still and smooth like a mirror. Then looking into it I saw the moon peaceful and calm once more, I emptied the bucket into my pail, and as I did so, I said aloud: 'I will never joke Patty again. She is gentle and sweet and sensitive; far too good for a rough fellow like me. I will never grieve her tender, loving heart by my peculiar kind of joking again.'

"And I have kept my word. We were married 50 years ago to-day, and although I have had my jokes with other people—jokes that they say are 'rather cutting, though Uncle Moses don't mean anything'—I have never joked with my wife. She has proved to be unalloyed gold, and, thanks to the good old parson's advice, it has not been defaced or had its luster dimmed by rough usage. I have never happened to see the moon reflected in the old well without the memory of those supremely unhappy moments coming back to me. Life is short at the best, young people, and you cannot be too careful about wounding the sensibilities of those who are the nearest and dearest to you."—Mrs. Preston, in *Congregationalist*.

### The Newspaper in the Home.

Philip Gilbert Hamilton, in his admirable papers on "Intellectual Life," thus speaks of the usefulness of the upright newspaper in the home: "Newspapers are to the civilized world what the daily household is to the members of the family—they keep our daily interest in each other, they save us from the evils of isolation. To live as a member of the great white race that has filled Europe and America and colonized or conquered whatever territory it has been pleased to occupy; to share from day to day its thoughts, its cares, its inspirations, it is necessary that every man should read his papers. Why are the French peasants so bewildered and at sea? It is because they never read a newspaper. And why are the inhabitants of the United States, though spread over a territory fourteen times the area of France, so much more capable of concert of action, so much more alive and modern, so much more interested in new discoveries of all kinds, and capable of selecting and utilizing the best of them? It is because the newspapers penetrate everywhere; and even the lonely dweller on the prairie or in the forest is not intellectually isolated from the great currents of public life which flow through the telegraph and press."

CURTAINS.—Cretonne is used and is often designed especially for curtains, but, for summer use, is not to be compared with lace or muslin. The Nottingham lace enjoys a cheap and easy popularity. It is not only very inexpensive, but does not require to be done up often. The present mode is to resemble the guipure curtains; and squares of darker color, embroidered with a white sprig, are a later variety. Otherwise they are not to be compared to muslin, either plain or figured. The prettiest curtains, prettier even than the real guipure—and we are not considering anything expensive in window draperies—are those of fine, clear muslin, with one strip of guipure set in and a guipure edge. But for ordinary chamber use, those of dotted or plain muslin, with a fluted ruffle or lace edge, have no rivals in freshness or fitness. Lace lambrequins are not used at all. Lambrequins of cretonne are beautifully made up at all furnishing stores, and are well worth the expense. If they are not practicable, there are many simple shapes which can be cut at home, paying due regard to accuracy and proportion, and the fitting can be done by the yard by the machines now so generally advertised.

At a lecture a few days ago in Chicago, a letter was read from John G. Whittier, who, speaking of the advance of modern science, said: "Admitting the theory of evolution to be true, I do not see that it need disturb the feelings or faith of the religious world. No deductions of science can change the facts of sin and holiness. We know that something calls upon us to be pure, true, merciful and just—that something holds us to the great idea of duty. This to me is God speaking directly to me, as he does to all; and because he asks me to be good, I know that he is good. Here is a rock with which geology has nothing to do."

### Cats.

It is not often that we hear any credit tendered to the cat for either intelligence or affection; and it is therefore pleasing to be able to record two instances in which one, if not both of these qualities is shown in a remarkable manner in this animal. A gentleman writing from India to a friend in England, a few mails ago, says of a pet Persian cat: "I was lounging on the sofa, drowsily perusing the newspaper a few mornings ago, when Tom came in and stood near me mewing in a plaintive way, as if to attract attention. Not wishing to be disturbed, I waived him off. He, however, returned in a minute or so, and this time jumped on to the sofa, and looking me in the face, renewed his noise more vigorously. Losing patience, I roughly drove him away. He then went to the door of an adjoining room, and stood there mewing most piteously. Fully aroused, I got up and went towards him. As I approached, he made for the farther corner of the room and began to show fight, bristling up and flourishing his tail. It at once struck me that there was an unwelcome visitor in the room, which Tom wished to get rid of; and sure enough, in looking towards the corner, I discovered a cobra, coiled up behind a boot-shelf under a dressing-table. The noise made by our approach aroused the snake, and he attempted to make off, but I dispatched him with my gun, which was readily loaded close by. You should have seen Tom's satisfaction. He ran between my legs, rubbing himself against them caressingly, as if to say, 'well done, master!' The snake measured five feet seven inches in length."

The friend to whom this incident is related, after reading it to me, went on to say, that some years ago, when in India with her father, the family were gathered after tea, one rainy evening, listening to one of their number who was reading an interesting story. While thus engaged, a cat, of which the father was very fond, jumped on to his knee, and moving about in a restless manner, began to mew in a louder key than usual. The old gentleman, as was his wont, commenced to caress the cat, expecting thereby to quiet it; but to no purpose. It showed signs of impatience, by jumping down and up again, mewing vigorously the whole time. Not wishing to be interrupted in what was going on, he called for a servant to put the cat out of the room; but Puss would not tamely submit to an indignant turn-out, and commenced clawing at the old man's feet. This he thought was going too far; he rose too chastise the cat; but ere he had time to do so, he discovered that it was nothing less than a timely warning which Puss had given him; for not far from where he sat there was, under the table, a small venomous snake, which probably would have bitten him had he molested or trampled on it. The reptile was immediately killed, and Puss ceased her mewing.

### Walk Softly.

The tiniest pebble, thrown sea-ward from the beach, causes a wavelet, whose influences are felt for unnumbered leagues upon old ocean's bosom. The softest whisper excites vibrations in the atmosphere around us, which cease not this side the boundless ether; so the act and thought of an immortal man, however insignificant, may color a lifetime, may leave influences which shall not cease until time shall be no longer; influences for good or ill, to millions of immortals like himself, for unending ages. These things being so, it would seem that every act should be felt a responsibility and every thought a prayer. Let us all walk softly then, or at least with a motive and a wish for good.

A crust of bread, thrown thoughtlessly by a fellow student, made Prescott, in a measure, sightless for near half a century. An ill-timed jest has severed many a warm friendship and planted bitterness for a lifetime, where ought to have welled up the warmest and purest and loveliest springs of our nature. Many a time and oft has a frown, a harsh word, an unfeeling or contemptuous gesture, crushed resolves forever, which were budding to a new and changed and better life. Reader, let us all walk softly then by day and by night, at home and abroad, inasmuch as for every step in life we must give account at the judgment.

A DIALECT STORY.—An English clergyman and a lowland Scotsman visited a school in Aberdeen. They were strangers, but the master received them civilly and inquired, "Would you prefer that I should speak these boys, or that you should speak them yourselves?" The English clergyman, having ascertained that to "speak" meant to question, desired the master to proceed. He did so with great success, and the boys answered satisfactorily numerous interrogations as to the exodus of the Israelites from Egypt. The clergyman then said he would be glad in his turn to "speak" the boys, and at once began. "How did Pharaoh die?" There was a dead silence. In this dilemma the lowland gentleman interposed. "I think, sir, the boys are not accustomed to your English accent; let me try what I can make of them." And he inquired in his broad Scotch, "Hoo did Pharaoh dee?" Again there was a dead silence. Upon which the master said, "I think, gentlemen, you can't speak these boys; I'll show you how I do it." And he proceeded: "Fat cam to Pharaoh at his hinder end?" The boys answered promptly, "He was drowned;" and in addition a smart little fellow commented, "Only lassie could hae told you that."

### Mrs. Gaines' Victory.

Readers will remember an allusion which our contributor, Mrs. Nichols, recently made to Mrs. Gaines in a letter to the "Home Circle." Since that letter was written Mrs. Gaines has won her suit to recover possession of a vast property, estimated in 1861 to amount to \$35,000,000. It will probably be known for years as the great American lawsuit. It seems to want no element of romance, mystery, courage and fortitude to make it famous. The indomitable little widow, now over 70 years of age, who has since 1834 been engaged in a constant series of suits for the recovery of her fortune, has just scored another victory by the decision of Judge Billings of the United States District Court of Louisiana, which, if confirmed by the United States Supreme Court, to which an appeal has been taken, will crown her labors with complete triumph.

Mrs. Gaines is a vivacious lady of small stature, who carries her years lightly and seems likely to live to enjoy the wonderful victory she has won, a long time. She has made herself personally familiar with the facts and the law touching every point of her case, and is reputed to be herself in the first rank of lawyers in her specialty of practice. Probably more than 100 lawyers, many of them eminent in the profession, have, at one time or another, had something to do with her case. She is exacting and severe in her dealings with those who serve her, and dismisses them summarily if they do not agree with her judgment of the proper course to pursue. She has had and spent several considerable fortunes in the progress of her litigation, but she has never faltered in her purpose, and never been daunted by any assailants of her claims. If she finally succeeds in recovering the full amount claimed, she will be the wealthiest woman in the United States, and perhaps the wealthiest in the world. What will she do with it when she goes hence. We believe she has no children. One person writes that he "has often seen her as recently as 1871 walking the streets of New Orleans in the plainest clothes, with her inevitable little black bag on her arm, looking far more like a cook in search of a place than like the heiress to \$35,000,000." Nevertheless, she is a most remarkable character, and has earned a place in our national history.

### Happy Homes.

It should be the chief aim of every man and woman to multiply the number of happy homes, for the home is the seed-plant of a noble and flourishing commonwealth, and all tendencies are to be avoided which increase the difficulty of diffusing through every rank of life the refined and holy influences which are nourished by the domestic affections.

Reckless speculation among capitalists, disturbing the steady and uniform course of employment, and its sure counterpart, drunkenness, and improvidence among workmen, are the sharpest weapons which are brought to bear against the happiness of the home circle; for the elements of man's truest happiness lie in a very small compass, and if society were only conducted in a more rational and moderate spirit, and its members of every class, were restrained from vicious indulgences of their appetites and passions, and from the pursuit of phantoms which fade away in their grasp, how much greater happiness would be found in the home circle, and what burdens of sorrow and grief would be lifted from the hearts of women.

A marriage entered into with thoughtful care, and cemented by a faithfully pure love, when a fixed position has been gained, and a small fund accumulated; with hard work and frugal habits at the commencement of the new life, so as to meet in time the demands of the future; a home comfortably arranged, clean, healthful and bright, with a small collection of good books, a few well selected engravings, some blooming plants in the window, with a canary bird to awaken sweet echoes in the room, or it may be a piano and flute to accompany the voice; the evenings made pleasant by cheerful occupations, tending to mutual improvement, with the exchange of visits with neighbors and friends of congenial tastes and pursuits—these are conditions of life which can be attained by every husband and wife who will carefully seek for them, but are lost to thousands because they do not seek them in the right direction, but go abroad in search of the enjoyment and happiness which they might create at home if they possessed the desire to obtain them.

This is not a visionary picture, but a sober possibility, which even now, under the pressure of adverse times, is to be found in the homes of many working men and women, who have learned the secret of being therewith content. Mutual affection should be preserved by mutual endeavors to amuse, and to attend to the wishes of each other; but when there is a total neglect and indifference either to amuse and oblige, can it be wondered at that affection becomes indifferent, and sinks into mere civility?—*Exchange*.

THE ways of the world are strange and devious. Yet there is great good in it, for a touch of misfortune maketh all mankind kin. Many a man deeply engrossed in business, hurrying along the pathway of life, absorbed in worldly cares, turns now and then aside for retrospection and kindly acts. And these are the flowers he strews along the highway of his earthly existence.



## Dyspepsia and Long Life.

The late Dr. W. W. Hall, formerly editor of the *Journal of Health*, has written very sensibly of dyspepsia in a little book just published in New York City by R. Worthington. According to this writer, nine out of every 10 cases of dyspepsia are caused not by any defect of the digestive organs, but by improper dieting and insufficient exercise, mental or physical. People, whom a disordered digestion requires to pay attention to these matters, frequently outlive by many years their more robust neighbors. The author cites the case of one poor dyspeptic patient in whose case no less than 63 ailments were manifested; among them fretfulness, nightmare, and, most dismal of all, a sense of gloom. This was undoubtedly a very bad case, for, in spite of all that wealth could supply, or careful treatment do to remove the disorder, it remained unabated, until finally the offending article of diet was discovered, and then recovery was rapid. In about a month's time the only trouble this restored dyspeptic had to complain of was that she could never get enough to eat. With this instance before his eyes, the most desperate dyspeptic may hope to live cheerfully to a ripe old age by searching out the cause of his troubles and resolutely applying himself to the removal of it.

Dr. Hall recommends the sufferer to begin by eating a little of one or two articles of food at regular meals. If that agrees with him let him increase the quantity; if not he should try something else. In this way the dyspeptic will soon find out what agrees with him, and what kinds of food he should avoid. After he has made these discoveries, it will be his own fault if he continues a dyspeptic.

**THE POWER IN NATURE.**—The power actually at work at present in producing rain, and so, indirectly, in leveling the earth's surface, is enormous. The amount of heat required to evaporate a quantity of water which would cover an area of 100 square miles to the depth of one inch, would be equal to the heat which would be produced by the combustion of half a million tons of coal, and that the amount of force of which this consumption of heat would be the equivalent, corresponds to that which would be required to raise a weight of upward of 1,000,000,000 of tons to a height of a mile. When we remember that the land surface of our earth amounts to about 50,000,000 of square miles, we perceive how enormous must be the force-equivalent of the annual rainfall of our earth. We are apt to overlook, when contemplating the silent and seemingly quiet process of nature, such as the formation of the rain-cloud, or the precipitation of rain, the tremendous energy of the forces really causing these processes. "I have seen," says Professor Tyndall, "the wild stone-avalanches of the Alps, which smoke and thunder down the declivities with a vehemence almost sufficient to stun the observer. I have also seen snow-flakes descending so softly as not to hurt the fragile spangles of which they were composed; yet to produce from aqueous vapor a quantity which a child could carry of that tender material, demands an exertion of energy competent to gather up the shattered blocks of the largest stone-avalanche I have ever seen and pitch them to twice the height from which they fell."

**PROGRESS OF AMERICAN MANUFACTURES.**—American manufacturers are penetrating Europe to such an extent as to cause a panic in a direction heretofore unheard of. They are sending soaps abroad in large quantities, which are selling there in preference to all others. American toilet soaps are replacing the French toilet soaps in their own markets. Partly on this account, as well as from other causes, there is a "soap panic" reported from Marseilles. There were 35,000 people employed there in that industry, and some of them are thrown out of work by the enforced idleness of the factories. American-made boots are making inroads upon Europe, and the clamor at the invasion is heard from the shoemakers of Switzerland and other continental countries. The *Berlin Shoemakers' Gazette* says that American boots are sold in Switzerland at \$2.90 per pair, and this has suddenly put a stop to the exportation of boots and shoes to America, by opening competition on their own ground.

**THE REAL COMFORTS OF LIFE.**—There are numerous conceptions of pleasure and comfort. Most people find, with or without experience, that the real comforts of life are found at home. For there the devoted wife is the presiding deity; there the children praise and play; there the young girl approximates and reaches womanhood; within its sacred precincts youth puts on the responsibilities of manhood; there are the reunions of hearts and hopes and prayers; there can be found real rest; there are the place and affection typical of the better life; there the germinating and binding together of hearts and minds and souls in a bond as strong as a chain and as lovely as a wreath of beauteous flowers; there the memories that glow and exist with life itself; there the influences that strengthen and bless and guide in after years, whatever we do and wherever our footsteps roam.

**BRING UP YOUR CHILDREN TO JOY.** Give them just as much as they can take without intoxication and without reaction. If you take too much of any one essential you cheat some other. Equipose of the various elements of our being is what we want.

## Young Folks' Column.

## The Fish that Went Ashore.

One day the fish were so enraged  
At the boys who came to swim,  
They vow'd they'd catch the first who plunged,  
And make quick work with him.

But the boy kicked out to right and left,  
And not a fish could stay;  
So they wiped their eyes and wrung their fins  
Until he went away.

"I know!" cried one, "we'll go on shore  
At noon, and let them see  
How we can go and bother them  
If they can't let us be."

So on the shore they went, each armed  
With things that lay around;  
One bore the farmer's old buck-saw,  
And one his pitch-fork found;

Another seized the housewife's broom,  
Another got the scythe;  
And thus equipped they soon began  
To wriggle and to writhe.

They wriggled and they writhed, poor things!  
They cried aloud with pain;  
And to the cool refreshing tide  
They never went again.

The farmer stared and laughed, "Ha! ha!"  
The children fairly roared;  
They caught the fish, and had that night  
A feast fit for a lord.

## Moral.

Now here's the moral of my tale—  
And, prythee, well construe it:  
When'er you try to vengeance take,  
Be sure that you can do it;  
Or like the fish who went ashore,  
You very soon will rue it.

—St. Nicholas for May.

## Earnest Words to the Youth.

My young friends, whether in school or out of school, learn to be truly useful, increasingly by useful to parents, guardian, or teachers and friends; in the home, on the farm, or in the shop.

Learn to love, to closely observe, and some day to understand, as far as we can, all that is beautiful and curious in Nature—and by Nature I mean everything around us that is not made by the hand or machinery of man. Nature—including man—is God's domain. He has only loaned this domain to us human beings, in His benevolence, to control certain parts of it for the uses of this life—as well as for a higher life—which our Creator has given us to make useful, to beautify and inherit. Look upon our domestic animals, the birds and flowers as your friends. Examine, study, and try to understand—as opportunity offers—the many needful and wonderful things which God has given man the power and will and skill to make. Learn to know, to value and to apply their uses. These, you see, include the arts, as distinguished from Nature—arts as invented by man by applying the laws of Nature; laws like all others controlling us and our destinies, established by the God of Nature, our Supreme Father. Ever honor your parents and guardians and respect your teachers. First of all learn the lesson of strict and honest obedience to those whom the circumstances of life have placed over you. It is in this way only, my young friends, that you can best be fitted to control others when your time for that shall come.

My dear young friends, let me urge you to make it your life-long study to learn clearly the difference between what is real or imaginary; what is natural or unnatural and affected; what is useful or useless—or even hurtful; what is true or untrue. When you find all the former of these—that is, what is real, natural, useful and true—held to it as what is good; cling to it, cherish it, practice it and live by it. When you find the contrary—I mean the imaginary, the unnatural, the hurtful, the false—turn from and shun them.

Ever cultivate towards all your associates, towards all God's creatures, that divine, that life giving, peace giving, joy giving virtue of good will. Learn to love the God of Nature, and ever use with reverence His holy name. Then strive to serve him in all the simplicity of His sacred truth.

But passing time admonishes me that we should part. We meet to-day for the first time in our lives. In all human probability it will not be my privilege to meet you again as private interests will require me soon to leave a State which a residence of nine years has taught me to value more than any other part of the world. Let these parting words sink deeply into your minds. May they go with you to aid you in your lives. Love the country; remember there is no nobler or happier occupation than agriculture; that all true labor is honorable and best for all our race; that wealth should be acquired by honest toil, and not by chance or fraud, or extortion; and when acquired should be used with economy to furnish the reasonable wants and comforts of life—to beautify our homes, to improve our minds and hearts, and to make suffering humanity happier and better.—*Extract from J. W. A. Wright's address before Atham-bra Juvenile Grange.*

HUNDREDS of thousands are trying to believe that alcoholic drinks are good for them. Do you want to be one of those wretched men? If we are to have drunkards in the future, some of them are to come from the boys. Do you want to be one of them? No? Of course you don't.

## GOOD HEALTH.

## The School-Room Evil.

[Written for the Press by C. L. ANDERSON, M. D.]

The dangers that lurk in the school-room to the breathing organs, and through them to the health of the body generally, I fear, are not sufficiently appreciated. School architects, teachers and the public are, in most cases, almost entirely ignorant of what takes place in nearly all school-rooms where many children are crowded together for hours at a time.

When we consider that not less than one-half the deaths in San Francisco during the past two years were caused by diseases of the respiratory organs, and that this, notwithstanding the epidemic of diphtheria, is not a higher per cent. than occurs in other large cities, we must see the importance of pure air in regard to health.

My attention has been more particularly called to the subject by having charge of the ventilating arrangements of a 12-room school-house.

Take 50 children and place them in a school-room, with doors and windows almost or quite closed, however large it may be and with the ordinary means of ventilation, and but a few minutes would elapse before the air would be impure and unhealthy to breathe.

By ordinary means of ventilation, I mean an opening in the ceiling, windows down at the top, a transom over a door opening into a hall, and perhaps a stove. All these are well enough for certain purposes, but with the exception of the stove, they do but little in the way of removing the most objectionable results of respiration—the carbonic acid gas. This being so much heavier than the air, falls to the floor, and with 50 pairs of lungs manufacturing all the time, it becomes uncomfortably abundant in a little while. Opening the doors or windows at the bottom gives it a chance to escape, but then the pupils are endangered by cold drafts, and they suffer with cold feet, caused by the cold air at the bottom of the room. How shall these things be remedied?

After a year's trial of our school-rooms, we find them to work with much satisfaction. The most usual evil, bad, cold air at the floor and lower part of the rooms, by this system of ventilation, is easily remedied. The plan adopted is as follows: We have two chimneys, consisting each of six smoke flues and six air flues. They are built so that each room has a separate flue for carrying off the smoke and one for ventilation. The ventilating flue is connected with a large air-tight, tin tube under the floor, passing across to the side opposite the place where the stove stands, and opening into the room through the base-board, with a register, which can be opened or closed at pleasure. Each chimney-stack, containing the flues, is carried straight up from the basement to the top of the building, and high enough to give a good, strong draft. The flues all unite as soon as possible after passing the upper set of rooms. Hence, it will be seen, that a draft, started by heat in either flue, will move the column of air in all the flues, provided they are open. When it is cool enough to have fire in one or all the rooms, the ventilation takes place in this way: The air at the bottom of each room is gently moving towards the register and the opening of the stove and passing into the flues. The room is being swept, as it were, of the cold and the vitiated air, while fresh air comes in through windows or other openings, which may be provided with screens, to prevent a draft. The register being situated at the opposite part of the room from the stove, tends to diffuse the air across the floor, which is being warmed by the stove, thus warming the feet of the pupils.

In warm weather, when there is no fire in either stove and it is desirable to keep the air pure in the rooms, a lamp, placed in one of the flues, would be sufficient to produce a motion of the air. But usually, in warm weather, the doors and windows are kept open, so that there is but little danger of bad air.

The plan above indicated can be applied to any school-house with one or many rooms. The principle is easily understood and the application non-expensive. The chimney is used as a ventilator, and carries that air, which falls by its gravity, out of the room by the force of the heated current set in motion by the air flue. The tube under the floor, opening into the room opposite the place where heat introduced serves two purposes—removing the carbonic acid gas and aiding to diffuse the heat in that part of the room where it is most needed, along the surface of the floor.

In most school-rooms, as well as other public places of meeting, there is no way to ventilate the lower part of the room. The heated air rises and goes out at the ventilators, and if there are openings at the surface of the floor and registers there, as I have seen, instead of carrying out the air that has been breathed, they introduce a current of cold air, because they are not connected with a flue, which may, by heating, give an upward current, and thus pump out the foul air.

There is a great deal of confusion in the popular mind in regard to ventilation and a great deal of nonsense written on the subject. "Patent ventilators" abound, but I believe with Leeds, who has written a very sensible book on this subject, "that perhaps the very best patent that could be obtained for anything connected with this subject would be the appli-

cation of a little common sense to the use of our ordinary contrivances."

This subject is not so difficult to understand or put in practice. The air of the school-room should be studied and understood by the teacher. If it cannot be kept pure and healthy inside, it would be better to march out and teach in some neighboring grove, after the manner of Plato or Aristotle.

A large per cent. of the diseases that either prove fatal in early years or follow us through life, especially those of the respiratory organs, are contracted in the school-room. This assertion is verified by recent investigations, and is, unfortunately, too true to be contradicted. A reform is needed in the manner of treating our children in schools. It is bad enough for grown people to endure for an hour or two, once or twice a week, the bad air of our halls and churches, without killing off our young children by confinement, four to six hours every day, in badly ventilated school-rooms.

## DOMESTIC ECONOMY.

## How to Make Sauces.

Hunger has the reputation of being the best sauce, and yet the housewife often desires to adorn and accompany her dishes with other kinds. We find in the *New York World* a treatise on the subject of sauces from which we shall quote a few practical notes and recipes:

To speak first of a few general things: It is necessary to give exercise to ingenuity and taste, that the pantry be supplied with the various herbs and seasonings; especially should care be taken that the oil be sweet and clear, and butter perfectly fresh. All sauces should be stirred thoroughly. Nothing is more disagreeable than a lumpy or a burnt sauce. To guard against the latter evil a *bain-marie* should be used, or an inside vessel. To thicken a sauce, use a beaten egg; to thin it, add more broth. Thin a salad-dressing with vinegar, using it gradually. "A miser for vinegar" says the Spanish proverb. Brown flour should be kept for the brown sauces. Spinach, having been soaked, drained, dried and thoroughly pounded, then brought nearly to the boil and strained, when mingled with a little sugar can be put away in a bottle for coloring sauces. Out of the several recipes below, the cauliflower sauce will be found useful for corned beef or mutton; the asparagus sauce for boiled fowls, a fillet of veal or boiled mutton. Below will be found recipes for the Bechamel and Espagnole sauces so often used by Mr. Deliee, the one being a white, the other a brown sauce.

**DRAWN BUTTER.**—Take a teacup of water or milk mix by degrees with two teacups of flour, put in a *bain-marie* and stir with a little salt until it is smooth; when it has come to boiling point add by degrees one and a half ounces of butter.

**MAITRE D'HOTEL SAUCE.**—To a teacup of drawn butter add a teaspoon of minced parsley which has been boiled, cayenne pepper, salt, a piece of a lemon, and beat into a whipped egg.

**WHITE SAUCE.**—To a teacup of drawn butter add a cup of milk in which a few shallots and a celery head have been boiled and strained out, and some chopped parsley. This sauce is for fish.

**VINAIGRETTE SAUCE** (for cold meat).—Cover some salt, mustard and pepper with vinegar, and, beating with a fork, add oil to the required thickness, and some chopped parsley.

**MINT SAUCE.**—Two tablespoons of mint and one tablespoon of sugar and a half cup of cider vinegar; let them stand on the fire until thoroughly heated.

**CAULIFLOWER SAUCE.**—Take a small head of cauliflower, boil it in two waters, changing when half done; of the last reserve a half teacup-full; in another saucepan cook a minced onion and a head of celery; heat the cup of water, add to it a teacup of milk; drain and chop fine the cauliflower, add it with onion and celery and three tablespoonfuls of butter covered with flour to the liquid, and cook in a few minutes.

**ASPARAGUS SAUCE.**—Take 12 heads of asparagus, boil, drain and mince it; into a pint of drawn butter beat the yolks of two raw eggs; salt and white pepper; when the butter is hot add the asparagus and the juice of half a lemon.

**BECHAMEL SAUCE.**—To two ounces of butter add a tablespoon of flour; work them together, adding at intervals a pint of milk; put it on the fire, stirring continually; when it begins to thicken remove from the fire; beat the yolk of an egg with a teaspoon of water; stir this in the sauce, and season with salt and white pepper.

**ONION SAUCE.**—Mince fine two white onions and cook them; having pressed the water from them, add to a teacup of hot milk with three tablespoonfuls of butter, or, if preferred, draw the butter and afterward add the milk.

**ESPAÑOLE SAUCE.**—Into a slightly-buttered pan lay a slice of ham, veal, game or fowl of any kind—four ounces of each. To these add a carrot cut in slices, an onion with a clove, half of a turnip and a sprig of thyme; cover the pan, set it on the fire, and let the contents simmer to a jelly. Mix a tablespoonful of the flour and a wine-glass of white wine with the jelly; cover with broth and add salt, pepper, a clove of garlic, sprig of parsley, a clove, a bay leaf and mushrooms. Let them all simmer three or four hours. Take off the steam carefully; when done throw in a few drops of cold water, and when cold skim off the fat and strain.





A. T. DEWEY, W. B. EWER,  
Publishers.  
Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25.....80.....2.00.....5.00  
Half line (1 square).....\$1.00.....\$3.00.....7.50.....24.00  
One inch.....2.00.....5.00.....14.00.....40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

DEWEY & CO.  
A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. EOWNE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, May 19, 1877.

### TABLE OF CONTENTS.

ILLUSTRATIONS.—The Price Excavator with Draper, 305. Drawing the Lot for Life and Death; Bernier's Apple Parer, Corer and Cutter, 313.

GENERAL EDITORIALS. Excavating Machinery; Not a Rose; Our Glorious Climate; California's Large Farms, 305. The Week; Adulterations of Foods, 312. Oak Home Herd, 312-13. Fruit Parer, Corer and Cutter; How Whips are Made; Drawing Lots for Life, 313. Patents and Inventions, 326.

QUERIES AND REPLIES.—Bluestone for Potato Blight, 312.

CORRESPONDENCE.—Food Plants. —No. 1; Placer County; Our Industrial Condition. —No. 2; The Tide Returning to the Foothills; Correction, 306.

ARBORICULTURE.—Answers to Queries on Fruit Growing, 307.

THE APIARY.—The Los Angeles Bees Suffering, 307.

THE DAIRY.—A California Milk Dairy, 307.

THE STOCK YARD.—Cattle Sale in Butte County, 307.

HORTICULTURE.—Los Angeles Fruit Growers' Association, 307-14.

PATRONS OF HUSBANDRY. Worthy Lecturer's Visits; Action by Fairview Grange; Grange Petitions; Women in the Grange; Farmers and Grangers; Temescal Grange; Co-operation, 308.

AGRICULTURAL NOTES from the various counties in California, 309.

HOME CIRCLE.—A Spring Poem (Poetry); "Only a Joke"; The Newspaper in the Home; Cats; Walk Softly; A Dialect Story; Mrs. Gaines' Victory; Happy Homes, 310. Dyspepsia and Long Life; The Power in Nature; Progress of American Manufactures; The Real Comforts of Life, 311.

YOUNG FOLKS' COLUMN.—The Fish that Went Ashore (Poetry); Earnest Words to the Youth, 311.

GOOD HEALTH.—The School-Room Evil, 311.

DOMESTIC ECONOMY.—How to Make Sauces, 311.

GENERAL NEWS ITEMS on page 316 and other pages.

MISCELLANEOUS.—Prize for a Method of Detecting Adulteration; Carbonic Acid in Air, 314.

### NEW ADVERTISEMENTS.

Etna Combined Self-Rake Reapers and Mowers, Baker & Hamilton, S. F.; The Babcock Village Hook and Ladder Truck, Parker & Lacy, S. F.; The Hygienic Institute, C. Heimoth, S. F.; Ground Fresh Bones for Poultry, C. P. Stone, Healdsburg, Cal.; The Alden Process, Alden Fruit Preserving Company, S. F.; Wakelee's Squirrel and Gopher Exterminator, H. P. Wakelee & Company, Druggists, S. F.; Hall's Patent Hog Ringer, James E. Gordon, S. F.; Lillie's Fruit Pitter, H. Jones, S. F.; Fancy Cards, J. B. Husted, Nassau, N. Y.; The Statistician, L. P. McCarty, S. F.

### The Week.

We have had "hay rains" with a vengeance in some parts of the State during the week. Indeed startling occurrences seem the peculiar pleasure of this unusual year. The accounts are of hailstones and torrents and downpours, refreshing things indeed amid the records of dry conditions; dry enough to be written on parchment. The week finds no more cheering ope than this rain. Its effect will be little more than refreshing, for the fate of crops for good or bad was fixed ere it came. But it will brush the dust from the eyes which can see but little to cheer them until the seasons change again. The area of the rain so far as reported to this hour, extends from the southern limit of the State up through the interior valleys, until it broadened its path and mounted the Sierras on the one hand, and on the other mingled its waters with the wealth of our grand bays. From all the points as it passed there comes notes of freshening feed, and a possible benefit to some belated grain. In some parts it was more vigorous than gentle, and beat the standing grain severely, but with what injury we do not hear.

What pleasanter lines this year than those of rain? A Stockton dispatch says: About three o'clock P. M. the sky again became overcast, and for half an hour rain and hail fell in torrents, accompanied by lightning. It is said by old residents to be the most severe storm ever seen at this season of the year.

ON FILE.—"Agricultural Condition in England," J. P. S.; "Answer to Orange Inquiries," R. L.; "Kingsburg," E. K.

### Adulteration of Foods.

EDITORS PRESS:—Having just read an article on the adulteration of food in the *Toronto Globe* of April 27th, 1877, it reminds me that we, too, might as well begin to rebel against eating trash. I never use spices, mustard or anything from the grocers in cans and bottles under those fine-looking labels, but that I feel reproached for wasting hard earned money and imposing on the stomach of those that partake of the food. If I could procure a small hand-mill that I could grind things fine enough with, I never would buy another box, bottle or can of anything again. I think if the newspapers would take the trouble to investigate and expose the adulterated brands of condiments it would make manufacturers more honest. It comes very hard on the class of working people to pay such high prices for necessary articles and find them unfit for use. I had to throw away a two and a half pound can of pepper, as it was so mixed with decomposed wood or browned sawdust, or something that made it smell unfit for use, and I have many times put a whole bottle of cinnamon in a baking of pumpkin pies, and they would not taste stronger than if one teaspoonful of the pure article had been used; and the bottle cost 25 cents, while one teaspoonful of the pure article ought not to cost above five cents. The last sack of fine table salt I bought was so adulterated that I could not safely use it. I was afraid it contained lime. The sufferings of dyspeptics are greatly enhanced, and many cases probably caused by this dishonest practice, and who knows how much life is destroyed by it in time.—Mrs. G. E. CHILDS, Santa Barbara, Cal.

The subject which our correspondent broaches is of the highest importance. It is an evil which has been felt in all states and countries. The remedy is by means of laws punishing adulteration and the appointment of State analysts and microscopists to furnish evidence against adulterators. Our correspondent is doubtless aware that charges of adulteration must be accompanied by actual proof that foreign substances are introduced. To show this there must be official analysis, and then the press can put forth statements which will enable people to shun the dangerous and the counterfeit. Until these necessary facts are set forth, the newspaper can do little more than throw out general warnings.

These may do good in many cases, but they cannot have the definiteness which the descriptions of the evil should possess. Few editors have the ability, and none, whom we know, have the time to pursue studies of manufactured foods with the thoroughness which should characterize them. The matter should be handled by State examiners, and adulteration should be punished by rigorous laws.

So far as we know, the English have done more than any other government to protect its citizens against the crimes of the adulterator. There are government examiners in all towns, and they are zealous in testing everything which is presented to them or which they have reason to suspect. The result is that adulteration of foods in England has declined to a wonderful extent. So careful and wide-reaching have been the achievements of these examiners, that numbers of books have been printed showing forms and substances used in adulteration, and the ways of detecting them, and the whole people have been awakened on the subject. With the description of the evil there is also given, in all cases where it is possible, simple tests to determine the purity of materials which are of great practical use to the people.

In the United States there is springing up renewed interest in this important question. We are not aware how many States have special laws and official examiners, but Massachusetts has the system in good working and great benefits result to the people. New York, during the last winter, passed a new law against food adulteration. During the last few months in New York City sellers of impure and watered milk and vendors of other fraudulent articles have been brought to grief for their evil practices. In our own State there are laws against adulteration, but though the laws may be good, we are not aware that they are supplemented by the necessary agencies for detection and presentation of evidence for prosecution. The following is Sec. 382 of the Penal Code, which makes adulteration a crime:

"Every person who adulterates or dilutes any article of food, drink, drug, medicine, spirituous or malt liquors, or wine, or any article useful in compounding them, with a fraudulent intent to offer the same or cause or permit it to be offered for sale as unadulterated or undiluted, and every person who fraudulently sells, or keeps or offers for sale the same, as unadulterated or undiluted, is guilty of a misdemeanor."

The purity of articles sold as food is of vital importance. We appreciate this fully and are ready to do everything in our power to convince the people that they should be protected against evil workers. Perhaps in this way the attention of the law-makers may be gained and the State will assume the responsibility for the detection of fraud, which is its province. We cheerfully offer to make microscopic examination of any material which our readers suspect of being adulterated, and we may thus expose the methods and materials used by the adulterators. The microscope is excellent evidence on many points of adulteration, as has been shown in the English literature on the subject.

The case of poor salt which our correspondent mentions was probably the result of natural impurities. Nearly all, if not all natural salt (*Sodium chloride*) contains chloride of lime in varying quantities, and if this is not removed the salt is not fit for table use or curing purposes. Although it is probable that nothing was added to the sample which our correspondent found unfit for use, it was fraudulent to put forth as "pure table salt" an article containing offensive natural impurities.

### QUERIES AND REPLIES.

#### Bluestone for Potato Blight.

EDITORS PRESS:—We have been troubled for years with the potato disease. This year I have experimented with treating the potatoes with a solution of bluestone, just as we treat wheat to prevent smut. I hope to get a good result, and if so I will inform you of it. I think it would be a good idea to inform farmers who have not planted as yet, so that they may try the experiment. Please give me your opinion about my idea in the next issue of your valuable paper.—F. THEIRWACHTER, Watsonville, Cal.

We have no experimental acquaintance with the use of bluestone (sulphate of copper), in the way our querist describes, but we have evidence in published reports of other experimenters, which lead us to expect no cure in the present case. We will give a few reasons why we have little faith in the beneficial application of bluestone to the potato:

The potato disease is no new thing. More than 30 years ago it appeared in Great Britain and destroyed the potatoes so widely that the result was the fearful famine in Ireland in 1845. Immediately the attention of the scientific world was turned to the disease, and its cure was attempted with all the agents which the chemist could suggest. We read in the reports of the Royal Agricultural Society of England of not less than 60 different trials of chemicals upon the disease, and in every case the agent employed was either ineffective to stop the rot or else acted upon the substance of the tuber in such a way as to make it useless for food or growth. It is the decision of all who have investigated the subject that the remedy cannot be found in any specific treatment, but that the growers must, by sound seed of early maturing qualities, and by planting on ground well drained or naturally dry, fight off the disease by securing the conditions unfavorable for its development.

Our querist is hasty in drawing a conclusion that a substance which is good for smut on wheat would also be a specific for rot in potatoes. Although he is sound in his first thought that sulphate of copper is generally injurious to fungus growth, this is not always the case, for some fungi will thrive upon the very surface of a copper solution. If he had thought further he would have discovered that there is considerable difference in applying chemicals to wheat grains and to a succulent tuber. The spores or germs of the wheat smut are dusted over the surface of the grain, and the bluestone solution can destroy them without penetrating the hard shell with which the germ of the wheat plant is surrounded. Thus the chemical can do much good and no harm. The case with the potato is different. The fungus spores are not dusted upon the surface as with the wheat, but the fungus is developed inside the tuber, thus it is beyond the reach of a surface application; and if the contact with the chemical is sufficiently protracted (and the substance of sufficient strength) to penetrate the structure of the potato until it reaches the disease within, it is probable that both potato and disease would be laid in a common grave. For this reason we are somewhat in doubt whether our querist will get any potato plants from the seed he has planted, but this we cannot know certainly without knowing the length of exposure of the tuber to the chemical and the strength of it. And if his potatoes sprout and grow as well as usual, we can assure him that he need not expect any immunity from disease because of the application, because the disease may be communicated from a soil impregnated with spores as well as from diseased seed.

We are glad the experiment is undertaken by our querist, because by experiment is the true way to test all ideas which come to the mind of the agriculturist. But we would advise him and all others to make small experiments. Do not risk a crop or half a crop by the application of a fancied remedy, the nature of which you do not understand. Try a little patch at first and test the truth of the idea in practice, before much money and labor can be involved in it.

This will in all probability be a bad year for the trial of specifics for the potato disease, for the reason that on lato plowed ground there is hardly likely to be the moist heat which favors the development of the disease. We heard of the rot on early plantings, but we should expect that with the dry soil which must prevail to a great extent in our querist's part of the State there would be but little trouble in the late planted fields. Of course this must be taken into account in estimating the result of his experiment, and we shall be pleased to hear from him when the result is reached.

DATE OF OUR MARKET REVIEWS.—We hear that some readers find apparent discrepancies between the market reports in the *RURAL PRESS* and those of other papers printed on the same date. This doubtless will arise in many cases when due regard is not had for the fact that our market report is finished up to Wednesday of each week, and the report is so dated, while the face of the paper bears the Saturday date. We are compelled to go to press on Wednesday night. Our review and quotations are correct up to that day each week.

OCEAN VILLA.—We have received from George H. Bliss, of Santa Cruz, a circular descriptive of his popular summer resort, "Ocean Villa." We have heard the villa highly praised.

### Oak Home Herd.

At the last meeting of the Cattle Breeders' Association, Mr. W. L. Overhiser, of Stockton, made the remark that he had resolved to devote his attention to developing the milking qualities of his Short-horn herd instead of making the show ring a test of their excellence. He was determined to do what he could to restore to the Short-horn her historic fame as a milk-producing animal, and should make the pail the gauge of value. He also gave a friendly challenge to all the dairy herds in the State, with the exception of Mr. Ashburner's, believing that he could surpass them all in the amount of milk drawn from the same number of animals. These things being so, and as the encouragement of milk from thoroughbred stock is one of our special points of liking, we determined to make a hurried visit to Mr. Overhiser's farm, at Stockton, to see the stock which he is now putting so squarely upon their absolute dairy value.

"Oak Home" is the cosy name which Mr. Overhiser gives to his beautiful place, which is situated about four miles in an easterly direction from Stockton. Mr. Overhiser located here in early times, and has improved the property by thorough culture, vine and tree planting, and the erection of fine buildings until he has a home of which he and his family may well be proud. He is thoroughly progressive in all his plans and policies, and his practical successes are the best possible evidence of the value of the application of this spirit to our agriculture. We have, in former articles, made allusion to some of Mr. Overhiser's farm practices, and now we propose to devote special attention to the cattle of which great things are claimed and expected, and, by a brief analysis of the blood, which runs in the herd, to discover some of their points of fitness for the work to which they are devoted.

The herd, as a whole, may be described by simply saying "good and useful;" useful because they are almost without exception good milkers and used as such. Besides that, they are always, to use a common expression, "ready for the butcher." The female portion of the herd consists of 42 head of all ages. Though the offspring of no less than five families are present in the herd, there is a general uniformity of character throughout the whole that is too seldom met in Short-horn herds. This may, in a great measure, be accounted for by the fact that the same bulls have been used indiscriminately to all the cows, without any regard to what is termed line breeding.

The foundation of the herd at Oak Home dates from the spring of 1863, 16 head having been purchased from J. D. Patterson, who at that time was well known as an importer of some of the best Short-horns that had then been brought to this coast. One of the first bulls used by Mr. Overhiser was "John Bull," 3,025, bred by F. W. Stone, of Canada; followed by "Grand Turk of Oak Home," 8,258, whose sire was the Gwynne bull, "Grand Turk," 3,990, by imp. "Grand Turk," (12,969), dam "Moneta," by the celebrated "Duke of Gloster," (11,382). There was also used upon some of the cows, "Patterson's 4th Duke of Airdrie," 4,224, from the Woodburn, herd and got by the well-known imp. "Duke of Airdrie" (12,730). Through these sires Mr. Overhiser introduced some good blood into his herd, and since then has principally used bulls of his own breeding, of which he still continues to use "4th Grand Duke of Oak Home, 14,400," a good eight-year-old of a rich roan color and of the Duchess de Argentine family, which we shall mention again hereafter. This bull leaves some excellent offspring in the herd, which excel especially in their dairy qualities.

Mr. Overhiser is now introducing fresh blood for future use in his herd, having just purchased from Robt. Ashburner, of San Mateo county, the seven-month-old bull calf "Minstrel Duke," by imp. "Kirklevington Duke" (34,364), dam imp. "Oxford Minstrel 2d." The good qualities of both sire and dam having been mentioned in our notices of Baden farm herd, it is unnecessary to say more, except a word about his ancient lineage. Being of the Gwynne branch of the "Princess" tribe, his pedigree traces through "Princess" by "Favorite" (252) to the Ketton cow, bred by Geo. Stephenson, of Ketton, in 1739. "This is probably the earliest Short-horn cow which can be identified as the foundation dam of any tribe of which a record in unbroken line has been preserved."

To "Kirklevington 2d" Mr. Overhiser has also bred three of his cows, one of which, "Duchess de Argentine 5th," one of his best cows, has already produced a neat, square-built heifer calf. Another, unfortunately, slipped her calf, but is still at Baden, along with "Flora Temple 7th," who has only recently been sent there on a visit to the Kirklevington bull. This last named is one of the nicest cows in the herd, though not one of the deepest milkers. Mr. Brown, of San Francisco, takes a bull calf from her dam "Flora Temple 6th," one of the best dairy cows in the herd; and Mr. I. C. Steele, of Pescadero, takes one from "Fashion 6th," a cow that took our attention as much as, if not more, than any other cow we saw, showing her dairy qualities in her light neck and moderately long face, with silky hair and fine skin, but more than all in her capacious and well-formed udder.

We have already said that five different fam-



ilies are represented in the female portion of the herd. At the head of the list, in point of breeding, we would put the Flora tribe, which traces through a long line of dams to R. Colling's "Golden Pippin," by "North Star" (458), beyond which are three crosses of the celebrated "Favorite" (252), followed by "Hubback" (319). The Curiosity and Tulip families are both descended from the same formation, being descended from imp. "Arabella" by "Victory" (5,565); the pedigrees ending in a dam by "Hubback." A remarkably good white three-year-old is nearly due to calve to Mr. Ashburner's Bates bred bull "Mark Antony," whose produce have been already spoken of in our notices of Baden farm herd.

In the Duchess de Argentine family, of which there are five representatives, we find the only one of the original purchases from Mr. Patterson, she being a daughter of "Duchess de Argentine" by "Duc de Argentine" (2,837). This last named bull is a Darlington, whose sire was the 1,000-guinea "2d Grand Duke" (12,961), dam imp. "Darlington 6th," by the celebrated "4th Duke of Oxford" (11,387); the dam of "Duc de Argentine," 2,837, being "Mary Ann 22d," bred by the late R. A. Alexander.

The Fashion family, which are second to none in their performances at the stall, trace to the imported stock of E. A. Le Roy, Avon, N. Y.; and the "Fancies," "Mirandas" and "Rosettes" to the imported stock of Henry Clay. Amongst the last-named branch we found the old cow of show-yard honors, when in her prime, who has five descendants in the herd, and all good ones.

We have not space at this time to dwell upon the individual merits of each animal, but have endeavored to give an outline of the method of breeding that has been adopted by Mr. Overhiser. This will also give, we trust, an idea of the breeding of each family, and of the new blood which has been introduced to advance the work of breeding for the useful qualities. We hope at some future time to be able to look at the other side, and give notes of the deeds of the herd in pounds and ounces of milk and milk products, and thus show, in a popular standard, the advantage of skillful breeding as an aid to milk production.

We found the female portion of the herd in better condition than we expected, taking into consideration the short grass season that we have had; but as we have shown in former articles, Mr. Overhiser is a farmer who studies all the economies in the utilization of food supplies, and his cattle may laugh at dry years. Mr. Overhiser is exceedingly fortunate in the selection of his herdsman, Mr. Alexander, who treats his cows like ladies, and consequently wins them to ways of gentleness and comfort. Perhaps no one quality of disposition is more essential to success in fine stock breeding. We wish this herd all success, and we trust much profit will accrue to Mr. Overhiser for training his cows to home duties and for the purposes for which they were designed by nature.

#### Fruit Parer, Corer and Cutter.

One of the devices useful to the fruit grower which received an award of excellence at the Centennial was the fruit parer, corer and cutter, of which we give an illustration for general information on this page. We have seen the machine work on a sample of good apples, and it did the work well, though of course not so rapidly as to enable us to tell how much work could be gotten from it when driven in actual service. As may be seen in the engraving the machine is quite simple, and apparently of such construction and plan as to admit of rapid work. A good idea of the simplicity of the machine and the working of it may be had from the following brief instructions which are given by the inventor, Mr. Bergner: "Draw the handle-rod back till the catch moves in the rod, hook in small ring, which slips over the rod. Stick the fruit on the fork, then turn the crank four or five times around until the rod-holder moves out; then let the handle of the crank hang downward and bring the fruit to the knife by softly pushing on the round plate; then push a little harder, and the fruit will be cut and cored. Draw the handle-rod back, and the machine is again ready for use."

It will be noticed that the coring and cutting are both done at one operation, and that by a straight push of the central shaft the knife, which may be seen at the left standing upright, will cut the apple in five pieces. There can be had six different cutting-knives, with four, five, six, eight, 10 and 12 blades, and the change from one to the other may be easily made. Thus the apple can be cut into almost any desirable thickness. In addition to the machine shown in

the engraving, which is an apple parer, there is another arranged for paring, pitting and halving peaches. The same principle is employed as in the apple parer. We are informed that Littlefield, Webb & Co., Washington street, San Francisco, propose to have a quantity of these implements ready for use on the coming fruit crop, and anyone interested may investigate the subject farther at their store.

#### How Whips are Made.

We doubt not that some of our readers have, in their youth, plaited whip-lashes from wood-chuck hides of their own dressing. That was on the "old farm." Now they find it easier to buy than to make their whips, if they have use for them.

Wishing to obtain some facts relating to the making of whips in this city, we visited the factory of the Keystone Whip Company, No. 2,629 Mission street. Here we found the business carried on in all its details by something more than a dozen operatives. The son of the senior member of the firm, himself an accomplished whip-maker, politely showed us about the factory and explained the work going on. The main items of expense in material are rattan

designs in colors, or the owner's name introduced. A great variety of sticks is used for the stiff portion of the stock, many of them being very handsome. The finest come from England, and include the holly and other ornamental woods. The Malacca cane, which grows in the Dutch East Indies, and is imported by way of Germany, is also used largely. The "mounts," or metallic ornaments are also imported.

Fine lashes for stage drivers, teamsters, or tandem whips are plaited out of the best California deer skin, tanned by Messrs. Keyston at their own yard. They contain from four to 24 strands, and are from four to 16 feet long. Horsehide answers for the cheaper grades used by cartmen and others.

Plaiting lashes well can be done only by careful and experienced hands, and is all piece work. Much of it is given out to be done at the homes of the operatives. Some of the best plaiters are women and girls, who earn good wages by working during hours that are not taken up by other duties, and without being exposed to the publicity of a factory. We wish there were more industries of this sort in our midst. The well-known "black-snakes" of the mountain teamsters are also made here from Santa Clara leather. Their quality depends mainly upon the quality of the leather and

#### Drawing Lots for Life.

The perils of the sea have touched the heart and roused the sympathy of all the world for those who are called upon to undergo them. In our early days we used to read the dreadful stories of suffering, of starvation, of thirst and of death from an utter lack of the needful things of life, and even in our childish philosophy we used to think those most kindly dealt with who sank with the ship, and were spared the days and weeks of agony.

We who live upon the solid land, who feel its enduring support beneath our feet, and go upon it as we will, to seek that which our life and comfort demand, are too apt to forget the intense suffering of those whose ill fortune it is to be cast abroad upon the barren waste of the ocean, chained to a raft which saves from drowning, and yet saves but to submit to a worse fate, which saves life only to steal it away by most excruciating torture. We think of these things occasionally, but they seem so far away that our own feeling of security drives away a realization of the woes which our fellow men

are called upon to suffer. Sometimes there comes an account of unusual suffering, and we pause a moment to render thanks to Him who casts our lots in pleasant places. Only the other day we read a heart-rending story of actual suffering at sea, the impression of which we cannot dismiss from the mind. It was the ordinary story of wreck through adverse elements, with which all accounts begin. There was the band of survivors upon the hastily-constructed raft, floating about for a time with full courage that each succeeding morning would disclose some friendly sail upon the surface of the waters, and that surely another day would find them on the way to life and friends. Thus days passed, until the food and water were exhausted, and starvation came to pinch the frames from which hope had well nigh gone out in despair. Then came that most dire recourse for the saving of life, the sacrifice of one for the maintenance of the many. Who of us can realize the desperation which leads to such an act? Who can appreciate the depth of suffering which nerves the man to draw the knife across

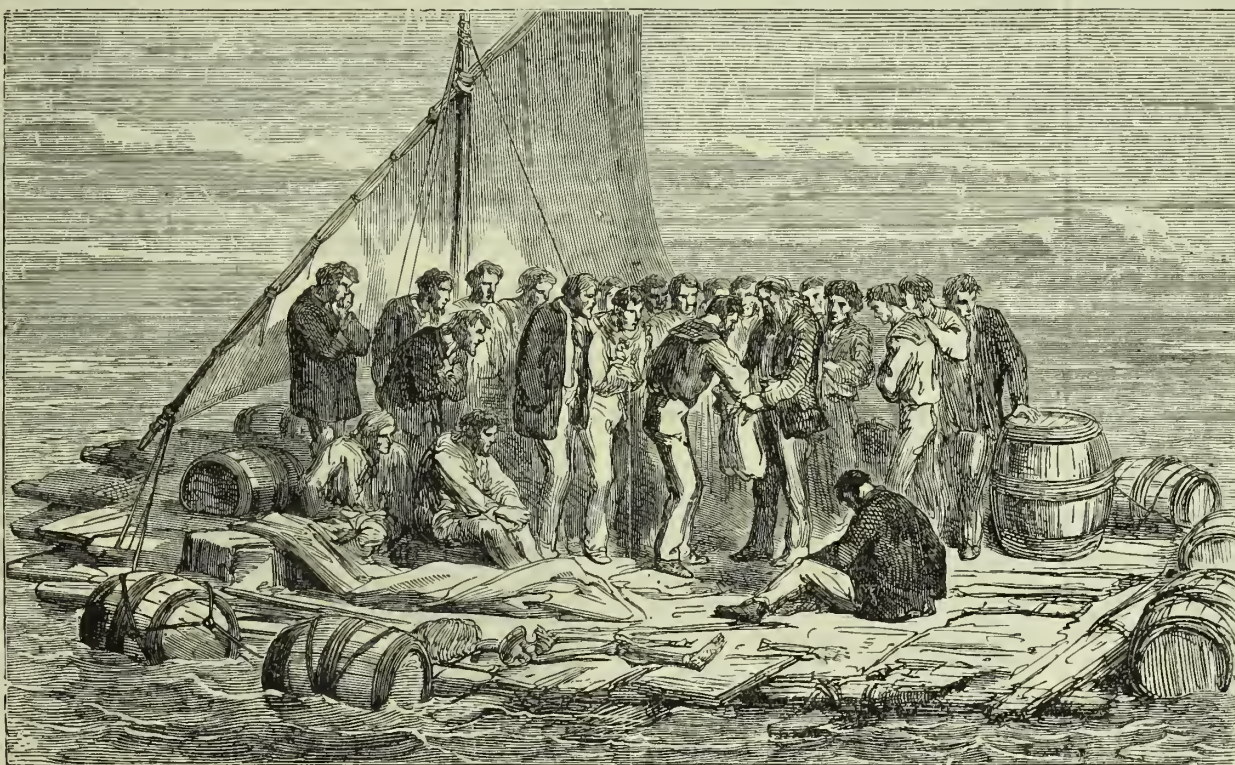
the throat of him whom the lot marks for death? We imagine that deep as our feeling may be, we do not reach even the surface of the woe which fills the hearts of men in such an event. It cannot be otherwise. No one knows suffering save those who have suffered. The story to which we have alluded tells how the despairing outcasts set apart one after another of their number for the common sustenance, until at length there were but two surviving. These two were finally rescued, but one life thus sustained in agony was so frail that, after a few hours of safety, it too passed away. Who can measure the length and breadth and depth of the grief and torture which that life endured ere it bade farewell to the wasted body which held it a prisoner for so many dreadful days.

Our illustration will call to mind vividly the scenes which we have been noting. A large group of survivors have found support upon the raft, but their food is gone and the recourse is being had to the human sacrifice. The lot is being drawn. Note the fixed and anxious eyes which are fastened upon each man as he desperately plunges his hand into the fatal bag. It is a time like that which tries men's souls.

It will do us good in our fancied security to think at times of the burdens which life sometimes entails. It will lead us to stop in our headlong and confident rushing after the affairs of this world to think of the higher life which is promised beyond. It will make us more charitable, more gentle and more kind to those around us, for who can tell how soon we may all be brothers in suffering. It will lead to refinement of disposition, to softening of the heart for all mankind. It will expand our views of the aims in living. As we dwell in thought upon the suffering of those whose right to joy and comfort is as good as ours, may not the thought lead to better life and to the reign of those finer sentiments of the heart which are the crowning glories of a genuine humanity.

CHANGED HANDS.—The Hygienic Medical Institute of this city, formerly owned by Dr. B. J. Smith, is now conducted by Dr. Noon and Mr. C. Heimsoth. Terms and other particulars may be found in our advertising columns.

THE sixth annual Placer County Reunion occurs at Badger's park, Oakland, May 19th. We acknowledge receipt of an invitation to be present on the pleasant occasion.



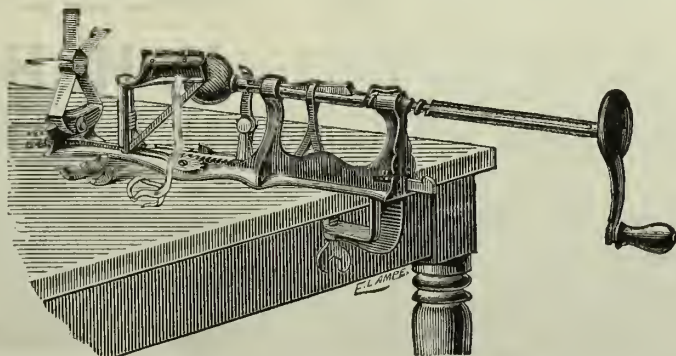
DRAWING THE LOT FOR LIFE AND DEATH.

and whalebone. The rattan is imported from Batavia and China. The qualities which are too soft, or otherwise unfit for use in whips, are sorted out and sold to the basket-makers. The fine strips which make up the stock of a whip are split out first by hand, and afterwards worked down by drawing them through a shave, which can be gauged. The whalebone is already split when imported from the East. The price of this article has advanced from an average price of about \$2 per pound to about \$7, in consequence of the loss of the whaling fleet last season.

The main part of most whips is composed of nine pieces. The whalebone is in the center,

number of covers sewed on. These last vary from one to five.

Samples of the goods turned out by this company would form a beautiful exhibit, of interest to any one capable of admiring good workmanship. They comprise every style from the regulation whip of the trotting course, four feet eight inches long, up to the longest stage-driver's "persuader," and they vary in price from \$3 per dozen to \$75 each. A gentleman lately had one made here for Foss, the celebrated Calistoga "whip," which cost \$30, and we saw one made for the owner of a tandem at San Jose, which was an elegant piece of work. The company also makes braided rawhide work of many



BERGNER'S APPLE PARER, CORER AND CUTTER.

surrounded by the thin strips of rattan, and secured in place by glue. This compound stock is dipped in glue so that every part is permeated by it, and then run through a machine, which winds it with a strong thread from end to end. It is again wound with rope, so that it cannot warp out of shape, and left to dry. A peculiar turning lathe gives a smooth finish and even taper from butt to tip. This valuable machine was made to order, on a new plan, in this city; the owners of the patented machine used in the East refusing to sell a machine to come here, or permit the use of their patterns.

The thread covers are plaited on to the stocks by machines, which are wonders of ingenuity; some carrying as many as 24 spools. Some of the better grades of whips have this cover made of fine gut, prepared from sheep entrails. Sometimes a portion is worked on by hand, and fancy

kiuds, such as riattas, bridles, hackamores, etc.

In this business California has to compete with the lower wages and water-power of New England. The Keystone company do not attempt to make the lowest class of goods, but intend that what they do send out shall give satisfaction. On the average they employ about 20 hands of both sexes and almost all ages. Several of "our boys" here find a field for usefulness, but it is not found best to have many in the same room.

About 70 dozen whips are turned out per week in these dull times, but as many as 200 dozen per week have been sold in better seasons. The Messrs. S. & J. W. Keyston are English by birth, have followed this business from boyhood up, and are familiar with all its details. They have had their factory running here for about six years.



Continued from page 307.

tree, which is compensated otherwise. I therefore give my unqualified opinion that it will not only pay to bud the orange, but, as intelligent men, we cannot afford to do otherwise.

L. J. Rose

Took the ground emphatically in favor of seedling trees for the following reasons:

Budding in itself changes nothing, for if the bud is taken from a tree that is an inferior fruit, that inferior quality is propagated; if superior, then there is an improvement. It would follow, then, that there must be a better variety of orange to bud from or there will be no improvement. The important question then arises, have we a better orange than the seedling? After much examination of many varieties, and careful study and observation of the seedling, whether our seedling is uniformly better than another; I have failed as yet to find a better or an equal to the Los Angeles orange; nor have I found any marked difference in the Los Angeles seedling. I find a difference in the fruit in different localities, even very near together, say in 20 feet; but there is always a difference in the soil or the exposure of the tree, it being less crowded, or it being sheltered from the wind, its water supply or its general health, which can be seen by the careful observer. Then, too, the overbearing or the reverse has a marked effect upon the fruit and so, too, has the age of the tree.

To better the Los Angeles seedling oranges produced in our best localities seems to me like gilding refined gold; and, as my interest lays in the direction where knowledge upon the subject is of great importance to me, and as having had superior opportunities of comparison gives some importance to my opinion. I have also tried the judgment of others, having sent oranges to England, to Boston, New York and Chicago, to parties who can give an intelligent opinion, even to Marshall Wilder, and there is but one opinion about our orange, when fully ripe, "the best orange we have ever eaten."

There are some circumstances under which it is desirable to bud the orange. There are some varieties of the orange that bear abundantly when young. By budding from these varieties the beginner in orange culture, or for small places in town, can have fruit early; and, as they are not likely to grow into large trees, they are adapted for small places. One of these varieties, which Mr. Garey names the Mediterranean Sweet, is a very good orange and perhaps, if grown under more favorable circumstances and in a favorable locality, it might be equal to the best Los Angeles seedling. It has, too, the advantage of being nearly seedless and thornless, but plant it largely for orchard and long usefulness, as compared with the Los Angeles seedling tree, would be an experiment that I have no faith in.

It is a fact that a seedling tree is hardier, has a longer life and is a healthier tree than one that is grafted or budded.

## Discussion.

Mr. Berry desired to see an orange from a budded tree as good as the best seedling in the orchards of Messrs. Rose and Wilson, and would then be willing to endorse budding. Mr. Berry presented two fine seedling oranges from a tree nine years old, which were 23 feet in height and seven inches in diameter, and desired to have them compared with the best budded fruit.

Mr. Barrows agreed with Mr. Sherb in the proposition that localities and qualities of soil had its influence on the quality of fruit raised thereon, no matter what kind of fruit is planted. He has an orange tree 20 years old in his yard that has never borne but bitter fruit because of its unfavorable surroundings. He claimed two advantages for budding. Trees should be budded at two years of age, or at the most, three. The fruit will come earlier and be uniformly better. In Australia they worked 10 years to find that they were raising poor, sour oranges, and they then turned attention to budding and have followed it since universally.

Mr. Kercheval stated that his trees, from which Mr. Berry presented the oranges above referred to, bore each last year about 200, and about the same this year and are now 23 feet high and seven inches in circumference, being only nine years old; that he had 45 trees of the same age, only a portion of which had commenced bearing.

Mr. Woodhead had seen the trees of Mr. Kercheval and considered them the finest in the county. He saw no reason why they should have made an unusual growth. In different parts of the United States different varieties of the apple take the lead; the White Winter Pearmain taking the lead in this county, and that it probably does not take the lead in any other State. In orange culture the same rule may prove true, and we may yet get a variety which will decidedly take the lead, if we have not got such variety already.

Dr. Conger stated that the Florida seedling was the best orange to be found in that State. In Nicaragua he ate a seedling orange which when ripe, was of a grass-green color, and he believed the locality was the cause. He was budding orange on lemon and lime, and expected to find neither a lemon, lime nor orange, but a hybrid. The Los Angeles seedling orange is being shipped to Salt Lake City, and is there pronounced the best orange in that market.

Mr. Berry believed that the fact that seedling orange trees came into late bearing was owing to poor cultivation.

Mr. Garey was not opposed to the Los

Angeles seedling orange, but did favor budding from the best varieties of the seedlings, as well as from imported varieties, so that the trees might be universally good. He refuted the idea that a good orange tree would bear an inferior fruit or hybrid, when budded on a China lemon by presenting a finely flavored orange grown on a China lemon root.

Capt. Thom thought the absence of thorns on the orange tree was a strong argument in favor of budding, and that the loss of oranges from being punctured by thorns must be a very large percentage.

A large number of names was added to the list of those who desired to join the Association as soon as a permanent organization should be effected, and the meeting adjourned to assemble again at the call of the President. Thus ended one of the most practically useful and interesting meetings that ever assembled in Los Angeles city.

**PRIZE FOR A METHOD OF DETECTING ADULTERATIONS OF BUTTER.**—*Dingler's Journal* announces that the Bureau of the Leipzig Pharmaceutical Union, offers a prize of 300 marks for discovery of a sure and practical method for the detection of adulteration of butter by other fatty substances. Professors Dr. Heintz, in Halle, and Dr. Knop, in Leipzig, have consented to act with Herr Kohlmann as judges in awarding the prize. Each competing essay is to be provided with a motto and accompanied by a sealed note, containing the motto on the outside and the author's name on the inside, and both are to be forwarded to Herr Kohlmann, apothecary, in Leipzig-Reudnitz, before September 30th, 1877.

**CARBONIC ACID IN AIR.** The open air commonly contains about 3.34 parts, by volume, out of 10,000; according to Pettenkofer any excess over 1 part in 1,000 is unwholesome. E. Schulze thinks Pettenkofer's limit is too low. In a club room he found 37 parts of carbonic acid, and in a school room from 14.4 to 35.6 parts out of 10,000.

## DEWEY &amp; CO.

American &amp; Foreign Patent Agents

OFFICE, 234 SANSOME STREET, S. F.

**PATENTS** obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurttemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in

all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

## CENTRAL CALIFORNIA COLONY.



## BEWARE OF DRY SEASONS!

Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

## THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

## The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

## WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited.

Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blennishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

## GOLDEN GATE PLASTER MILLS,

LUCAS &amp; CO.,

Nos. 215 and 217 Main Street, San Francisco.

YOUR NAME PRINTED ON Forty Mixed Cards for Two Cents. STEVENS BROS., Northford, Conn.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

## Poultry.

RENO, I. P. LORD, NEVADA.

BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.



Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. It. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*

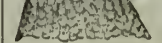
## Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few settings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

## LOOK!

ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.



ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## H. F. ROCKEY,

Dealer in  
AMATEUR PRINTING  
Presses,

Small Fonts of Type,  
Printing Materials,  
Plain & Fancy Cards, &c

22 Kearny St.  
Bet. Market & Post, S. F.  
(Up Stairs.)  
Send for Illustrated Circular.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. *Send for illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.*

We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.



# MUSIC BOOKS

—FOR—

## Schools, Academies & Seminaries

**THE HIGH SCHOOL CHOIR**, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older **HOUR OF SINGING**, (\$1.) by EMERSON & TILDEN, **CHOICE TRIOS**, (\$1.) for 3 female voices, by W. S. TILDEN, and **DEEM'S SOLFEGGI**, (75 cents) which has exercises in Italian style.

**THE ENCORE**, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

**THE WHIPPOORWILL**, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

**AMERICAN SCHOOL MUSIC READERS**, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, **RIVER OF LIFE**, (35 cents,) **SHINING RIVER**, (35 cts.), **GOOD NEWS**, (35 cents.)

Either book mailed, post-free, for Retail Price.

**OLIVER DITSON & CO., Boston.**

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

GREAT  
IMPROVEMENTS  
ARE NOW  
BEING INTRODUCED  
IN ENGRAVING  
BY THE  
Scientific Press  
ENGRAVING CO.,  
AT  
THIS OFFICE,  
WHEREBY  
Good Engraving  
Will be done at  
REDUCED RATES.  
E. SCHULTZ, Manager.

**HEALD'S BUSINESS COLLEGE.**  
No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

**A FARM FOR SALE IN NAPA COUNTY.**

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,900 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. **WILLIAM CLARKE.**  
Napa Co., Cal. P. O. Napa City, Box 51

**TO FISH RAISERS.**

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit.  
Address J. A. POPPE, Sonoma, Cal.

**YOUR NAME PRINTED** on 40 Mixed Cards for 10 cents.  
**CLINTON BROS.,** Clintonville, Ct.

Don't waste your time in reading cheap trash.

# GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). JOHN LEWELLING, (TREASURER). W. L. OVERHUSER.  
A. D. LOGAN, (VICE PRESIDENT). G. W. COLBY. A. T. HATCH.  
AMOS ADAMS, (SECRETARY). I. C. STEELE. O. HUBBELL.

W. W. GRAY. THOS. FLINT

SHIPPING AND COMMISSION HOUSE,  
Grangers' Building, - - - - - 106 Davis Street, S. F

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

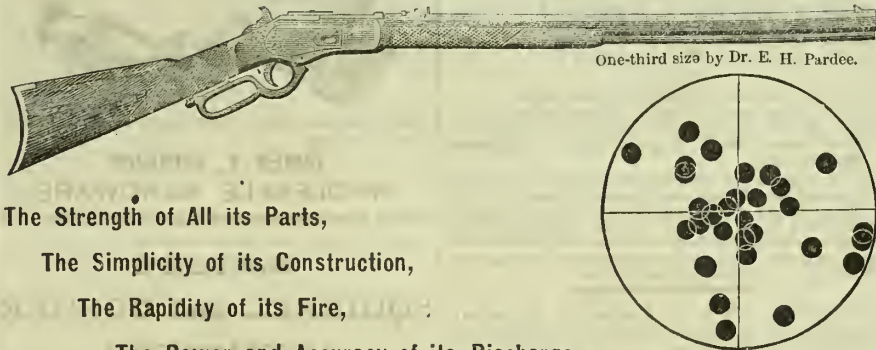
Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

# Winchester Repeating Rifle.

MODEL 1873.

One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

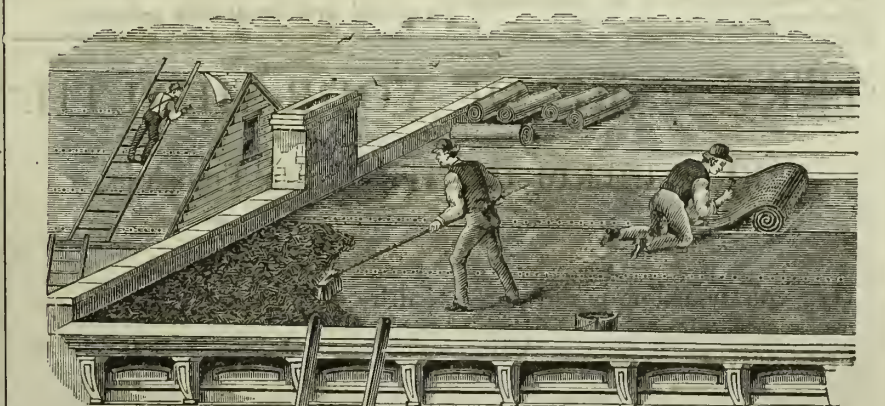
The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S.; known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1860. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**  
SOLE AGENT FOR THE PACIFIC COAST.

H. W. JOHNS' PATENT  
ASBESTOS ROOFING AND ASBESTOS PAINTS,  
ASBESTOS CEMENT FOR LEAKY ROOFS  
Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.  
**Thompson & Upson, 5 First Street, near Market, S. F.,**  
EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

**E. GROTKASS,**  
COLIMA, - - - - - MEXICO.  
DEALER IN REAL ESTATE.  
Information given free of charge. Lands procured for sale or for rents on easy terms.  
\$55 & \$77 a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine.  
Farmers, write for your paper.

**MOUSTACHE PROTECTOR.**  
Will fit any Cup.  
Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Williamantic, Conn.

**London Assurance Corporation,**  
OF LONDON, ENGLAND.  
Established in 1720.  
Cash Assets - - - \$14,993,466

**Western Assurance Company,**  
OF TORONTO, CANADA.  
Incorporated 1851.  
Cash Assets - - - \$1,576,307

**CROSS & CO., Gen. Agents, San Francisco.**

**Grangers' Bank of California,**  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
VICE-PRESIDENT.....JOHN LEWELLING.  
TREASURER.....J. V. WEBSTER.  
CASHIER.....ALBERT MONTEPELLIER.  
SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

**LEVI STRAUSS & CO.,**  
Patent Riveted  
Clothing,  
14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

**Buy the Best.**

Before purchasing an American Watch, examine the different styles manufactured by the **NEW YORK WATCH COMPANY**, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

**DEWEY & JORDAN, Agents,**  
433 Montgomery St., S. F.

**ROWELL & CHESMAN**  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.

Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulations, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.

Take the paper that stands by your interests,



**General News Items.**

THE shipbuilders' lock-out, Glasgow, will affect from 25,000 to 30,000 men.

Two thousand colliers in the Dartmouth district, Prussia, have struck. The strike threatens to assume serious proportions.

VOLUNTEERS from the English militia regiments have been asked for, for hospital and transport service. The Duke of Edinburgh is on his way to the Suez canal.

THE Department of State, Saturday, received information from our Minister at Peking that the Chinese Government had given notice that it would, on the 1st of April, open to foreign trade the additional ports of Ichans, Wuhun, Wenchoo and Pakhoy.

PROF. RILEY, Chief of the National Entomological Commission, has just closed a three weeks' examination in Texas and Kansas of grasshoppers, and submitted his report to the Governor. He says that throughout the largest part of Kansas the battle is already fought and won.

THE Managers of the Chicago, Burlington and Quincy, Missouri, Kansas and Texas, and Texas Central railroads, have effected a fast freight combination of their roads, which will go into operation June 1st, and they will regularly run 200 cars and seven sleepers through from Chicago to Houston and Galveston, Texas, from that date.

THE ALDEN PROCESS.—The Alden company have a few words to say to the public in our advertising columns this week. They assure us that they are meeting producers half way in their prices this season. In addition to improvements in their large machines they are making a point with a small evaporator for family use. It is furnished complete, ready for use, and can be used in any room, or one-story building, about the premises, or in any place that is clean and affords shade for the operators. The following statement of the capacity of this family drier and the pecuniary advantage in its use, is furnished us for publication: "The machine will dry 50 bushels of apples in one day. This will yield 313 pounds of dried apples, which can be sold at the average price of 13 cents per pound, and this will yield \$40.69 as the gross result of one day's work with the drier. If the same quantity of apples be dried by sun-heat they would be worth, at present market rates, but five cents a pound, or \$15.65, as the result of the day's work. This would leave a difference of \$25.04 in the receipts of the day's work. But no farmer can dry this amount of apples in the sun, day after day, because the weather is not always favorable, and a larger space than can be generally commanded would be required for spreading out the fruit until the sun dries it." We are informed that several of these machines have been already sent out for use this season.

UTILIZING SQUIRREL SKINS.—We have stated before our belief that the great squirrel nuisance may be greatly abated if we can discover some profitable use to which their skins and aud carcasses can be turned. We propose to keep the subject up until full and complete trial is made of the materials which can be furnished. If some of our readers will send us a dozen or two of squirrel skins, properly stretched and dried, we will put them on exhibition at the Mechanics' fair in this city, then send them to the Paris exhibition of 1878 and try to call the attention of foreign manufacturers to the cheap price at which they can be obtained in endless quantity. Parties who will aid us in making an exhibition of this kind will please send the skins by mail, prepaying the postage at the rate of one cent per ounce, and not cause us to pay express rates, which are much higher. We should like farmers to state at what price they can furnish them by the 100 if wanted. We trust our readers will help us in this matter, that the subject may be fully tested.

WELL EARNED.—Those who have used the Averill Chemical Paint need no more proof of its value than that afforded by their own experience. It has gained considerable celebrity all over the United States, and is now well-known here as the increasing sales of the company testify. As will be seen by our advertising columns, the paint won the highest medal and diploma at the Centennial exhibition, which is no small honor when we consider the rivalry called forth on an occasion of this kind, when all the mixed paints are in direct competition.

WAR MAP.—We have received a very handsome large map of the seat of war in Europe; and also on the same sheet a general map of Europe, with statistics of the military, naval strength, population and financial condition of the contending powers. The map is in colors and very plainly printed in good style. Copies can be had for 50 cents, post-paid, by sending to E. M. Slater, agent for the Pacific coast, 529 1/2 Shotwell street, San Francisco. The map is published by Gaylord Watson.

MEDICAL LECTURES.—We have received a copy of the annual announcement of the Toland Hall Medical Department of the University of California. Those having a desire for medical instruction in this department of the theory and practice, can obtain the announcement from A. A. O'Neil, M. D., Dean of the Faculty, 650 Washington street, S. F.

PATENTS AND INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

- FOR WEEK ENDING MAY 1ST, 1877.
- 190,146. KEY FASTENER.—L. W. Kennedy, Oakland, Cal.  
190,210. HARROW.—J. B. Greene, Elliott, Cal.  
190,217. REVOLVING ORE ROASTER.—J. Howell, Benton, Cal.  
190,224. BUNG AND BUNG INSERTER.—W. Kromer, S. F.  
190,225. WINDOW SHAKES.—L. Landecker, San Luis Obispo, Cal.  
190,234. DEVICE FOR ELEVATING EARTH.—G. E. Milliken, Los Angeles, Cal.  
190,244. URINALS FOR INVALIDS.—R. H. Olmstead, Napa City, Cal.  
190,245. VALVE MOTION AND CUT-OFF.—Eugene O'Neill, Oakland, Cal.  
190,387. MEANS FOR UTILIZING EXHAUST STEAM.—W. H. Thomas, Wilmington, Cal.

- FOR WEEK ENDING MAY 8TH, 1877.
- 190,408. CUT-OFF VALVES.—F. A. Bishop, Placerville, Cal.  
190,434. TYPE DISTRIBUTING MACHINE.—J. M. Howe, S. F.  
190,473. TRACE FASTENERS.—C. S. Crittenden, S. F.  
190,475. SEWING MACHINES.—W. A. Dawson, S. F.  
190,530. SPECTACLES.—C. Yocco, San Jose.  
190,552. WASHING MACHINE.—R. Charter, S. F.  
190,556. SOFA BEDSTEAD.—H. Compes, S. F.  
190,560. CAN-OPENER.—L. Cutting, S. F.  
190,538. ENVELOPES.—W. S. Hoeding, S. F.

- RE-ISSUES.
- 7,661. LUBRICATOR.—J. Gates, Portland, Oregon.  
662,663. LUBRICATOR.—J. Gates, Portland, Oregon.  
7,664. WINDOW SCREEN.—R. Hochkofler, (guardian of G. Reed, insane), W. C. Hoagland and J. J. Newsome, Brooklyn, Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.  
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

PERSONAL.—Wm. J. Lawrie (or his alias). Description.—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

Questions of the Times.

Which are the most reliable watches?  
American watches, they are driving those of foreign make out of the market.

Which is the best American watch?  
The New York watch, made at Springfield, Mass.

Why is it the best watch?  
Because it is substantial in all its parts, constructed on the best principles and embodies those improvements which experience has shown to be the most desirable.

Why is the New York Watch so popular?  
Because in buying one you are sure of getting a good time-keeper. While purchasing a watch of most other makes is like investing in a lottery—a great many blanks to one prize.

Which is the cheapest watch?  
The most economical is the New York watch. For you can get one of these excellent time-keepers for less than it costs in a short time to patch up a poor watch, which benefits no one but the repairer.

Where can I get a New York Watch?  
By addressing the long established, practical Watch-makers and Jewelers, DEWEY & JORDAN, 433 Montgomery St., San Francisco, who will send you a descriptive price list, including the following styles of movements: "John Hancock," "Geo. Sam. Rice," "Chas. E. Hayward," "Aaron Bagg," "Theo. E. Studley," "Chester Woolworth," "Frederick Billings," "Railway," "John L. King," "E. W. Bond."

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

"TAKE CARE OF YOUR HEALTH."

THE HYGIENIC INSTITUTE, San Francisco.

Hygienic boarding is the most healthy diet possible.

Price only \$4.50 per week.

A proper dietary will keep a well person from getting sick.

It is an essential aid to sick people who wish to get well.

Furnished rooms from \$1.50 to \$5.00 per week.

C. HEIMSOTH,

Nos. 635 and 637 California Street, - - Near Kearny.

SAN FRANCISCO.

THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

THE ALDEN FRUIT PRESERVING CO.,  
OF CALIFORNIA,  
No. 426 Montgomery Street.

HILL'S PAT. HOG RINGER,  
RINGS AND TONGS  
OR HOLDER.



A full line of these salable goods at manufacturers' prices. Address,

JAMES E. GORDON,  
WHOLESALE HARDWARE,  
254 & 256 Market, and 8 & 10 Front Sts. S. F.

WAKELEE'S

SQUIRREL and GOPHER  
EXTERMINATOR.

Farmers who have wheat should save it.  
Wakelee's Squirrel Exterminator is the only poison successfully employed to protect standing grain.

H. P. WAKELEE & CO, Druggists,  
AGENT AND MANAGER GOLDEN CITY  
CHEMICAL WORKS.

Office, Cor. Montgomery and Bush Sts.,  
SAN FRANCISCO.

Ground Fresh Bones for Poultry.

Owing to increased demand, I have reduced the price of bone meal as follows: 100 pound sack, \$4.00; 50 pound sack, \$2.50; 25 pound sack, \$1.50.

Carbolic powder 25 cents per pound or ten pounds for \$2.00. The carbolic powder can be packed in the mouths of the bone meal sacks, thus saving freight expenses.

Fresh bones ground up raw will stimulate hens to lay, hasten the laying of young pullets, and feathering out of young chicks; the natural result of the animal food and jelly they contain; while burnt bones pounded up being reduced to phosphate of lime or animal charcoal, will not produce the same result.

One ounce of carbolic powder will destroy more vermin common to poultry than a pound of sulphur, and not liable to injure the eyes of chicks; it will also drive ants and other insects from dwelling houses. Correspondents can remit coin, currency or postal orders at par. Address

C. P. STONE, Healdsburg, Cal.  
Refer to Postmaster, Bank of Healdsburg or Wells Fargo & Co.'s Agent.

WHEN so many poor watches are being sold, it is not too much for us to say that those who buy the New York Watch Company's movements will be sure of a good article at fair prices.

Superior Pianos for the  
People at Popular  
Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

The Brilliant and Durable  
GOLDEN PIANO

Which we now offer the readers of this paper

At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

Prices of the Golden Piano:

	The Installment Plan Prices.	Our Reduced Cash Price.
The Golden Piano, \$500	\$350	
(UPRIGHT—C.)		
The Golden Piano, \$375	\$300	
(SQUARE—No. 1.)		
The Golden Piano, \$500	\$350	
(SQUARE—No. 2.)		
The Golden Piano, \$600	\$400	
(SQUARE—No. 3.)		
The Golden Piano, \$800	\$450	
(SQUARE—No. 4.)		

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 16th, 1877.

Trade for the week has been very quiet. In Wheat and Barley there has been a weaker feeling, and the subsidence of the speculative demand causes a decline in market rates. There is apparently a disposition to wait until the prospects for the coming harvest can be more directly ascertained. The foreign market is probably at the bottom of the decline, for the Liverpool prices have shown a downward tendency during the week, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	13s	2d	13s	6d	13s	6d
Friday.....	12s	9d	13s	4d	13s	3d
Saturday.....	12s	9d	13s	4d	13s	3d
Monday.....	12s	9d	13s	4d	13s	3d
Tuesday.....	12s	7d	13s	2d	13s	3d
Wednesday.....	12s	7d	13s	2d	13s	3d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875.....	8s	11d	9s	2d	9s	6d
1876.....	9s	8d	9s	10d	9s	10d
1877.....	12s	7d	13s	3d	13s	6d

## The Foreign Review.

LONDON, May 15th.—The *Mark Lane Express* says: A favorable change occurred in the weather, beginning last week. It is doubtful whether the backward season has done any serious harm. With the warm weather, which it is reasonable to expect, the fears entertained in some districts will be dissipated. Spring sowing, even in late districts, is finished. It is stated in Cambridgeshire that the acreage devoted to wheat is small. In Scotland the weather has been dry, but very cold. Pastures are in an almost hopelessly backward state, and warm rain is much needed to favor the growth of grass. The excitement has in a great measure subsided. Business at the country markets has been quiet, the principal noticeable feature being the tenacity with which farmers hold to Wheat. This, coupled with the unusually light offerings, both at provincial exchanges and in *Mark Lane*, leads to the conviction that the quantity of home-grown Wheat in farmers' hands is so small that they are determined to hold out for extreme prices. Since the blockade of the Black sea, no political event has occurred directly affecting the interests of the Grain trade. This absence of fresh extraneous support, coupled with the change to more seasonable weather, accounts for the decline of one to two shillings, which has taken place for the second time on values of Wheat, from the recent highest point. It may, therefore, be considered a fair inference that until supplies show a marked increase, the future course of prices will be to a large extent dependent upon political influences. The only source whence it is probable we shall receive increased imports is Russia. Present appearances do not favor the supposition that the exigencies of the war will interfere with shipments from St. Petersburg, where the accumulated stocks of Wheat and Oats are undoubtedly large. Still, the situation is critical enough to warrant firmness on the part of holders, now that granary stocks in London certainly are at a very low ebb. Sales of English Wheat last week were 32,775 quarters, at 60s 6d, against 45,201, at 45s 2d, the previous year.

## Freights and Charters.

The *Commercial News* says: We have had a quiet market during the week, with few engagements. Wheat freights continue nominal, and though one ship has been taken up, on terms not made public, we hear of no special inquiry for tonnage. The majority of the ships in port will lay up and take their chances on freight in July, and though there is more activity in outside business, the rates offered are too low to tempt tonnage. At the close we have 24,479 tons disengaged, 2,252 tons under engagement to load Wheat and Salmon, and 14,197 miscellaneous.

## Eastern Grain Markets.

New York, May 13th.—The collapse of grain speculation has led to extreme dullness in grain, and prices are a little lower, No. 2 Spring Wheat being nominally \$1.90 at \$1.95; and for Corn, 70¢ to 75¢, with still lower prices for forward delivery. The stock of Wheat is very small, with no prospect of any material increase before the marketing of the new crop; consequently there are no fears of a heavy decline either in Wheat or Flour. The export trade is held in check by the tenacity of holders, causing a decline in freights to 4d per bushel, and 5d to 6d per quarter to exports.

CHICAGO, May 13th.—Business on 'Change, though not driving and characterized by the excitement and violent fluctuations of the preceding month, has been very large, and the markets have been sufficiently unsettled to admit of speculation in almost every commodity. On Monday, June Wheat sold at \$1.71 to \$1.81; Tuesday, \$1.65 to \$1.71; Wednesday, \$1.62 to \$1.70; Thursday, \$1.60 to \$1.72; Saturday, \$1.70 to \$1.75. There would be in ordinary times, most remarkable fluctuations, but considering the late experience, it is a toning down. Wheat has attracted rather more attention and bids far before long to again take its place as the chief speculative cereal. The greatest fluctuation in Corn in any one day was 3¢, and the difference between the highest and lowest price during the week was only 6¢. The stocks of grain are steadily and rapidly decreasing, not so much on account of great shipments as of light receipts. The closing quotations are: For cash Wheat, \$1.69; Corn, 53¢; Oats, 43¢; Rye, 37¢; Barley, 75¢. Receipts for the week: Wheat, 34,000 bushels; Corn, 960,000 bushels; Oats, 26,700 bushels. Shipments: Wheat, 259,000 bushels; Corn, 644,000; Oats, 464,000. Receipts for the same time last year: Wheat, 199,000 bushels; Corn, 540,000; Oats, 248,000. Shipments: Wheat, 556,000 bushels; Corn, 1,151,000; Oats, 547,000. Provisions have been in good demand, but prices are nearly a dollar under those of last year, closing at \$14.67 to \$14.75 for Pork, and \$9.45 for Lard. Business generally has been only fair. Jobbers complain that sales are for small amounts, and that merchants seem to fear and distrust the future.

## Eastern Wool Markets.

New York, May 13th.—The London sale of Colonial Wool was reported by cable thus: "Buyers very numerous; competition moderate. Superior Australians 5¢ and other kinds 10¢ lower." On this side of the water, the trade was somewhat surprised upon learning of so small a decline, the general impression being that prices, in view of the enormous quantity to be offered, would fall at least 10¢ to 15¢ all round. Notwithstanding this decline permits Australian to be laid down here at 40 cents, it is not likely that any great quantity will be purchased for American account.

The demand in this market has been quite lively during the week, but buyers as a rule have had the advantage. Spring California has sold to a fair extent, but prices gen-

erally are considered high by purchasers. Fall California is neglected, notwithstanding lots are offered at low prices. New Texas is now arriving freely, and is generally held at 23¢ to 25¢. Carpet stock has been in fair request, and full prices have been obtained.

Sales for the week are: 15 bales autumn Donskoi at 19c, gold; 55,000 lbs Mexican, 16¢ to 17c, currency; 320 bales Cordova, in Boston, 17¢ to 18c, gold; 200,000 lbs new spring California, 20¢ to 22c; 83 bales old do, 30¢ to 32c; 30,000 lbs heavy do, 17c; 30,000 lbs fall do, 15¢ to 20c; 120,000 lbs Colorado, about 20c; 20,000 lbs Oregon Delaine, 32c; 86,000 lbs Western Texas, 16¢ to 22c; 20 bags super pulled, 32c; 38,000 lbs XX Ohio, 38¢ to 40c; 80,000 lbs X and No. 1 do, 36c; 2,500 course do, 33¢ to 35c; 66,000 lbs Wisconsin, 35c; and 10,000 bales spring Donskoi, 11,000 lbs fall California, 30,000 lbs scoured do, 12,000 lbs spring do, 60,000 lbs Colorado, 20,000 lbs Georgia, 70,000 lbs Western Texas, 80,000 lbs new spring do, 20,000 lbs scoured, 4,000 bags super pulled, 30 do X do, 10 do coming do, 25,000 lbs State delaine, and 14,000 lbs Ohio do, on private terms.

Boston, May 12th.—Wool was in fair demand and prices were steady and uniform for all desirable grades. Holders are still disposed to meet the market at current rates. Sales of fleece Wool have been small, on account of very light stock sales. Ohio, 67,000 lbs, No. 1 X, 40¢ to 42c; XX and above, 45¢ to 48c. Sales of Michigan, Wisconsin, New York and West Virginia, 25,000 lbs, principally in the range of 35¢ to 38c. Combining and delaine were quiet, as there was scarcely enough on the market to tempt buyers to operate; quotations are entirely nominal. Pulled was in fair demand. Sales of 208,500 lbs, principally in the range of 35¢ to 40c for good to choice super. California was in good demand, transactions comprising 676,000 lbs, principally new spring. Very choice spring is quoted as high as 32c, but prices vary very materially as to quality and condition, ranging from 18¢ to 32c, principally 22¢ to 28c. Fall sold at 15¢ to 25c, mostly at the lower figure.

PHILADELPHIA, May 15th.—Wool is quiet, with a light supply. Prices are firm. The London auction is progressing, with no further decline since the opening day. Ohio, Pennsylvania and West Virginia XX and above are quoted at 42¢ to 45c; X, 40¢ to 42c; medium, 43¢ to 45c; coarse, 33¢ to 35c; New York, Michigan and Western fine, 35¢ to 37c; medium, 38¢ to 45c; coarse, 32¢ to 35c; Canada washed, 45¢ to 50c; do unwashed, 33¢ to 36c; Canada combing, 50¢ to 55c; unwashed, 25¢ to 27c; coarse and medium unwashed, 25¢ to 32c; tub-washed, 35¢ to 40c; Colorado washed, 17¢ to 22c; unwashed, 16¢ to 18c; extra and merino pulled, 35¢ to 37c; No. 1 and superior pulled, 33¢ to 36c; Texas fine and medium, 16¢ to 25c; coarse, 15¢ to 17c; California fine and medium, 25¢ to 28c; coarse, 17¢ to 22c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. April 25.	WEEK. May 2.	WEEK. May 9.	WEEK. May 16.
Flour, quarter sacks.....	37,987	56,251	36,163	29,136
Wheat, centals.....	29,139	23,137	38,493	28,099
Barley, centals.....	6,918	12,783	10,156	14,353
Beans, sacks.....	380	433	1,018	1,712
Corn, centals.....	2,189	1,919	2,757	3,574
Oats, centals.....	5,557	3,775	5,091	6,164
Potatoes, sacks.....	9,318	13,180	12,745	12,957
Onions, sacks.....	483	1,105	353	563
Wool, bales.....	8,363	6,863	8,610	6,786
Hops, bales.....	—	9	5	20
Hay, bales.....	1,387	1,329	1,150	1,295

There is some disposition among farmers to provide themselves for the coming harvest. There is no change reported in prices.

Barley—Barley is weak and considerably low in ruling rates. We note sales during the week as follows: 600 sacks good Coast Feed, \$1.60, silver; 150 do, \$1.54, gold; 200 sacks good Bay Feed, \$1.55; 400 sacks choice Bay, to a brewer, \$1.90; 800 do fair do, \$1.80, half silver; 3,000 do good Feed in warehouse on Mission rock, \$1.57, gold.

Beans—There is no change in outside rates. Beans are firm and one price for a good article is the rule.

Buckwheat—The price is still \$1.75, silver.

Corn—Corn holds its price. We note sales: 500 sacks large Yellow, \$1.85; 200 do small do, \$1.90; 170 sacks large Yellow, \$1.90, 340 do do, \$1.87, at \$1.90 per cbl.

Dairy Produce—There is no change in Butter prices. California Butter is plenty. There is now some New York Butter in market, which sells at \$20 to \$25c. Cheese is doing a little better; 16c is obtained by first-class makes, and nothing in new Cheese goes for less than 14c, unless it be of objectionable quality. We hear of a choice lot of California Cheese, which went off like hot cakes at 17c under a New York brand. It was good Cheese, and California should have credit for producing it. "New York Cheese" has been made in Illinois and Ohio for the last 10 years, and now New York Cheese is made in California. We know that "New York Cheese" has been made in the commission houses of San Francisco to suit the trade, but now it is being made in the country. "Be true to California."

Eggs—Eggs are unchanged.

Feed—Ground Feeds are unchanged. Hay shows a weakness to-day, as some of the best Wheat was sold at \$21. This is a decline of several points since a week ago. We note sales during the week: 46 tons good Volunteer, 17; 25 do good Wild Oat, \$17; 63 do good Wheat, Oat and Barley, mixed, \$18; 47 do good Wheat, \$20; 9 do do, \$21; 25 tons new Wild Oat, \$18; 80 do new Volunteer Barley and Oats, \$15; 33 do poor old, \$14.

Fruit—Fruits are becoming more plenty and the novelties show considerable decline in price, as may be seen in our table of quotations below. Green Pears and Apples have been received from the Sacramento river and sold at 75c per basket. California Lemons have advanced in value.

Hops—We hear of nothing new in the city trade. Parcels are generally held above buyers' views. Emmet Wells reports the New York market, for the week ending May 4th, as follows:

There has been a very fair demand this week, chiefly from consumers, and as stocks are light, and receipts small, the price keeps tolerably firm. Cable advices from London report two or three heavy failures in the Hop trade, with liabilities aggregating nearly \$3,000,000. We do not hear of any New York houses being involved, nor has the news yet produced any serious effect upon this market. In London, however, a strong feeling of depression exists, in anticipation of heavy stocks being thrown upon the market; how this will effect other markets, later on, remains to be seen. Quotations: New Yorks, choice, 15¢ to 17c; New Yorks, common to prime, 10¢ to 13c; Eastern, 10¢ to 13c; Wisconsin, 8¢ to 12c; Yearlings, 6¢ to 10¢. Olds, all growths, 4¢ to 6c; Californians (nominal), 12¢ to 17c; Oregon (nominal), 12¢ to 17c.

Oats—Sales of Oats have been within former range. The supply has been considerably increased by receipts from Oregon. We note sales: 417 sacks good Oregon, \$2.40, silver; 300 do choice do, \$2.35, gold; 100 sacks choice Oregon Feed, \$2.35.

Onions—New Onions are now in market from Sacra-

mento river. Prices for all descriptions are lower. We note sales: 51 sacks good Union City, \$1.50. New are jobbing at \$1.25 to \$1.50 per cbl.

Potatoes—Old Potatoes are a little lower again this week. We note sales of good choice Petaluma and Tomatoes at 50¢ to 65c; choice Bay, 70¢ to 80c. New Early Rose have sold better to-day than last week; the best selections bringing \$2 per cbl. Sweet Potatoes are now in small supply, and the price is \$1.25 per cbl.

Poultry and Game—A few slight changes are noted in our price list.

Provisions—Fresh Meats are generally unchanged, save a fractional decline in Mutton and undressed Pork. Supplies of first quality are small, but the excess of low grades holds the price down. The trade in Cured Meats is moderate. A slight decline is noted in California Hams and Smoked Beef.

Rye—Rye is unchanged.

Vegetables—The Vegetable market shows ups and downs which are noted in the price list. The first Green Corn was received from J. W. Smith, of Vacaville, Solano county. Grass Valley Rhubarb of fine quality is in market, and other kinds being scarce it sells for good prices. The extreme outside price for String Beans, given below, is gained for fine lots of "Fountain" Beans, which are received from Stockton.

Wheat—The trade is dull and trade slow, as noted above. We note sales during the week as follows: 200 sacks choice Oregon Milling, \$2.85; 1,000 tons choice Milling, to be delivered at Vallejo, \$2.80; 3,000 sacks good Milling, \$2.75.

Wool—Choice Wool is improving, and the quotation for best Northern is advanced 1¢ lb. There are rumored occasional sales of superior selections above these rates. At the last auction sale of Wool in this city, the offering comprised 1,355 bales, of which all was sold except 336 bales. Of Southern Fleece there was 385 bales, known as the "Newhall clip," and the entire line was sold at 11¢ to 14¢ for heavy to fair, the first two lots, consisting of over 300 bales, being taken by Koshland Bros. at 12¢ and upward; 40 bales Southern, condition fair, staple good, few seeds on skirts, 13¢; 81 do do, condition good, staple short, stray corks, 16¢ to 16½c; 260 do, ungraded, 12¢ to 20c; as to condition and staple; 114 do graded, in several lots and various conditions, 12¢ to 17½c. The only sale of Northern Fleece was a lot of 63 bales of ungraded, part of the Parrott clip, at 26½c.

We note sales by regular dealers during the week as follows: 600,000 lbs various descriptions at 13¢ to 27¢ lb; 23,996 lbs, 27½c; 9,826 lbs, 26½c; 1,123 lbs, 26c; 5,683 lbs, 25½c; 259 lbs, 25c; 6,925 lbs, 24c; 1,731 lbs, 22½c; 4,561 lbs, 15c.

## DOMESTIC PRODUCE.

[WHOLESALE.]

BEANS.		HOPS.	
Bayo, cbl.....	5 00 @ 25	California.....	15 @ 20
Butter.....	2 00 @ —	NITS—Jobbing.	
Pea.....	3 25 @ —	Cal. Walnuts.....	9 @ 10
Red.....	4 00 @ —	Almonds, bd sh lb.....	7 @ —
Pink.....	4 50 @ 60	Soft sh lb.....	15 @ 17
Sm White.....	3 00 @ —	Brazil.....	14 @ 16
Lima.....	3 25 @ —	Pecans.....	17 @ 18
BROOM CORN.		Peanuts.....	4 @ 6
Common, lb.....	2 @ 21	Filberts.....	15 @ 16
Choice.....	2 @ 4	ONIONS.	
CHICORY.		Union City, cbl.....	50 @ —
California.....	4 @ 45	Stockton.....	15 @ —
German.....	61 @ 7	Sacramento, New 1.....	25 @ —
COTTON.		Oregon.....	20 @ —
Cotton, lb.....	15 @ 18	Petaluma, cbl.....	60 @ —

DAIRY PRODUCE, ETC.		POTATOES.	
Cal. Fresh Roll, lb.....	25 @ 30	Humboldt.....	60 @ 75
Point Reyes.....	30 @ —	Cuffey Cove.....	— @ —
Pickle Roll, Old.....	22 @ 25	Early Rose, new.....	1 00 @ 2 00
do, New.....	27 @ 30	Sweet.....	1 25 @ —
Firkin.....	27 @ 30	POULTRY & GAME.	
Western Reserve.....	16 @ 20	Hens, doz.....	5 50 @ 7 50
New York.....	20 @ 25	Roosters.....	6 00 @ 10 00
CHEESE.		Broilers.....	2 50 @ 6 00
Cheese, Cal. lb.....	14 @ 16	Ducks, tame.....	6 00 @ 8 00
Old.....	8 @ 12	Geese, pair.....	1 25 @ 2 50
Eastern.....	— @ —	Wild Gray.....	50 @ 60
N. Y. State.....	— @ —	White.....	75 @ 1 00
EGGS.		Turkeys, Live, lb.....	18 @ 21
Cal. fresh, doz.....	22 @ 23	Snipe, Eng.....	2 50 @ —
Ducks.....	19 @ 20	do, Common.....	1 00 @ —
Oregon.....	17 @ 18	Rabbits.....	1 00 @ 1 25
Eastern.....	19 @ 20	Hare.....	1 50 @ 2 50

FEED.		PROVISIONS.	
Bran, ton.....	25 00 @ —	Cal. Bacon, Lb, lb.....	14 @ 14½
Corn Meal.....	44 00 @ 45 50	Medium.....	13 @ 13½
Hay.....	15 00 @ 21 00	Heavy.....	12 @ 12½
Midlands.....	57 50 @ —	Lard.....	12 @ 14
Oil Cake Meal.....	40 00 @ —	Cal. Smoked Beef.....	9 @ 9½
Straw, bale.....	75 @ —	Eastern.....	— @ —
FLOUR.		Eastern Shoulders.....	— @ —
Extra, bbl.....	9 00 @ 3 50	Hams, Cal.....	12½ @ 15
Superfine.....	6 50 @ 7 50	Armour.....	14½ @ 15
Graham.....	8 00 @ 8 50	Dupe's.....	15 @ 15½
FRESH MEAT.		Magnolia.....	15½ @ —
Beef, 1st quality, lb.....	6 @ 6½	SEEDS.	
Second.....	5 @ 5½	Alfalfa, Cal.....	27½ @ 30
Third.....	2½ @ 4	Canary.....	10 @ 12½
Mutton.....	3 @ 4	Clover, Red.....	25 @ —
Spring Lamb.....	6 @ 7	White.....	50 @ 55
Pork, undressed.....	4½ @ 6	Cotton.....	6 @ 10
Dressed.....	7½ @ 8	Flaxseed.....	34 @ —
Veal.....	7 @ 8	Hemp.....	5 @ —
Milk Calves.....	6 @ 8	Italian Rye Grass.....	35 @ —
GRAIN, ETC.		Perennial.....	35 @ —
Barley, feed, cbl.....	1 50 @ 2 60	Millet.....	10 @ 12
Brewing.....	1 70 @ 2 75	Mustard, White.....	10 @ —
Chickens.....	1 70 @ 2 75	Down.....	3½ @ 4
Buckwheat.....	75 @ —	Rape.....	3 @ 4
Corn, White.....	1 90 @ 2 05	Ky. Blue Grass.....	30 @ —
Yellow.....	1 90 @ 2 05	2d quality.....	29 @ —
Small Round.....	2 00 @ 2 10	Sweet V Grass.....	75 @ —
Oats.....	70 @ 72	Orchard.....	30 @ 35
Milling.....	2 25 @ 2 40	Red Top.....	25 @ —
Rye.....	2 00 @ 2 25	Hungarian.....	8 @ 12
Wheat shipping.....	2 60 @ 2 75	Mezquite.....	20 @ 25
Milling.....	2 60 @ 2 75	Timothy.....	10 @ 10½

HIDES.		TALLOW.	
Hides, dry.....	18 @ 18½	Crude, lb.....	6 @ 6½
Wet salted.....	7½ @ 9	Refined.....	7½ @ 8
HONEY, ETC.		WOOL, ETC.	
Beeswax, lb.....	25 @ 27½	Short Free, dusty.....	13 @ 15
Honey in comb.....	10 @ 11½	Good Southern.....	15 @ 18½
Chickens.....	104 @ 114	Choice Northern.....	22 @ 27½
Dark.....	8 @ 9	Burry.....	12 @ 16
Strained.....	6 @ 8	do, Northern.....	18 @ 23

Milk Calves.....	6 @ 8	Perennial.....	35 @
<b>GRAIN, ETC.</b>		Millet.....	10 @ 12
Barley, feed, ctal.....	1 50 @ 60	Mustard, White.....	10 @
Brewing.....	1 70 @ 75	Brown.....	3 @
Chevalier.....	1 70 @ 75	Rape.....	3 @
Butter.....	1 90 @ 95	Ky.....	30 @
Corn, White.....	1 90 @ 95	2d quality.....	29 @
Yellow.....	1 90 @ 95	Sweet V Glass.....	75 @
Small Round.....	2 00 @ 10	Orchard.....	30 @ 35
Oats.....	1 70 @ 75	Red Top.....	25 @
Maying.....	2 20 @ 25	Hungarian.....	5 @ 12
Wheat.....	1 00 @ 25	Laws.....	50 @
Wheat, shipping.....	2 60 @ 75	Mezquite.....	20 @ 25
Milling.....	2 60 @ 75	Timothy.....	10 @
<b>HIDES.</b>		<b>TALLOW.</b>	
Hides, dry.....	18 @ 18 1/2	Crude, lb.....	6 @
Wet and salted.....	7 @ 9	Refined.....	7 @
<b>HONEY, ETC.</b>		<b>WOOL, ETC.</b>	
Beeswax, lb.....	25 @ 27 1/2	SPRING.	
Honey in comb.....	13 @ 13 1/2	Short Free, dusty.....	13 @ 14
do, No 2.....	10 @ 11 1/2	Good Southern.....	15 @
Dark.....	8 @ 8	Good Northern.....	12 @
Strained.....	6 @ 8	Burry.....	12 @
		do, Northern.....	12 @ 2



## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA  
SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants. Spring Lists free. F. K. PHOENIX, Bloomington Nursery, Illinois.

## Nurserymen.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor.

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.,

Wholesale Grower of

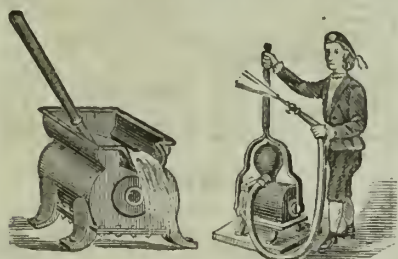
ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

**SQUILLS,** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Roses, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Petaluma, Cal.

## Agricultural Articles.

## IRRIGATION and PLACER MINING



## THE SLUTHOUR PUMP

Has been thoroughly tested for irrigating purposes, and for economy in power, durability and simplicity of parts, and large results, it really has no equal, and our orders show that the farmers are at last fully convinced of this important fact. Send for circulars to

J. M. KEELER, AGENT,

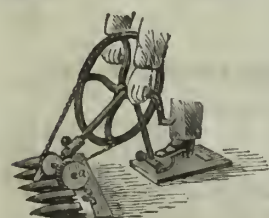
(Late of 330 Sansome Street.)

Now with MESSRS. M. C. HAWLEY & CO.

301, 303, 305, 307 & 309 Market St.,

SAN FRANCISCO.

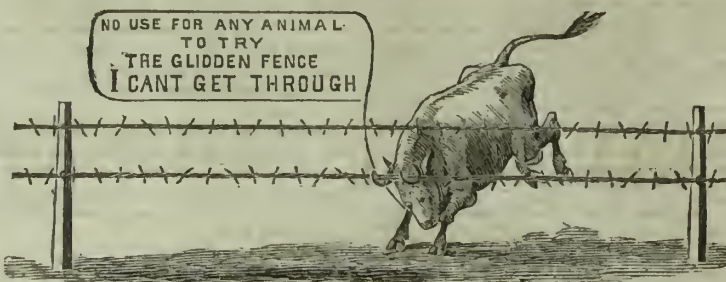
## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or unhooking the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, or, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

WILSTER & CO.,  
17 New Montgomery St., San Francisco.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



It makes the most durable, safe, and reliable fence in the world against stock of all ages.

About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNANIMOUSLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 50 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street,

San Francisco.

## OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

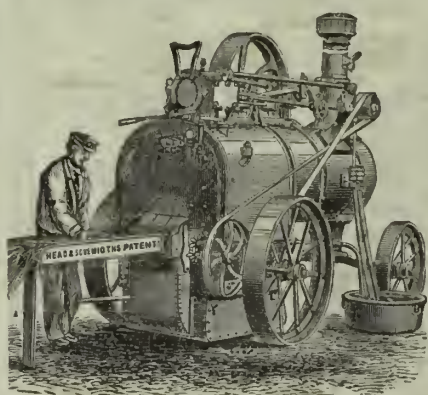
*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crose and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## HEAD &amp; SCHEMOITH'S STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm Pumping, Railroad and Power

## WINDMILLS,

Pumps & Fixtures.

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping. All warranted. Address,

HORTON & KENNEDY,  
Managers for California and Pacific Coast.

ALSO BEST FEED MILLS FOR SALE.

General Office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

Best & Cheapest. Jenks' Portable Lawn Sprinkler, is used to irrigate & ornament Lawns, Gardens, Flower or Strawberry Beds, etc. A patent non-clogging distributing nozzle is used on tube, & held firmly upright, or at any angle, BY PATENT SPINDLE. Order Circulars. Styles and Prices: "A" (No. 1 spray), \$3.50; "B" (all styles spray), \$5; "C" (large "B"), \$6. Weight, 6 lbs. 10 sent by mail to any part of U.S. for 75 cts. extra. Express and C.O.D. Order of WALWORTH MFG. CO., BOSTON, MASS. of Dealers, or GEO. E. JENKS, Patentee, Concord, N.H.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

MARCUS C. HAWLEY & CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 163,965, 167,124, 167,508, 164,181, 165,661, 172,760, 173,491, 173,697, 180,351, 181,433, 186,380, 187,126, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over erule knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

## Fraud! Fraud!!

COLLINS & CO'S

## CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

We can recommend the New York watch, of Springfield, Mass., as A 1.



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT.

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

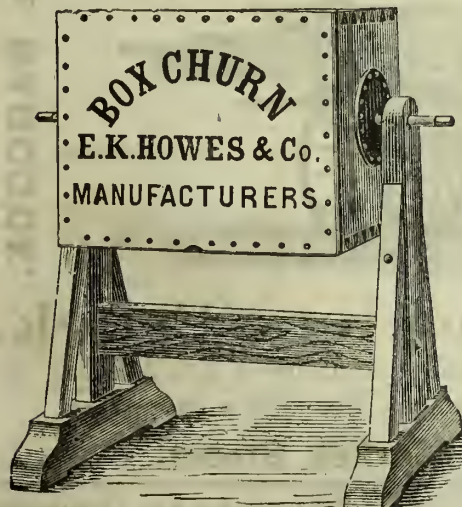
"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

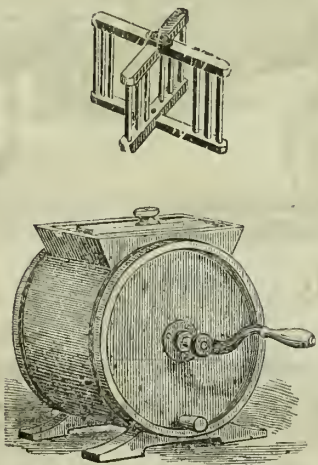
## E. K. HOWES & CO.,

Nos. 118, 120 and 122 Front Street,

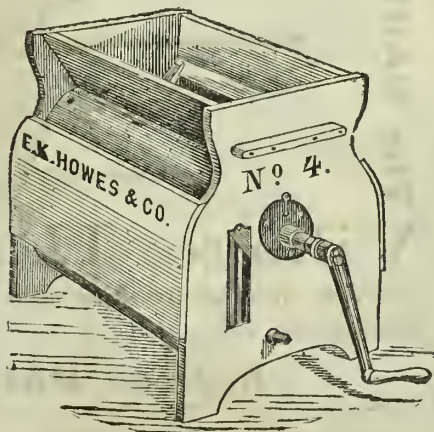
San Francisco.



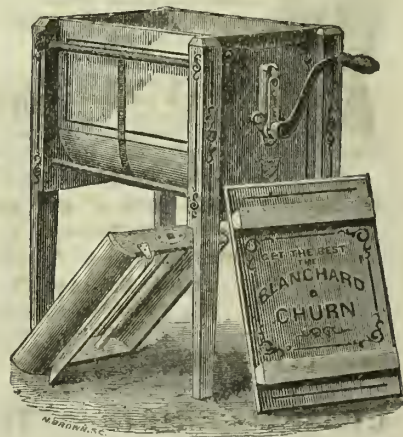
Box Churn.



Cylinder Churn and Dasher.



Thermometer Churn.



Blanchard Churn.

Sole Manufacturers on this Coast of all descriptions of Churns, Butter Workers and Molds, Butter Tubs (35, 50 and 60 pounds), Butter Kegs—Plain and Gal. Hoops—Wholesale and Retail. Send for Price-List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

## PACIFIC CORDAGE COMPANY,

MANUFACTURERS OF

### MANILA, SISAL AND TARRED CORDAGE, MANILA AND SISAL HAY ROPES.

The best rope manufactured on this Coast. Our Hay Rope stands unrivaled, and is acknowledged by all to be the best ever introduced in this market. Dealers and consumers are respectfully invited to call before purchasing elsewhere.

E. K. HOWES & CO., Sole Agents for this Coast,

118 and 120 Front Street, San Francisco.

#### LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,  
SANTA BARBARA, CAL.

Correspondence solicited.

Get the best. Take the RURAL.

#### DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

#### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.



CALVERT'S CARBOLIC  
SHEEP WASH,  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vio Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

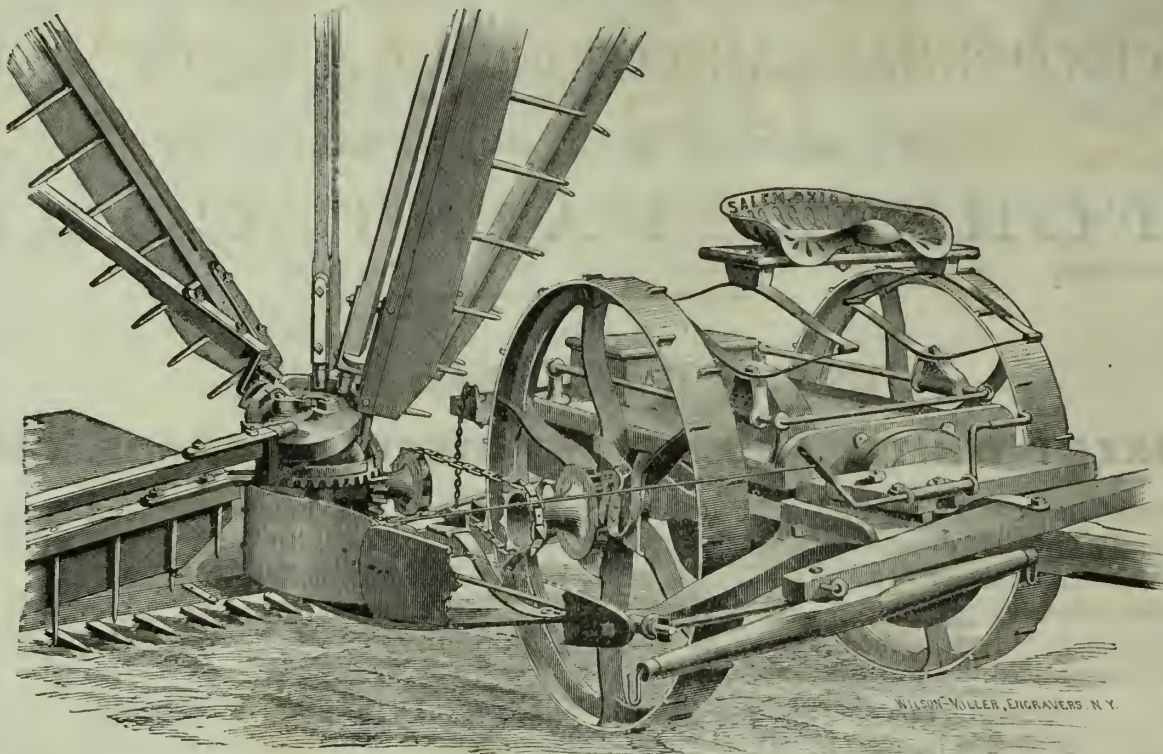


Farmers, Attention!

Farmers, Attention!!

**ÆTNA COMBINED SELF-RAKE REAPERS AND MOWERS, \$100.00 CASH.****ÆTNA MOWERS, \$75.00 CASH.****CHEAPEST MOWERS AND REAPERS ON THE COAST.**

The "Ætina" machines are now being made with the "Ætina" Double Motion or Differential Gear, which, in the most simple, convenient and effective manner possible, secures a change of speed at will. By the movement of an easy-working lever, without stopping the team, without reversing the direction of motion of the gearing, and without destroying the simplicity of the machine, or adding the least complication to its parts, the speed of the knife or sickle can be instantly changed from fast to slow or from slow to fast, or by the same lever thrown entirely out of gear, placing at the will of the operator such a speed as may be best adapted to the gait of the team, or the work in hand, and enabling him to cut all kinds of grass and grain with the least possible wear and tear to the machine, while at the same time the draft will be reduced to the lowest attainable point.



SECTIONAL VIEW OF THE "ÆTINA" SELF-RAKE.

The cutter-bar of the Ætina can be folded to the side of the machine, and secured in that position with the greatest facility, and without throwing any weight on the horses' necks. All of the running parts can be thrown out of gear, and the driving wheels thus made to run loose like the wheels on a cart; in this way the Ætina can be transported with the ease of a light wagon, rapidly from field to field, or any required distance, without noise, without tiring the team and without the least wear and tear of its running gear. These advantages will be appreciated by all who use mowing machines.

These Machines Were  
**BOUGHT AT A BANK-  
RUPT SALE,**

And the Mowers were formerly

**Sold for \$150.00,**

And the

**Self-Rake Reaper and Mow-  
er Combined****FOR \$250.00.**

If You Want a Cheap Reaper and Mower Don't Fail to Send in Your Order at Once or Call on  
**BAKER & HAMILTON, Importers of Hardware and Agricultural Implements,**  
SAN FRANCISCO AND SACRAMENTO.

**OAKLAND POULTRY YARDS,**

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff,  
White and Partridge  
Cochins, White  
and Brown  
Leghorns, Dorkings,  
Polish, Hamburgs, Plym-  
outh Rocks, Game and Se-  
bright Bantams, Bronze Tur-  
keys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 650, San Francisco, Cal

**TO FRUIT MEN.****LILLIES' FRUIT PITTEP,**

Patented March 7th, 1876.



This machine pits all the different kinds of stoned fruits, (clinging stones included,) both rapidly and well, and without waste, and with entire satisfaction to all who have used it.

It does the work without waste and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully.

For further particulars and terms, address

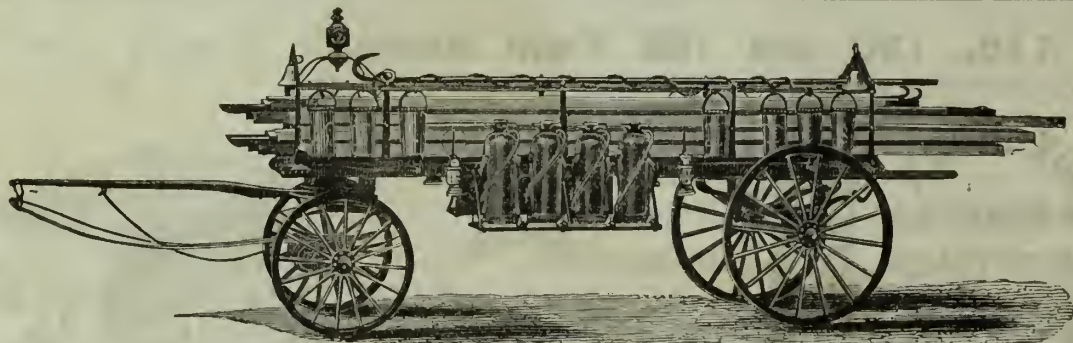
**H. JONES, Sole Agent for California,**

419 and 421 Sansome Street, S. F.

**25** FANCY CARDS, all styles, with name, 10 cents;  
30 Bon Ton Cards, for ladies, with name, 20 cents;  
10 Shadow Cards, all fun, no name, 10 cents,  
post-paid. J. B. HUSTED, Nassau, N. Y.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

The BABCOCK.



The BABCOCK.

**Village Hook and Ladder Truck.**

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

**Address PARKE & LACY, 417 Market Street.****SEEDS.****SEEDS.**

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton

Yellow Flint Corn.

Long Red Mangel Wurtzel  
Yellow Globe

Beet Seed.

White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL

**GEO. F. SILVESTER,**

No. 317 Washington Street, San Francisco

**R. J. TRUMBULL,**

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYR-INGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

**R. J. TRUMBULL,**

419 and 421 Sansome Street, S. F.

FARMERS write for your paper.

**THOROUGHbred FOWLS,**

BRONZE TURKEYS,

Pekin Ducks,

Emmden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

BRAHMAS

LEGHORNS



Eggs Shipped to

Any part of the

Coast to Hatch Af-

ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

WAR MAPS, largest variety, published by E. STEIGER, 22 & 24 Frankfort Street, New York. Send for list. Liberal terms to canvassers.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, MAY 26, 1877.

[Number 21.]

## An English Straw-Burning Engine

As the threshing is near at hand, notes of threshing machinery are timely. We have formerly given illustrations of engines made by Pacific coast and other American inventors, and to make information on the subject of threshing engines more complete, we present on this page an engraving showing an English machine, which has been introduced on this coast, and thus demands attention. The illustration gives a good idea of the engine, and it is plain that its general characteristics are strength and symmetry of form and design. It is from the manufactory of Ransomes, Sims & Head, of Ipswich, England, and this firm is represented on this coast by Mr. E. L. Ransome, 10 Bush street, San Francisco.

To describe the engine which our illustration shows, we shall quote from an address which Mr. John Head, C. E., read before the British Associated Institute of Civil Engineers. Mr. Head is one of the inventors of the engine, and his claims for it may thus be learned:

"The expansive engine here illustrated are manufactured from six to ten-horse power with single cylinders, and from ten to 30-horse power with double cylinders. The proportion of the steam generating power of the boiler to the cubic quantity of steam required in the cylinder to develop the maximum power at the normal speed has been carefully considered; and from a variety of experiments it has been found that the consumption of fuel in these boilers does not exceed more than about four pounds of coal per effective horse power per hour.

In designing the boilers the main object has been to obtain the greatest amount of evaporation from a boiler of moderate dimensions, and about eight pounds of water may be reckoned as the average evaporation by one pound of coal in the boiler illustrated on this page. The usual proportion of heating surface is, 15 square feet of tube surface, .60 to .75 of grate surface and 2.75 to three square feet of fire-box heating surface, per nominal horse power. These boilers are manufactured of the best brands of English plates, and the riveting is almost entirely performed by hydraulic machinery, which does not destroy the fiber of the iron in the rivets so much as hand riveting. The average working pressure of steam in these boilers is from 80 to 90 pounds per square inch, and they are tested with hydraulic pressure up to 160 pounds per square inch. Both the barrel and the outer fire-box are covered with felt lagging throughout, which prevents radiation and tends greatly to economize fuel when the engine is at work in the open air during cold or damp weather.

The engine proper is placed on the top of the boiler. The cylinder is jacketed throughout, and the valve chest is accessible for repairs, not only from the front but from the top, which enables the slide face to be filed and scraped when worn without taking the cylinder off the boiler.

The crank shaft is carried on two cast iron brackets, firmly bolted on to the cylindrical part of the boiler. These brackets are stayed to the cylinder by means of two strong wrought iron stays, one end of which is bolted to the top of each bracket, which is elongated so as to make it the same height as the cylinder, and the other ends are attached to strong lugs cast on the cylinder. These stay rods—which are screwed up when the boiler is hot, so as to compensate for the expansion—bind the whole of the working parts of the engine most firmly together, and prevent any of the vibration which is so often felt in portable engines when they are doing the maximum amount of duty.

In the general arrangement, the principle of moderately high piston speed, with a medium diameter of fly-wheel, has been preferred to a long stroke and slow speed with a larger fly-

wheel. The reason why this system is adopted is, that the motion of the engine at a high speed is more uniform and is not liable to be so easily affected by the sudden shocks to which all small engines are exposed. The average piston speed is from 280 to 300 feet per minute; the number of the revolutions of the fly-wheel from 140 to 150 per minute; and the speed of the periphery of the fly-wheel varies from about 2,000 to 2,500 feet per minute, according to the size of the engine. All the bearings of the crank shaft, connecting rod and piston rods, are large and of great length, thereby distributing the strain over a larger surface than is theoretically required.

The apparatus for feeding the straw, reeds and other fuel into the fire-box, as shown in the cut, consists of two toothed rollers placed at a minimum distance of about one-fourth of an inch apart, and capable of rising so that the distance between them can be increased to one and one-

## Canary Seed.

Events show that canary seed is one of the agricultural products which experience extreme fluctuation in market prices. Within the last two years in this state the price has doubled and halved. Our local price often fluctuates of its own accord when supplies by importation run low, but it is also effected by prices at the points of large distribution. During the last year this price has been very low and an advance is now announced. This will be of interest to producers in this State, some of whose fields promise very well for the season. The New York *Bulletin* of a recent date mentions an active speculative movement in canary seed. It adds: This was greatly stimulated by a cable dispatch from Smyrna reporting an advance of 50 per cent.

## The Cure for Stock Evils.

There are few in the country who do not know that there has been in the city mining stock markets, a depreciation of values such as the history of the State does not afford a parallel. City and country alike have suffered, for in both may be found men who have trusted their surplus cash to the maelstrom of the stock market, thinking that it would toss them in return a speedy hoard of wealth. Since stocks have so fallen there has been abroad a wide feeling of distrust, and an impression that the mining enterprises have not been managed for the benefit of the large mass of the stockholders, but for the few who held the management of the mines. These leaders have had a meeting in this city, with the ostensible purpose of discovering what was the cause and what the remedy for the immense depreciation. The remedy to the outsider seems to be the honest management of mining enterprises and the uprooting of the pernicious system of gambling and ring manipulation which has prevailed. The fact that a committee of the men who are considered to have been largely instrumental in bringing about the present condition of affairs should meet to devise a remedy, gives the *Call* an opportunity to pen the following pointed paragraph. It is called the "San Francisco Sick Man."

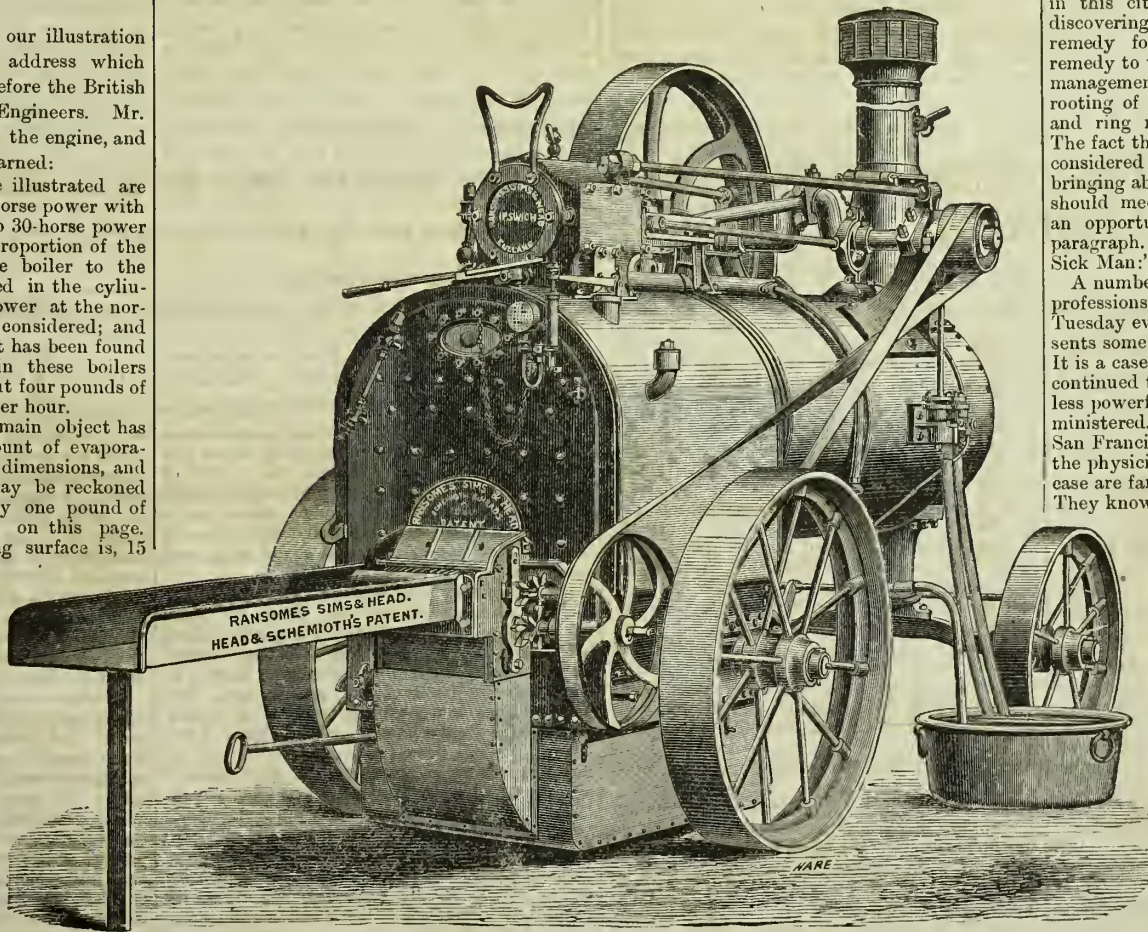
A number of eminent gentlemen from various professions, assembled at the Palace hotel on Tuesday evening to consider a case which presents some peculiar and interesting features. It is a case of prostration so complete and long-continued that fatal results are anticipated unless powerful remedies are discovered and administered. There is one point in favor of the San Francisco sick man's chance of recovery: the physicians who have assumed charge of his case are familiar with the causes of his disease. They know very well what practices brought a

hale and hearty man to his bed in his early prime and chained him there until he is but a ghost of his former self. It may seem a little like a farce for these self-appointed physicians to exercise their powers of a cure on patient whom their skill in implanting maladies has brought to death's door; but we may fairly presume that they repent of their former line of practice, and are seriously disposed to do better in the future. At all events, there is some advantage in securing the services of a physician who understands the disease, even if his knowledge of it was obtained through crooked practices. In the middle ages, before the science of medicine was so well understood as it now is—or rather, when a little knowledge

of the science possessed was confined to a smaller number of people—it was held that there were poisons for which there was no antidote except as prepared by the hands of the poisoner. The professional gentlemen we have alluded to are apparently acting upon the same principle. We trust that if, by a wise use of the remedies Nature has provided for cases of this kind, they restore the sick man to health, they will not imitate the example of the typical personage of whom it is written:

"When the devil was sick the devil a monk would be, But when the devil got well a devil a monk was he."

**AN UNFAVORABLE RESULT FROM RAISIN SHIPMENT.**—Some months ago mention was made in the *Call* of the shipment by Lusk & Co., as an experiment, of 500 boxes of Briggs' raisins to New York, by the ship *Two Brothers*. The ship cleared on the 7th of December, and arrived recently. A dispatch states that the shipment turned out in a sweated condition, and was disposed of by auction at 90c per box. It is evident that the safest mode of shipping raisins is by rail; still no difficulty was found in getting cargoes from Malaga in good order by sailing vessel before the railroad was built.



ENGLISH PORTABLE STRAW BURNING THRESHING ENGINE.

fourth inches. The under roller is set in motion by means of a strap from the crank shaft of the engine, and makes about 45 revolutions per minute. The upper roller moves at the same speed, and is connected with the under one by means of long-toothed wheels. The rollers are carried on a cast iron frame, to the front of which is attached a trough for holding the supply of vegetable fuel to be fed into the furnace. The rectangular space between the rollers, which serves as a passage for the fuel into the boiler, is placed from four to five inches above the fire bars, this distance having been found by experience to give the best results, as by injecting the fuel at this point the fresh substance forces its way into the center of the burning mass inside the fire-box, and ignites more quickly than when it falls on to the top of the fire. The theory of the invention is, that by means of a continuous mechanical feed, the fuel can be forced into the furnace in a thin stream in the form of a fan, and the fresh fuel is practically held in suspension for a short time, allowing the separate stalks to become immersed in the flames, and the long pieces of straw, reeds or brushwood to have the effect of stirring up the half-burnt material in the furnace, thus keeping the whole in motion.

The transactions here for three or four days have involved the very large quantity of 4,000 bags, beginning at \$2 and running up to \$3.50 per bushel for Smyrna, \$3.50 for Dutch, while Sicily advanced to \$4, with some holders asking even higher. A short time ago Smyrna seed sold as low as \$1.62½, which was extraordinarily low, the price in former years generally being about \$7, though two years ago, a large speculation, based on a short crop, drove the price up to \$11.50. The seed is raised in Asiatic Turkey, Sicily, Spain, Holland, and to some extent in Barbara. Even at the late advance, the price, as will be readily inferred from the foregoing, is unusually low, but the market seems now to have caught the speculative fever, and it is impossible to foretell where the advance will stop. This year up to April 25th the imports of canary seed had reached 9,525 bags, or equal to 2,113,688 lbs. Last year the imports were 22,835 bags, or equal to 5,094,776 lbs., against only 11,333 bags, or 2,571,259 lbs., in 1875.

**THE FIRST DATES.**—We are informed by the *Placer Argus* that Dr. Frey, who resides at Newcastle, has in his garden a date palm tree in bloom, from which he expects to gather fruit the present season.



## CORRESPONDENCE.

### Answers from the Foothills.

EDITORS PRESS:—During the past week four of your readers, all fruit growers, have written to me for further details in regard to the foothills of this and El Dorado county. As the desired information can be embodied in one letter, and may be of interest to others, I will, with your permission, give it through your widely circulated journal.

To "H. J. R.," Carpenteria, Santa Barbara county: I regret that you are forced to leave so fine a climate and productive soil, with no frost whatever, because you have no good market for your fruit. The price of the best of lands from one to five miles out of town, with improvements from moderate to fair, ranges from \$10 to \$25 per acre. The odd sections belong to the railroad company. The mineral has been proven off most of this land, and the company have, or will shortly, receive a patent therefor, when they will inform applicants the price per acre, which will be from \$2.50 upwards, according to quality. Five years time will be given by paying 20% in cash and the remainder payable at any time within five years, interest 10% per annum, paid yearly in advance. Many are prejudiced against railroad land, but these people can give no good reason for their railings against the company's land, except it be they charge a little more per acre than the Government. The title is perfect. The most intelligent of our citizens are filing on railroad land. The company gives preference to actual settlers, or those who make the most improvements. B. B. Redding, Land Agent Central Pacific Railroad, San Francisco, will furnish particulars to those desiring information. A very limited amount of these lands have been improved, owing to the fact that the mineral has only recently been proven off. Most of this land is of good quality, ranking among the best in the State for fruit growing. There is yet some unoccupied Government land classed as mineral which is good agricultural land. In most cases the mineral is easily proven off. This land, where pre-empted, costs \$2.50 per acre (in railroad limits) besides the expense of proving off mineral, which, however, is small. Within railroad limits 80 acres only can be homesteaded, while 160 can be pre-empted. This condition of affairs has kept back that speedy agricultural growth which this section otherwise would have possessed. But of late, since it has been shown these lands are superior for agricultural purposes, a new prosperity has loomed up, which already stands head and shoulders above the mining interest. The fact that nearly all of the many new settlers coming hither are men of intelligence and experience, speaks volumes in behalf of our foothill lands.

Do cherries and other small fruits do well at so high an altitude? Indeed, not only cherries but all varieties of currants, gooseberries, blackberries, raspberries, Zante currants, raisin grapes, strawberries, almonds, prunes, peaches, apples, figs, sweet corn and tomatoes are especially adapted to this section, growing to perfection. Our vegetable gardens are all that could be desired. We have no grasshoppers. We have more or less frosts through winter, but they are not injurious to orange trees, which also thrive here. Sometimes we have a frost about the 20th of April, which is confined only to low, damp spots, where tender vegetables sometimes get nipped. We have a climate, I should judge, about midway between the coast and Sacramento. Some winters snow falls from four to 10 inches, but it lasts only a few days, doing no more harm than so much cold rain. We have very good schools handy most everywhere. As to churches, they are scattering. Most of the water is owned by companies, several ditches traversing the country. The owners of these ditches furnish alike water to miners and farmers at 10 cents an inch. In this locality, the water is taken from Bear river, and is very muddy; but we use it to advantage, however. Reservoirs are easily constructed by throwing up a dam or levee of earth, and the water allowed to settle, which it quickly does. Some use the water direct from the ditch. Now and then is a farm favored with a spring or stream sufficient for a few acres.

To "W. S. P.," Pescadero: The kind of a farm you desire can be had for from \$1,200 to \$1,500.

To "S. T.," of Tulare: Our rainfall this season amounts to about 18 inches. We always have double the rain they do in Sacramento. You will find this just the country for fruit growing. Two large fruit-drying establishments have been erected in this county this spring, located on the Central Pacific Railroad. You will find no better fruit market in the State.

In reply to my Sutter county friend, I will say we have no "agur" up here. We grow finer flavored fruits, but you can beat us for the first early fruit. We have no leeches nor mining debris to contend with. It is lamentable that so much excellent land, in so good a county as Sutter, has been and is being ruined by hydraulic mining.

I have endeavored to answer all. I would

advise those visiting Auburn to call upon the Superintendent of the Alden evaporator, Mr. Lerner, whose residence is near the depot. Although he has no land to sell, he is ready and willing to give strangers information. A visit in J. W. Hulbert's orchard in Auburn, and his almond orchard in the country alone will satisfy any one that this section is ahead of many others, although only partially developed. There you will see chestnut and persimmon trees growing in their natural perfection.

H. W. HULBERT.  
Auburn, Placer county, May 15th, 1877.

### Notes from Anaheim.

EDITORS PRESS:—I recognize the obligation upon all of the live members of the farming community of California to write for and aid in every way the PACIFIC RURAL PRESS, which is one of the best, if not the very best, agricultural paper in the United States. I have been remiss of late, not from want of inclination, but from physical inability. But after being 17 years "under the harrow" I have at last, owing to our genial climate, almost entirely recovered my health, and intend with your approval to resume my correspondence and try to keep you posted as to matters agricultural in this valley of the angels.

It is unnecessary to state that this is a dry year. That fact is patent to any one but a blind man in many parts of California; and also another fact is equally evident to the senses of the observer, that a dependence upon our uncertain rainfall in many parts of this State, but more particularly the southern part, is nothing but folly. One good crop and two utter failures in three years is anything but encouraging to a hard-working farmer, whose livelihood as well as that of his family are dependent upon his success.

It is this dependence upon rain that causes farming to be considered an uncertain business, but on the other hand those who do not depend upon rain, but upon natural moisture or irrigation, are entirely free from all anxiety for the future; they can make their calculations on a certain amount of crop in each year, and the misfortunes of their neighbors are, without action on their part an advantage to them, from the increased price of produce consequent upon scarcity.

The man whose land always possesses the requisite moisture, or who can irrigate at pleasure, is always serene. If the rainfall is insufficient for others his land is wet enough, or he supplies the deficiency by irrigation. A small amount of extra labor or expense makes him perfectly safe, whilst his unfortunate neighbor in the dry country is praying for the rain that does not come, and watching the clouds night and day, fluctuating between hope and despair, as appearances are favorable or otherwise. I, like many of your readers, have experienced all this, and know that such a state of affairs is more wearing upon health and constitution than the hardest and most unremitting labor; the fatigued laborer is rested and recuperated by sleep, sound, dreamless sleep, but from worry and anxiety and the feeling of utter helplessness the other has no rest night or day, and becomes entirely hopeless and discouraged.

This year applies the test; land which produces fair crops notwithstanding our diminished rainfall can be relied upon on any year. The amount of rain which has fallen in this valley is about four inches, and in the hills about eight inches, but it is only upon the moist valley lands or other lands that have been irrigated, upon which there are any crops. Much of our barley is a full crop; this is on land with abundant moisture, either from irrigation or good cultivation. There are other crops with less moisture that will yield one-half or one-third of a crop. On the dry land, as every where else, it will not make good sheep pasture. Our corn and potato crop will be as large as usual. Most of it is raised on irrigated land, and the rest on land always productive. But the great standby of our stock and dairy men is our immense body of green pasture land—land covered with a compact sod of perennial grass which really grows better in dry years than in wet; in this valley there is not less than 40,000 acres of this perpetually green land which can be relied upon to sustain one cow to the acre during the entire year, and there are portions of it that will carry not less than five cows to the acre, for eight months of each year. Cows fed on this grass require no other feed, and make gilt-edged butter. Alfalfa being a deep-rooted plant is not affected by dry seasons, as its roots are in perpetual moisture, that, resting upon an impervious bed of pipe-clay, is always at hand, no matter whether the season is wet or dry. Stock farming is the most profitable pursuit in the whole line of farming on account of the saving of labor, and this is undoubtedly one of the best stock counties in the State of California. The dairymen in some dairy districts of the State calculate ten acres to each cow, and dry feed half of the year, here one acre of natural feed will do as much and no dry feed; with alfalfa one-fourth of an acre will do as much. Horses, cattle, sheep and hogs all thrive upon it; an industrious family with one acre of alfalfa and another in garden truck, can make a comfort-

able living from the sale of the produce from their cows, pigs and hens.

Forty acres of this land is better than 400 acres in some places dependent upon rain. The owner makes money with absolute certainty, there are no drawbacks, the seasons here are always favorable to the man who has water. I am sorry to see by the letter of my friend Berwick, that even the Carmel valley has suffered this year. He promised years ago to pay me a visit; now is a good opportunity, as I suppose he will have more than his usual amount of leisure this season. I hope he will avail himself of it.

In addition to our resources of natural moisture and flowing wells, which last number is between 500 and 1,000 (it is now impossible to keep count), at least one each day is added to the number, and each set of boring tools is engaged weeks ahead by other parties. There are not less than 150,000 acres in the valley where water can be obtained, and a large portion of the land is still unoccupied. We will this fall have completed a large irrigating canal, which will supply 25,000 acres of our best land that requires irrigation, and by constructing reservoirs for accumulating the surplus water, the same canal will afterwards supply a total of 50,000 acres, and the total expense will not be more than \$3 per acre for the whole, and will furnish an unfailing supply of water and also the best water power in the State, because the power will be contiguous to the center of population.

WM. R. OLDEN.

Anaheim, Los Angeles Co., May 14th.

### Kingsburg, Fresno County.

EDITORS PRESS:—I read with interest the article which appeared in your last issue describing the course of our magnificent river, which gives its name to this fertile valley, and noticing favorably the settlement at its lower or southern end called the Lower King's river settlement, or Munsell's slough country. As a short description of this locality would only be *apropos* of the subject and would besides, as it were, complete the notice of the two principal agricultural sections of King's River valley, I hope you will find space in your interesting paper for this letter. I had my doubts whether correspondence such as this would be admissible in the RURAL PRESS until I read in your issue of 5th instaut, that you were "glad to hear from new localities, for thus our readers may gain acquaintance with new portions of our wide domain."

I would have it understood that my remarks apply to that portion of King's river country situated within a radius of about six miles of the railroad depot, situated in the little town called Kingsburg. Not two years ago the cabins erected on these plains could be counted on the fingers; now the tidy little cottages mark each "quarter section," clearly showing that the tide of emigration has drifted not a few of the enterprising to this comparatively obscure locality. This country is by no means unattractive naturally, and whether this has served to arrest the eye in others as it did with me I cannot say.

On the east we have a pretty picture. In the foreground the timbered belt along the river with a magnificent background of gently rolling hills, and rugged, lofty, snow-capped mountains forms a scene of indescribable beauty in the softening tints of the setting sun. But perhaps I am too enthusiastic on these points, and besides I must hasten to the subject of my letter. I shall notice what agricultural advantages we have at present, and then take a glimpse of what we may expect by such advantages wherever they are rightly applied.

We lie south of the fortieth parallel and consequently, according to Professor Davidson and his colleagues, and by the still higher authority of experience, we lie in the region of scanty rainfall and irrigation. Our facilities under the latter head cannot be too prominently or too early noticed, for verily they are not only the *sine qua non* of our very existence as farmers, but I trust this short *resumé* may prove interesting to those not practically acquainted with the projection and execution of irrigating schemes on newly settled portions of this State. It is the old California story over again. A few months ago not a vestige of herbage could be seen on our lands, and now with water there are acres of crops looking bright and healthy. I recollect reading in Charles Nordhoff's book on California, when I was hundreds of miles away from here, of the energy and promptness with which the Farmersville community, near Visalia, brought water to their thirsty lands, and I was then struck with the "pluck," if I may use the term, of American settlers. Our irrigating scheme does not fall short of it, and I should like these details published, if for nothing else to show that we are not afraid to put out our labor to achieve ends where this "pluck" and muscle are conditions of success.

### Irrigation Arrangements.

More than two years ago one or two of our early settlers endeavored to deviate the waters of our unfailing river from its natural channel out on the plains. But want of skill, I am inclined to think, rendered these efforts futile. Shortly after a proposal came up from the

Fresno Canal and Irrigation Company to the effect that if we would excavate a channel about three-quarters of a mile long and 60 feet wide at the base, of an average depth of over four feet, the company would give as compensation 24 water rights. By the fulfillment of this contract, which engaged 24 of us nearly three months, we are now entitled to a cubic foot of water per second at our respective farms. We were further required by the contract to construct our own ditches, making them over to the Fresno company and paying them annually, to keep them in repair, \$20 per share. The main ditch is about 21 miles long, and about twice that length if you include the middle and western branches. It cannot be denied that the lay of our country affords considerable facilities for ditching, for the survey showed an average fall of about four feet to the mile; but we are notwithstanding proud to let all know what the Kingsburg Irrigation Company has accomplished in face of difficulties, so well known to those who have experienced the settlement of a new country. This is not all. Last autumn another company of 50 was formed calling themselves the Kingsburg and Centerville Irrigating Company. They engaged the services of a competent engineer; surveyed the routes of their ditches, and have been, for the last three months or more, busily engaged in making them. We wish the company every success, at a time when the unprecedented drouth of 1876-77 has so crippled their resources. This year we hope to see not only another 150 feet of water drawn from the river, but each member of the company in the enjoyment of his shares. We can now, I think, reasonably conclude that water will be plentiful, and with a fertile soil and genial climate that prosperity will smile on the community.

### Farther Prospects.

Shall I say that there is still room for immigration? I think I may do this safely. I would not have it understood that there are Government lands open to settlement, but an immigrant with limited means can find railroad lands which will not be in the market for another year at least. It was at one time the opinion that the railroad lands would revert to the Government owing to an unauthorized change made in the route of the railroad. But now that the Government has allowed an extension of time, and that the company are pushing the construction of the line provided for in their contract, it is highly probable that a patent for these lands will be issued to the railroad company in a year or so. This time can be turned to profitable account by an energetic farmer, who should, I think, however, have means to meet the first installment which the railroad company may require of him. Besides these railroad lands, there are small tracts in the hands of a few who will sell at about \$6 an acre. Water rights, I presume, can also be purchased from members of the Kingsburg and Centerville Irrigating Company.

### Work in Spite of Drouth.

It is worse than useless to deny that the exceptional scarcity of rain this season has thrown a slight gloom over the spirits of our community, but I would not have it thereby understood that it has not worked beneficially in calling into existence considerable energy in farming irrigated lands. I regret I cannot allude with pleasure to waving grain fields and remunerative winter crops, for they have signally failed, but I can see how such reverses have led many not to trust, as they used to, to our fickle rainfall. The early weeks of summer show instead a small acreage in corn and a good beginning in alfalfa. These crops look very promising and on their out-turn, as well as on the out-turn of other crops, I shall write of in the future.

Irrigation is working in another way. We have promises of orchards and verdant shade trees. Little nurseries are not uncommon. The blue gum seems to flourish in the open air and grows readily from the seed without any care. We have also raised from the seed almonds, walnuts, limes, apricots, peaches, mulberry and pepper trees, and from cuttings the poplar, cottonwood, locust, fig, pomegranate, and numerous grape vines. Unquestionably our fertile soil needs but water to develop its resources, but we have yet to find out how our crops of potatoes, both Irish and sweet, beans, castor beans, etc., are going to yield. We are also noticing the seeping properties of our soil, and whether it will be as retentive of moisture as observation so far leads us to hope it will.

I may mention here that last harvest a neighbor reaped forty bushels of barley to an acre on irrigated land, and I have just seen thirty acres of wheat on irrigated land looking green and healthy, only just heading out and standing three feet six inches in height.

My esteemed friend, Prof. W. A. Saunders, is about to enter extensively into the culture of the choicest varieties of grape vines, and I shall not fail to avail myself of his kind invitation to visit his vineyard and notice how it succeeds. His experience no doubt will bring to light most conclusive evidence as to whether our country is going to be a wine producing one or not, and I trust the Professor will favor myself and your readers with the results of his experiments.

EDWARD KAUNTZE.

Kingsburg, May 14th.

[Prof. Sanders is one of our esteemed contributors and we trust the RURAL may be favored with the results of his investigation and experience in the future as in the past. We shall also expect farther observations from Mr. Kauntze.—EDS. PRESS.]



## On Sumac.

EDITORS PRESS:—Your articles on sumac (*Rhus coriaria*), have sent me to all accessible authorities, and, without claiming special credit for anything besides a compilation, I forward a few notes on sumac in Italy, and also in our Southern States.

Sumac grows from two to three feet in a season in the ordinary soils around Palermo. Manure is never used. Stony soil will produce well. The plant does not bear much moisture, and does best on a hillside with a southern exposure. The soil is prepared as for potatoes, and young suckers, or pieces of the root, are planted in rows far enough apart to allow of cultivation. It can be grown from seed, which must be soaked well before planting. The planting time in Italy is during January.

In August, of the first, year the leaves are stripped from the lower branches, and in October the whole head is broken off. The second year, in June, the branches are again stripped, and in August the whole plant is cut down to within a foot of the ground. The branches are dried in the shade, and then beaten with a flail to separate the leaves from the wood, which has no value. The leaves are then ground by a stone revolving on its edge about a center, or by any simple arrangement with close rollers. The product is then sifted and packed for market. A sumac plantation will produce a good article for 10 years, and an inferior one for 10 years longer, after which it must be grown on other land. Two thousand pounds of sumac per acre is considered a good average yield.

So much for the *Rhus coriaria*, or European sumac. In the United States *R. glabra* and *R. typhina* have been used for tanning. Since 1867 sumac has been gathered and prepared in the Southern States, and its quality is claimed to be superior. The "Agricultural Report for 1869," page 230, has an interesting report, from which I quote:

FINEST SICILIAN. (Lead Seal Pojero.)	FINEST AMERICAN. (Virginia.)
Tannin..... 23.65	Tannin..... 30.00
Sand..... 1.00	Sand..... .50
Vegetable fiber..... 75.35	Vegetable fiber..... 69.50
Total..... 100.00	Total..... 100.00

Sumac ought to be tried, and on some soils will probably be of value. The proper adaptation of the land can be found by experiment. Take sulphuric ether and dissolve 100 grains of leaves, then draw off the ether by heat, and the deposit will be pure tannin. Cinchonia may also be used as a test. C. H. SHINN.

Niles, Alameda Co.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

## A Colossal Poultry Yard.

Stoddard's Poultry World for May contains an elaborate illustrated article descriptive of the immense poultry establishment of Mr. Wm. C. Baker, at Cress-kill-on-the-Hudson. This grand steam-hatching place for chickens is said to be the largest successful artificial fowl-raising establishment in the known world. The following extracts from the account of the Baker place will be read with interest: At some rods distant from the family residence and ornamental grounds, stand the great glass-covered chicken-houses, the incubating-house, the enormous laying-houses (the latter a range 460 feet long), the forcing-house, or patent feeding-rooms, the slaughtering-house, store-rooms, etc., which constitute this immense artificial poultry-raising establishment.

After practically experimenting in various ways for several years (during which period Mr. Baker has expended in these experiments, and in the erection and appointments of his numerous buildings, some \$75,000), his establishment for hatching chickens, ducks or turkeys is today brought down to a very fine point, assuredly, and upon Mr. Baker's plan the thing is entirely feasible.

The great brooding-house is a long, glazed building, fashioned like a pitch-roof greenhouse, with a broadside aspect to the east and south. A two and a half story building at the end (to which this is attached) is a commodious dwelling-house for the attendants, etc., and contains Mr. Baker's private office, the incubating-rooms, a dining hall and other apartments above, while the basement is devoted to store-rooms, boiler-room, electric battery apartment, heating apparatus, etc.

Passing through the battery-chamber, we enter the incubating-apartment. Here are quietly produced thousands of chicks by artificial heat every week. This chamber is about 20 feet square, protected by double sets of windows, and three ranges of huge low incubators stand ranged through the center, while a lesser range, similarly constructed (each with eight tiers of shallow egg-drawers, one above the other), stand around the four sides of the room.

The capacity of the hatching-drawers, or multiplied trays, in these incubators is equal to the accommodation of about 8,000 eggs at a time, or, say, for turning out 140,000 chickens per year.

There is another room devoted to this same

purpose, and Mr. Baker is still further increasing his incubating works, with the design of raising, during the coming year, a grand total of 250,000 chicks; for which, as they mature, he has secured a cash market for table consumption in New York city.

Mr. Baker's plan of hatching is as follows: The gas for heating the incubators is manufactured upon the premises. Beneath each machine is kept alight a single jet of this gas to heat the water conveyed through pipes to the narrow open chambers or vacuities over the surface of the eggs as they rest in the trays while being hatched. This process constantly gives to the eggs the required artificial heat, in form quite similar to the action of the warmth that descends from the natural hen-mother's body when she is brooding over her eggs. An ingenious, practical and most admirable arrangement this; for, in Mr. Baker's verified experience, precisely as the hen performs her duty in the natural way, so must the incubator perform its duty to be successful in the hatching. The eggs in the trays are turned regularly once in a day by the attendants. The heat conveyed to the interior of the incubators, as we have described is controlled automatically. An electric battery in the adjoining room communicates with the hot water chambers over the eggs, and also with the gas-jets; and when the temperature becomes too hot or too cold for the healthy and rightful progress of the hatchings, the undue variation of heat is instantly announced through indicators governed by the electrical current and apparatus contrived for this special purpose. The atmosphere in the incubating apartment is kept moist and humid, like the warm spring air, by placing open, shallow pans of water around, upon which the heated air acts advantageously, evaporating it evenly and admirably. The young birds remain in the trays (where they first see daylight after breaking their shells) for two or three hours, when they become dry and lively, and are transferred to what Mr. Baker calls his "brooding-house."

This glass house is 30 feet in width and 158 feet in length. It is divided off into 50 separate compartments (25 on either side), in each of which are kept and "brooded," artificially, 100 chicks from the second day of their birth to two or three weeks old, the accommodations within this large conservatory being ample for 5,000 chicks at a time (of all ages), from the size of a half-grown robin to that of a pigeon or partridge, until they become good-sized broilers; and then, at from one and a half to two and a half pounds each, they are dressed and sent to the hotels and restaurants in New York at 40 to 50 cents per pound.

In this house the chickens are "brooded" when quite young by a patent hen-mother to each pen. At two or three weeks old transfers are made from this house to another and larger range of buildings, similarly glazed and ventilated, in which are also confined, in numerous separate apartments, the laying hens and pullets kept on the premises by Mr. Baker. This latter range of buildings is glazed on one side only, is 460 feet long, divided into 75 compartments, and each pen has three rooms or divisions in it. The pens run through from front to rear, and are six feet wide, each, by 20 feet long, from east to west. The fowls are fed from the rear of the pens. This immense laying house is heated by steam or hot water pipes again, and the apartment is kept at continuous summer heat (in the colder season) by this means, whereby Mr. Baker has found, with stimulating food and constant care, that his fowls "lay well in winter time," as well as in the warm months of the year. In each pen there are kept from 20 to 25 hens and pullets, or about 2,000 laying fowls in all; and these are of all sorts and kinds—well-bred, full-bred, cross-bred, etc.—suited to Mr. Baker's purpose—to wit, laying of eggs only.

Not far from this building stands the cramming or forcing house, 120 feet long by 25 feet wide, which is quite novel in this country. There are erected within it eight round, upright wooden "feeding machines," each having five tiers of small boxes, pigeon-hole shaped, for the accommodation of a single fowl in a box, and each machine will hold, in the five circles running around this upright drum, 210 birds, when deposited there for forcing flesh upon them for marketing.

It requires 15 to 18 days of this cramming to put the fowls taken from the runs in ordinary trim into the very best possible condition for the table. The extra flesh thus put upon them through this process is not literally fat, but good, sound, solid meat. There can be so prepared in this building 30,000 chickens per annum.

Each box holds one bird. The feeder takes it by the head and thrusting a pipe into its gullet forces from a mess tub near by, through a flexible tube, the boiled, mashed food prepared for this purpose. With a single movement the crop is filled, and the next bird is similarly served. In less than three weeks the weight of fowls or chicks thus treated can be nearly doubled. Their food is of the most delicate and nutritious kind, mixed with milk (not water), and they thus fatten very readily and kindly. Mr. Baker is now enlarging this house, and expects to be able another season to force, say, 50,000 cocks and hens by this plan.

He now has the capacity for hatching and rearing in a twelvemonth 250,000 chickens, and he is ambitious to double this production, for he is certain of a ready market for them all, as the weeks and months go by, annually. There is no limit to the product, indeed, when man-

aged upon Mr. Baker's system. He will shortly extend his laying-house to about 800 feet frontage, adding 350 feet in length to its present size. This will, in all, give space for 135 pens, to accommodate, under one roof, 3,500 laying hens and companion roosters.

The hen-houses, incubating-house, stables, forcing-house, etc., are all severely plain in their style of architecture, but are costly, extensive and well-built throughout; and the modes adopted by Mr. Baker to render the interior of the fowl and chicken-rearing premises cool and airy in summer, or warm, healthy and comfortable for his vast poultry-families in winter, are in all respects the most economical, the most practical, and the most substantial for these ranges of buildings that we have ever seen devoted to this business.

## THE DAIRY.

## A Dairy House of Concrete.

Many of our dairy readers in the heated districts of this State will find their work much easier if they can have a building in which the temperature can be kept considerably below the heat of the external air. In some of these parts of the State building stone is either altogether wanting or obtainable only at high prices. To meet these conditions we propose to reproduce from the *Live Stock Journal* a description of a building made with gravel and cement, which details the steps of construction so explicitly that the dairyman and his common hands can build it with little aid from professional builders.

We shall describe a small building, for that will meet the needs of most of our dairy ranchmen: The best material of which to build such an ice-house and milk room is concrete. Concrete is better than stone, because, being more porous, it is a poorer conductor of heat or cold. To construct it in the best manner, build a double wall with an air space of six or eight inches between. The outside wall should be eight inches thick, and the inside wall six inches, tied together every six feet. The building of the concrete wall is very simple. If your building is sixteen feet square, set a standard, three by four inches, at each corner, reaching one foot above the top of the plate. Plumb these standards, and stay-lath them in that position. Then set a standard in the middle, in line with the corner standards. Now, eleven inches inside the outer row of standards, set another row of three by four for the inside of the outer wall. Now a straight-grained plank, an inch and a half thick and fourteen inches wide, placed inside these standards, will leave the space just eight inches between for the thickness of the outside wall. Then set another row of standards nine inches inside of the second row, and place two planks inside of these, and you have a space of six inches between the second boxing plank—just the thickness of the inside wall; and you will see that a space of seven inches will be left between the two walls—that is the four-inch standard, and two thicknesses of boxing plank three inches. The standards may be fastened together at the bottom by nailing a thin strip of board under the bottom end, and another across the top end, which will hold them in the proper relative position, and when plumbed and stay-lathed will be held there during the building of the wall.

Having the plank boxing all in place, you are ready to begin building the wall. Now take ordinary sand, without sifting, and mix, very thoroughly, one part of water-lime or cement with four parts of sand, while dry, then make into a thin mortar. Place a layer of this mortar, some two inches thick, in the bottom of the box; and if you have small stone, either cobble or flat, bed them in this mortar, not allowing them to quite reach the plank or outside of the wall, so as to have the mortar go all round them. Fill with mortar, then, over the top of the layer of stone, and then another layer of stone, and so on. When the boxing is filled around the building, and the mortar has set sufficiently, which usually occurs in one day, then begin, where the concrete was first placed, and raise the boxing plank 12 inches—this will leave two inches lap on the wall below. You will now fill the boxes again in the same manner as before. To tie the two walls together, now, you will take two short pieces of board, 12 inches long and seven inches wide, drop them below the boxing plank, and they will just fit in edge-wise between the two walls; and being placed four inches apart, mortar filled in between them and rammed down will form a tie to connect the two walls. Make this connection every five or six feet, or two ties on a side will be sufficient. These ties may be put in after twice raising the boxing if that is more convenient.

When the wall is carried to the top of the first story, which need not be more than seven or eight feet, and leveled all round, place a strip of seasoned plank, 2x4, on the top of the inside wall. Set your joists, 3x8 inches, for the floor on the top of this strip, just reaching over it; place them 16 inches from center to center, and stay-lath them to hold them in position. Now go on with the double wall, to the top of the second story, which should be nine feet high. Then place the plate, a seasoned plank, 2x12 inches, and let it rest on both walls. Place on top of these plates joists, 2x4, to hold the upper ceiling, 16 inches from center to cen-

ter. Now take rafters 2x8, and place the feet on these plates, and beside these upper joists or ties, allowing the feet of the rafters, four inches wide, to project over the wall 18 inches. Spike the rafters to the sides of these upper joists, which will prevent the roof from spreading the building. Now carry the wall at the eaves to the upper edge of the rafters, and the gable ends up to the under edge of the rafters. The rafters will be boarded up on the under side, and then the space between the rafters filled with cedar sawdust or shavings, if it can easily be had, to prevent vermin from working among it; but if not at hand, then use any sawdust, with a little gas tar mixed in to prevent the work of vermin; ram the sawdust in solid, and then put on the roof boards and shingle. The material for such a dairy-house will be much more expensive than boards, but such a building will be most complete; and will be so impervious to the outside air, that without ice the temperature may be kept 20° below the external air.

## ARBORICULTURE.

## Orange Growing in Fresno.

The Fresno Republican publishes the following review of Mr. Lyon's recent criticism of Prof. Sanders' lecture:

In the *RURAL PRESS* of April 21st, 1877, appears a long article—"Points in Orange and Lemon Culture," by Robert Lyon. This article is a critical review of a lecture delivered by Prof. W. A. Sanders before Raisina Grange, Central California colony, on the evening of December 30th, 1876. We pardon the modest reluctance with which he attacks the theories of the lecturer, which he calls the result of inexperience, but would remind him that the lecture of Prof. Sanders was prepared in and for this particular part of the San Joaquin valley. Without questioning Mr. Lyon's experience in Ventura county, we feel constrained to say a word in defense of one of our residents whose earnestness and whose experience in fruit culture has done much to call attention to this part of the State. Prof. Sanders recommended the flooding of land before planting trees. Mr. Lyon says such flooding would destroy the land for that season, and, if persisted in, would soon destroy it forever, by leaching the surface soil, and forming a hard pan at the depth the land was plowed. This assertion alone is sufficient evidence to those raising trees by irrigation here, that Mr. Lyon knows nothing about this locality. The colouy soil is light and porous to a depth of several feet and does not form the hard pan mentioned, nor leach by flooding. Prof. Sanders recommends planting deciduous trees in January and February in our valley, and, in reply, Mr. Lyon says that in California it is often so wet during January and February that land cannot be worked without injury. The soil of the Central California colouy never becomes too wet, by rain, to work, and most of it can be flooded one day and worked the first or second day after. As for puddling (Mr. Lyon to the contrary, notwithstanding,) we have tried it ourselves and know it will do. Moreover, it is not original with Prof. Sanders, but is recommended by nearly every work of repute on fruit culture. It requires considerable assurance on the part of Mr. Lyon to assert that "his (Prof. S.) theory of producing seedling trees exactly like the parent tree is a chimera of his own creating." We are not much of a botanist, but we believe the law of hybridizing plants, as taught by Linnaeus, and commonly accepted by students of botany, has not been contradicted until this new authority appeared in the *RURAL PRESS*. As fine peaches as we ever saw were raised upon a seedling tree on the Gould farm near here last season. As for transplanting orange trees—we published the lecture of Prof. Sanders in full and have it before us. He did not say February was the proper time for setting out orange trees, but, when the ground was warm, when the buds began to swell. He referred to Mr. Garey, of Los Angeles, who transplanted 1,000 orange trees in mid-summer. Whether there is or is not a no-frost belt, we have seen places along our Sierra foothills where sunflowers, tomatoes, etc., were green and blossomed all winter. We do not desire to discuss the matter of naturalizing or acclimating trees, but feel satisfied from our own observations that Prof. Sanders is right. We have orange trees in our yard that were not irrigated late in the fall, nor were they protected during the winter, yet the frost did not kill them. It seems certain that in this climate, sometimes very cold, young orange trees do best when protected in winter, but when older they do not require protection unless they are kept wet. In conclusion, we would say to Mr. Lyon that Prof. Sanders is an unostentatious, yet devoted botanist. His knowledge has been obtained both by study and by practical work. His observations have extended both to Europe and America, and he offered the people of the colony and this country the result of his observations and experience, for their practical benefit in this little known, yet evidently one of the best fruit sections in the State. We have a soil and climate peculiarly our own, and every kind of agriculture has to be learned especially for this locality. Before residents of the coast criticise our methods we invite them to come and see for themselves.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### The Agricultural Situation in England.

EDITORS PRESS:—We are now having what we hope will prove to be a valedictory dose of a very peculiar sort of winter; peculiar, that is, for England. For more than six months the weather has been so hopelessly seized with a mania for the pastime of raining as to be utterly lost to all other and more sensible considerations, and the result is that we have had scarcely a lick of our old-fashioned winters. You know what I mean by an old-fashioned winter in England—severe frosts coming unannounced and going away unexpectedly, sometimes accompanied by an erratic snow-storm, sometimes not—this was always "as it happened to be," you know. It is no unusual thing in winter time, in ordinary winters, for us to go to bed on a fine, open, genial sort of a night, and to wake up on the following morning finding our windows crusted over with frost-crystals, all organic nature outside wrung and pinched with bitter agony, and the genial atmosphere transformed into a "hipping and an eager air." Our climate at all times, especially in winter, is a most irregular, accidental and untrustworthy "quantity." We have long ceased to be so fatuous as to place any confidence in it. Since last October we have not had four consecutive days of fine weather, until last week, when it suddenly became bitterly cold under the withering influence of a keen east-wind. During the winter, which is now happily almost over, we have had a few attempts—they were nothing more—at a frost, and two or three plucky little snowstorms came, as if to vindicate their claim to come on the score of long habit, but these soon had to beat a retreat. A few years ago we used to have steady-going frosts and snows, now and again, which remained in possession five or six weeks; but now our winters seem to have drifted into that chaotic state which usually precedes collapse, and it would seem as if some new sort of climate was fighting with the old one for possession of our islands.

During the past winter period—I will not call it winter—many of our low-lying, flat tracts of land have been repeatedly flooded, and great damage has been done to autumn-sown wheat. Grass too, and arable land not under wheat, has suffered very much from excess of wet. It is more than probable that our wheat crop will be both deficient and inferior, and if the anticipated deficiency in the Eastern and Central States of America prove to be correct, you in California are in good form for reaping a truly golden harvest this year—providing your crops are up to the average.

The free trade principles which Cobden, Bright and Peel inculcated and established in this country, have not yet become an integral part of the nature of all Englishmen, for some amongst us now and again get terribly alarmed at some of its later developments. There are amongst us those who would reimpose prohibitive duties in order to protect the English farmers against severe competition from abroad. Happily there are not many of these left alive, and as there are next to none of the same sort growing up, there is a good chance of the race becoming extinct in the present generation.

It is nevertheless true that American competition pushes our English farmers hardly at times; and these are heavily handicapped in the race by the stupid, feudal restrictions which are imposed on them by the majority of landlords. When the duty on foreign corn was reduced to a mere fee for registration at our ports, our corn farmers were in *extremis*, commercially speaking. As a matter of course some suffering had to be passed through before they had learned to successfully adapt themselves to the altered conditions; and, indeed, it always follows in mundane matters that great reforms bring suffering—to the few—though the many are greatly benefited at the same time. In this case it was our corn farmers who suffered. In time, however, they learned to accustom themselves to the new position of things, and even they—as many of them as are left—now admit that though they suffered by it, free trade was an incalculable blessing to the country at large.

Now it is the turn of the grazing farmers to be troubled, and the scare is about American beef. Of course it is not owing to the recent removal of any tariff or duty on flesh meats, that all of a sudden your beef and mutton have almost flooded our markets; but this new branch of commercial enterprise may, nevertheless, be regarded as one of the results of the commercial energy to which free trade gave birth. For some time past your cheap corn has been extensively used as an adjunct in fattening sheep and cattle in this country, but now

our farmers view with dismay the probability of your corn—a large portion of it—coming to us already manufactured into beef and mutton, and their occupation they think to a corresponding extent become obsolete. The scare is undoubtedly genuine, but I doubt the necessity of it. Had it not been for American beef coming to us, as it has done, in large quantities during the past winter, our own would probably have been at almost famine prices. As it is, the best English beef has been retailing in London at 30 to 40 cents, gold, per pound, and the best mutton proportionately high.

A few weeks ago, on behalf of the Royal Agricultural Society, I inspected a cargo of beef and mutton which had just arrived in Liverpool on board the White Star steamship, *Celtic*, and I must confess I was surprised to find how completely the process of natural decay had been suspended during the voyage. When the refrigerating rooms were opened there was not the faintest odor, except that which arises from perfectly fresh meat. The meat was not in the least "messed" by the voyage or flaccid from having been killed 10 days before, but it was quite fresh to the eye and firm to the touch, and the juices had not gravitated downwards as one might have supposed they would when the meat was suspended in one position for so long a time. It would appear, however, that this meat commences to decay earlier and quicker than freshly-killed meat does. This property of earlier decay will tell against the American meat throughout the warm weather, but during winter it is of little consequence.

In any case, however, the imported has kept down the price of home-fed beef and mutton within reasonable limits. Much of the former is of good quality and excellently fed; but, notwithstanding that, the retail price of it in our markets has been little, if any, above half the price the latter has fetched in London. The importers have, however, been realizing handsome profits, and these have tempted them to glut the markets, and the consequence is that the imported meat has had to suffer, for the time, a commercial depreciation. As is usual with new ventures, there has been, and still is, considerable prejudice amongst consumers against this imported meat, and this prejudice, again as usual, has been chiefly among the poor and ignorant classes. So far the middle classes have been the chief customers, and now the prejudice of the lower is giving way, as it always does after it has had its fling.

One good result, in the interests of English farmers, will almost certainly, and perhaps quickly, come out of this new enterprise of your countrymen—we shall get dead instead of live meat sent to us from the continent of Europe. You have conclusively demonstrated the possibility of sending dead meat long distances successfully. Hitherto this had been a disputed fact; it is so no longer. A loud demand, which gathers volume each day, is now being made that our government shall prohibit, by law, the reception of live fat-stock from European countries. Why? Because along with this fat-stock we are continually liable to import contagious bovine diseases. Many times have we done this, and have suffered thereby losses amongst our own cattle, amounting to many millions of money. Mr. James Howard computes that we have lost this way more than the value of the whole fat-stock we have imported from abroad. The rinderpest, brought to us 12 years ago from Germany, is again amongst us from the same source. Now, all importations of cattle from that, and some other infected countries, are strictly prohibited. Again, however, is the prohibition too late, for the plague is in our midst, and no man can say where it will stop, and when. It follows, therefore, that if we must become secure against these diseases, we must allow no foreign cattle to be landed alive on our shores. The fat must be slaughtered at the ports of embarkation, and the store we can well do without altogether. It is probable that this system will soon become law.

Meanwhile agriculture languishes in these islands, principally because of the restrictions I have spoken of. Our farmers urgently need to be organized so that these may be removed. The Grange, or something nearly akin to it, is required to unite our farmers in a system of inter-dependent co-operation. But the co-operation needed with us must be more political in its nature than the Grange is with you. The reforms here will have to come chiefly through Parliamentary agency, and to this end it is necessary that we send many farmers as members to Parliament. Hence it follows that our farmers' organization, when it comes, must have a political as well as a social, educational, and a commercial basis; and the first more especially.

On June 21st I shall give, by invitation, an address to the farmers' club, at Maidstone in Kent, on "The American Granges and Agricultural Unity." I shall give a history of the rise and progress of the Order, and a description of some of the more salient reforms which it has helped materially to accomplish in your country. The historical portion I shall extract from Mr. O. H. Kellogg's book, and the descriptive from Dr. Ezra S. Carr's "Patrons of Husbandry on the Pacific Coast," a copy of which the author has been so good and kind as to send to me. This book of Dr. Carr's is written and compiled with no ordinary ability and grasp of the subject, and it is a valuable addition to the permanent literature of the Grange movement. It is, moreover, a volume which no future historian of the great republic can afford to overlook. I am specially pleased to possess it, as I value no less highly the kind feeling which prompted the author to make me a present of it.

Having given in my address a necessarily brief history and description of the Grange, I shall proceed to sketch out certain important reforms which the agricultural world over here needs and demands so justly, and I shall point out the only way by which, in my estimation, these can be gained, viz., by organization of agriculturists first, and by their united action afterwards. I hope thus to arouse a discussion which will produce some amount of result, more or less, in the right direction. At present English farmers have shown very little aptitude for organization, for combination, for cohesion; but I do not doubt the existence in them of these properties, though as yet they slumber. Other classes of our citizens combine readily enough, and hold well together afterwards; these are teaching, slowly and fitfully perhaps, but none the less surely, the lesson of unity to our farmers.

We expect every day to hear of the commencement of the war between Russia and Turkey. Where this unholy conflagration will end no man can pretend to predict, but probably a general European melee will come out of it. We regard war as inevitable now, and our markets are excited because of it. Corn of all kinds has gone rapidly up in price, and other commodities will follow suit. Then they will soon commence to vacillate with unhealthy feverishness and uncertainty. The rise in prices is unhealthy and fictitious, but it serves its turn. It points, however, to no legitimate increase of prosperity.

J. P. SHELDON.

Sheen, Ashbourne, England, April 21st, 1877.

### The Grangers and Legislation.

The Executive Committee of the California State Grange, recognizing the great necessity of some legislation that will relieve the farmers of unequal and unjust burdens of government, adopted at their meeting held April 3d, 1877, the following resolution:

*Resolved*, That we hereby recommend a convention of Grangers, to be held at the Grange hall in San Francisco (time of meeting to be fixed hereafter), there to consider and decide upon such legislation at the next session of the Legislature as may be beneficial to the farming classes.

In accordance with this recommendation the convention will be held at the Grange hall in San Francisco, on Tuesday, July 10th, 1877 at 1 o'clock, P. M.; there to determine what legislation is needed by the producers of the State.

The following are some of the questions that will be considered by the convention: "The unequal assessment of improved as compared with unimproved land;" "The repeal of the law taxing growing crops;" "Changing the revenue laws so that all taxes and licenses due the State, county or municipal governments may be paid in silver, currency or gold, at the option of the taxpayer;" "A change in our educational laws, as foreshadowed in the report of the Committee on Education," submitted to Grangers' Educational Convention; the question of voting for or against "a convention to amend the State constitution," and probably other questions of equal importance.

It is of the utmost importance that there should be unity of action to insure success, therefore all Grangers are cordially invited to be present.

A Convention of Wheat-growers will take place immediately after the adjournment of the Convention on Legislation. With judicious management the farmers can this year get all the Liverpool market will warrant for their wheat.

AMOS ADAMS, Sec'y State Grange.

May 23d, 1877.

### Farmers and Grangers.

#### Open Meetings—Invitations Extended to all—Further Appointments.

The good results realized from the work of Bro. Pilkington, the Worthy Lecturer of the State Grange, have induced the following further appointments for June and July:

Sonoma, Tuolumne County.....	Saturday June 2d.
Oakdale, Stanislaus County.....	Tuesday, June 5th.
Lathrop, San Joaquin County.....	Wednesday, June 6th.
Modesto, Stanislaus County.....	Thursday, June 7th.
Antelope, Stanislaus County.....	Friday, June 8th.
Turlock, Stanislaus County.....	Saturday, June 9th.
Cottonwood, Merced County.....	Monday, June 11th.
Merced, Merced County.....	Wednesday, June 13th.
Fresno City, Fresno County.....	Thursday, June 14th.
Centerville, Fresno County.....	Friday, June 15th.
Kingsburg, Fresno County.....	Saturday, June 16th.
Grangeville, Tulare County.....	Monday, June 18th.
Hanford, Tulare County.....	Tuesday, June 19th.
Visalia, Tulare County.....	Wednesday, June 20th.
Farmersville, Tulare County.....	Thursday, June 21st.
Soda Springs, Tulare County.....	Friday, June 22d.
Tulare City, Tulare County.....	Saturday, June 23d.
Glennville, Kern County.....	Tuesday, June 26th.
Bakersfield, Kern County.....	Thursday, June 28th.
Tehachipa, Kern County.....	Saturday, June 30th.
Los Angeles, Los Angeles County.....	Monday, July 2d.
Compton, Los Angeles County.....	Tuesday, July 3d.
Anaheim, Los Angeles County.....	Wednesday, July 4th.
Westminster, Los Angeles County.....	Thursday, July 5th.
Azusa, Los Angeles County.....	Saturday, July 7th.
Rineon, San Bernardino County.....	Tuesday, July 10th.
Riverside, San Bernardino County.....	Thursday, July 12th.
San Bernardino, San Bernardino Co.....	Saturday, July 14th.

Appointments for San Diego and other counties will be made in next week's RURAL.

AMOS ADAMS, Sec'y State Grange.

**CALIFORNIA RAISINS FOR AN EASTERN MARKET.**—The Grangers' Business Association last week shipped two car-loads—20 tons—of California raisins, consigned to Eastern houses. The Association contemplate shipping a car-load—ten tons—of honey East in a few days.

### From the Granges.

#### Picnic of El Dorado County Granges.

EDITORS PRESS:—I know that Patrons all over the State are glad to hear of enjoyments had by other Patrons, and are also glad to hear from prosperous Granges such as ours of El Dorado county are. The occasion of which I speak is a picnic had on Saturday, the 18th, by the Patrons of this county, and to which the citizens of the county were invited. It was held in a beautiful grove of oaks, about midway between Placerville and Coloma.

At about 9 o'clock the people began to assemble and scatter themselves over the grounds; some to play that ever fascinating game of Copenhagen; others to "trip the light fantastic too," and the older ones to enjoy themselves by watching the young.

At noon several tables were spread on the bosom of Mother Earth by the provident sister Patrons, to which all sat, and enjoyed a repast such as none but they know how to prepare. After dinner the speaker of the day, Brother Jones, of Contra Costa county, was introduced, and made some very interesting remarks about the uses and advantages of the Grange, and also about the Rochdale system of co-operation. He was followed by Brother Colonel Jones of Placerville, who, if he is not a farmer by actual occupation, has interests closely allied to those of the farmer and knows how to appreciate every advantage gained by him. After the Colonel, Mr. Blanchard, a lawyer of Placerville, was introduced. He loves the foothills and wants to see the condition of the farmers living among them changed for the better. He thought it is through the Grange that this must be done. Some remarks were then made by Brothers Wiltse, of the Placerville Grange, Valentine, of Sutter Mill Grange, and Brooks, of El Dorado.

The people then began to disperse, all satisfied that an institution which numbers so many members and can get up such enjoyable picnics is of some weight after all. It was estimated that there were at least 500 persons present.

There is some talk of having an annual picnic and reunion of the Granges of the county. We need it. We must cultivate the social part of nature more. We work too hard and have too little enjoyment. Not that we should live a "short life and a merry one," but as we are given faculties for enjoyment we should exercise them. After such a success as we had Saturday we should hesitate no longer, but prepare for a picnic every year.

In a future letter I will say something about the productions and facilities for irrigation that we have in this county.

L. W. VALENTINE.

Coloma, May 21st.

On Tuesday last, Hock, farm was the scene of the gathering of the farmers and their families and friends in Sutter county, to the number of about 600 or 700. The day was rendered somewhat unpleasant by the prevalence of a high north wind, which had the effect to prevent the attendance of many who would otherwise have been present. A day full of enjoyment was passed by those present, and nothing occurred to mar the good feeling prevailing. At about 11 o'clock dancing commenced, the music being furnished by Trickle's band from Marysville, consisting of two violins, a cornet, harp and base viol, and the platform was kept filled nearly all day. Races, climbing the greased pole, croquet, and other amusements diversified the performances. Enos Grover, of Yuba City, carried off the prize in one race and also for climbing the pole, and Jay Harter got away with the racing prize in another race. Taken as a whole, the affair was very enjoyable throughout. Tables were spread at intervals over the ground, and filled as only the Grangers know how to do that thing, and no hungry man, woman or child left the grounds at the breaking up of the party. The party was a complete success in every respect, and reflects credit upon the committee of arrangements and those having it in charge.—*Sutter Banner*.

**WHEAT GROWERS TO THE FRONT AGAIN.**—We are informed that it is in contemplation to call a meeting of the wheat growers to perfect arrangements for the sale of their wheat this year. Many have expressed a desire to adopt the tactics heretofore pursued by the wheat buyers, who put Mr. Friedlander to the front as the wheat buyer of the State, knowing full well that where there is only one buyer of an article in the State, he can control the prices much better than he could if he had a dozen competitors. It is the wish of many that there should be but one man in the State to sell wheat for export, believing that much better prices can be realized than there can be if each farmer sells his own grain. If this plan is adopted, it still leaves each farmer the right to fix the time when, and the price for which, his wheat shall be sold.

**ANOTHER NEW GRANGE.**—A dispensation has just passed through this office for the American Valley Grange, located at Quincy, Plumas county. The Grange was organized by District Deputy Geo. W. Boyden, April 7th, 1877. Officers for the present year are D. R. Tate, M., and J. A. Welden, Sec'y.

**PLYMOUTH GRANGE.**—S. C. Wheeler writes: "Plymouth Grange still holds out and could be greatly benefited by co-operation and fellowship with other Granges."



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

LIVERMORE VALLEY.—*Cor. Transcript*: The growing grain is looking much better than was anticipated, and we can safely count on at least one-third of a crop. The late sown grain and that sown on summer-fallow land will yield almost a full crop. Several places in the eastern part of the valley where grain was put in hurriedly will yield enough to pay for cutting, while that adjoining which was summer-fallowed will bring forth a fair crop. Haying is in full blast in the northern and eastern part of the valley, farmers being anxious to take advantage of the present high price.

HAYWARD.—*Cor. Washington Independent*, May 19: Rain on Tuesday afternoon poured down in torrents, filling the streets with water. Most of the farmers are happy over it, but those having hay cut are considerably worried for fear it will rust their hay; but we may reasonably expect cloudy weather the remainder of this week. The benefit to growing grain is enormous, and also saves the corn crop and every kind of vegetables. One more hard rain and Alameda county will be clear from a dry season.

## AMADOR.

EDITOR PRESS:—It is very gratifying to note the favorable notices given in your excellent paper, from reliable correspondents and other sources, of the unprecedented crop yield the present season in the "foot-hill" region of this State. I have been a resident of the "foot-hills" in Amador county for over 23 years, and during that time a failure of crops has never occurred. In fact, the rule here has been that the drier the season the heavier the yield. From summer fallowed land, early sown grain is sure to produce from 15 to 40 bushels per acre. Farmers here are just beginning to learn how to secure a good yield. Reuben M. Ford, of Lower Rancheria, who has farmed there for a number of years, has this year harvested from 18 acres of red land 48 tons of No. 1 barley hay. Last year the land was plowed early, and in June was cross plowed, and sown in October. Those who plow and sow in winter seldom have large crops. The soil and climate are most favorable if the farmer will do his part intelligently. Improved land can be bought here at from 5 to 10 dollars per acre. There are no large farms here, few exceeding 320 acres, while a large majority contain 160 acres. More than half the land here is broken, rough and unfit for cultivation, but is good outside range for stock. Much of this latter class of land is still in the hands of the Government, but can be obtained by homestead and pre-emption. In conclusion I will say that persons desiring homes in California and whose means are limited, cannot do better than to visit the "foot-hills" before locating elsewhere. We have no land monopolists or colonizing schemes in this region to allure men seeking homes. All we have to offer is the fellowship and good will to all who may come to make a home in our vicinity.—S. C. WHEELER, Plymouth.

## BUTTE.

NELSON STATION.—*EDITORS PRESS*: As I have seen many notes of travel in your valuable paper, I thought nothing more than right to give you a brief sketch of Nelson station and its surrounding country. Nelson is situated on the C. & O. R. R., twelve miles south of the flourishing town of Chico. It has had drawbacks, but has nearly overcome all of them, and is now one of the most flourishing little places on the Pacific coast. But last November there was not a store in the place, now there are two; one kept by J. W. McIntosh, who employs four clerks; the other is kept by R. F. Docking, who also employs several clerks. They are both doing a thriving business, which reminds "an old Californian" of the days of '49. The hotel is kept by D. S. Ryan, who is doing well. There is a fine hall just completed for public use; a two story brick, 40 by 90. There are blacksmith shops, a butcher's shop, livery stable etc. It is not hard to see why Nelson station sprung up as if by magic. It is surrounded by as good farming land as there is in the State, and the wheat crop now growing is estimated to average 40 bushels per acre. It is beyond a doubt that the yield will be very large. Land can be bought here from \$25 to \$30 an acre, and of the very best quality of adobe. Failure or drought is unknown. I would buy ten thousand acres of it if I only had the money.—TRAVELER.

## COLUSA.

CROP PROSPECTS.—*Sun*, May 19: The prospects for crops have materially improved in the last fortnight. Although the land has for a long time seemed to be perfectly dry, and the grain seemed to be drying up, the cool weather we have had of late has caused grain to grow rapidly and head out very well. The grain is now filling admirably, and the yield will be more than the looks of the fields would seem to justify, for the reason that nearly all the wheat has three or four grains in a mesh, and most of it will be tolerably plump. We have heard of smut, however, in all parts of the county, which, besides injuring the quality of the wheat, will reduce the yield somewhat. Farmers on the island think they will be able to turn out from one-fourth to one-third of a full crop; the north half of the county claims at least half a crop; the east side of the river about one-third of a crop, and the southwestern part of the county about one-fourth of a crop. Putting all these

together, we conclude that one-third of last year's yield would be a fair estimate for the present. This, of course, may be varied by the hereafter.

## CONTRA COSTA.

AGRICULTURAL SOCIETY.—*Gazette*, May 19: The annual meeting of the Contra Costa County Agricultural, Horticultural and Mechanical Society was held May 12th, at Odd Fellows' hall, Pacheco. Vice President Walter Renwick presided. The Treasurer, S. W. Johnson, presented his annual report: Receipts, \$3,596.87; disbursements, \$3,340.72; balance on hand, \$256.15. It was unanimously voted to hold a fair this fall. The following officers were elected: G. P. Loucks, President; Walter Renwick and R. O. Baldwin, Vice-Presidents; E. W. Hiller, Secretary; S. W. Johnson, Treasurer; H. C. Gallagher and Wm. Cavin, Directors. On motion, C. B. Porter, F. M. Warmcastle and A. W. Hamnitt were chosen as the Visiting Committee of the society, to inspect and report upon farms, orchards, vineyards and crops entered for the society's premiums. Quite a protracted informal discussion respecting the pool selling and other gambling and disreputable jockeying tricks connected with the speed trials at our fairs then occurred, and was engaged in by Messrs. Hamnitt, Nottingham, Hathaway, Downing, Hendrick, Cavin, Porter and others, without resulting in any test expression as to the treatment the society should apply to these practices.

WORK AND WEATHER.—The weather continues favorable and the early-sown grain is improving under its influence. Some of the later sown grain, too, of which nothing was expected a few weeks ago, promises now to be worth harvesting, and will at least make pasture feed where it might not pay for cutting and threshing. Nearly all the late-sown grain land upon which the crops have dried out is in a light mellow condition, easily plowed, and much of it will consequently be prepared before fall for re-sowing. If summer-plowed and sowed and seed cultivated in after the first good rains, there will be a great certainty of good crops from it next season.

## KERN.

RAIN.—*Democrat*, May 19: A refreshing shower fell on Monday night, south and west of Bakersfield. Some apprehensions were felt until a short time ago that there would not be sufficient rain in South Fork country, Walker's basin and Tehichipi to insure any crops, but we believe a light crop is now generally assured. The rains on Monday night are not, so far as we can learn, heavy enough to damage the hay crop.

## LAKE.

THE weather of the past month has been cold and blustery, with but occasionally a few warm days, and haying, which had been commenced by some of the farmers, has been delayed. There have been quite a number of slight showers of rain, and there cannot now be, if there ever was, any doubt about the crops. They will not be of the very heaviest, for nothing can quite take the place of a good December and January soaking, but they will be good enough to be very thankful for.—H., Mt. Hannah, May 18th.

## LOS ANGELES.

RAIN IN THE BEE REGION.—*Herald*, May 19: We are informed by bee-keepers in the Arroyo Seco and in the vicinity of El Monte that recently their section of country has been blessed with heavy rains, which continued about 36 hours, which have given flowers fresh impetus and added very favorably to the prospects for a fair honey crop. In this portion of the county (Sierras de San Vicente) rain has set in, with every prospect of a copious shower, but we fear it is too late to be of much benefit to our early leading honey plants; but, should it turn out to be a soaking rain, it will bring out the late feed, so that bees that are carried through to that time will be enabled to survive the season. We are now engaged in moving our bees to Los Angeles, where they will soon recuperate and, we hope, reward us for our care. Many of our prominent bee-keepers are now engaged in moving their bees to more favorable portions of the county, where they will remain until our usual season of plenty returns.

WOOL CLIP AND THE FUTURE OF SHEEP HUSBANDRY.—The wool clip of the San Fernando Sheep Company this year was in many respects a remarkable one. It was probably the largest single clip in the United States or perhaps the world. The flocks of the company comprise 39,400 sheep, and their yield of wool was 331,000 pounds. As amongst this number there were a good many lambs last fall, this was an average of over nine pounds to the sheep. The entire crop was shipped to Europe, and, of course, it is at present impossible to say what prices it will command. In San Francisco, wool is now bringing from 12½ cents to 17 cents a pound. It is a modest estimate to place the value of this single crop at \$50,000. Mr. Lankershim informed us some time ago that should every sheep on the San Fernando ranch die this year, he would still have made money out of them. But they will not die. Many of them have been taken to distant pastures, and the ranch can, despite the drought, be made to support a large number. There will unquestionably be an immense destruction of sheep in California this year. The effect of this, if we have a good season next winter, will be to largely increase the value of those which shall be saved. It will also have an effect on the price of wool. These facts will probably again make sheep

raising an exceedingly profitable business until it is again overdone. The probability is, however, that the tendency to cut up Los Angeles county into small farms will prevent the sheep business ever being again overdone here.

## MERCED.

WHEAT ON UPLAND.—There are said to be but two fields of good wheat on upland in Merced county. One of them, which is farmed by a man named Henderson, was overflowed by Bear creek last year, and immediately after the water subsided a heavy growth of sun-flowers sprang up. These he plowed under three times before he killed them out. The result of this combined thorough cultivation and irrigation is that this year he has a wonderful stand of wheat from which he will harvest at the least calculation thirty-five bushels to the acre.

## MONTEREY.

SALINAS VALLEY.—*Index*, May 17: The rain will be of much benefit to the growing grain in Salinas valley and surrounding foothills, and also greatly help the feed in the mountains. All vegetation is freshened and revived, and green fields meet the view as far as the eye can see along the Alisal. Many fields are also looking well between this city and the Salinas river, and along that stream all the way down to Moss landing. Considerable wheat and barley in the vicinity of Chualar promise well. The crops are reported as looking splendid over the Carmel valley. Considerable of the grain in the Salinas valley and elsewhere in the county will probably be made into hay, farmers being of the opinion that it will be more profitable in that shape than to thresh it. Taken all in all, our crop prospect is not nearly so bad as it was a few weeks ago, and much more hay and grain will be raised than was supposed. With a good year following this, prosperous times will return and our people will forget, as it were, all about this dry season.

## NAPA.

CROPS.—Pine Station *Cor. Star*: We have had two weeks of cold, damp weather; fog, rain and sunshine. It is good for the wheat, and the hay is drying nicely, the cold weather making it heavy and saving it from burning. It is not so good, however, for the corn, as that needs warm weather, while the small grain wants cold. Hauling and stacking grain and hay is the order of the day down here. W. A. Field commenced cutting barley on the 3d inst. Pressing hay has begun. The farmers are lively and in good spirits. Mr. G. Horton has about 100 acres of hay cut. It will turn off near 300 tons. The barley is ripening fast. I think next week will present to us quite an extensive barley-harvest, as some are already in condition to thresh. The vines are doing nicely and everybody expects a good crop of grapes.

## SAN DIEGO.

STOCK AND BEES.—*News*, May 19: Our stock are reported to be doing fairly, and in most sections enough will be raised to pass them over to the next season. In some places, the cattle are fat enough to make fair beef, and in others not so well off. In the honey line, a half or three-quarters of a crop will be made. But, as to sheep, the outlook, though better than a few weeks ago, is by no means the brightest, but fully as good as those heard from elsewhere, and in fact better.

ALMONDS.—In Santa Barbara it is complained that the almond trees are not bearing well this year. We believe the same fact exists in this county. Indeed, one gentleman has told us that they have never borne to do any good, and never will, hence Mr. Higgins had his trees removed, and is putting in better fruit. In our garden, we have a tree, and on it we have one nut—no more.

THE Santa Barbara *Press* says: While the Santa Barbara crop will fall short of the average, it will be by no means a failure. Many trees are fairly full of fruit.

## SAN JOAQUIN.

HAIL STORM.—*Independent*, May 19: The hail storm this week appears to have done no small amount of damage. A sample of wheat badly cut up by the hail was brought in yesterday by Mr. N. C. Culver, who reports one-third of his crop destroyed by the storm. Near Woodbridge one family lost an entire brood of 13 young turkeys, killed by the hail, and a large number of chickens. Young grapes suffered severely, and all manner of tender vegetables were riddled as though pierced by a charge of buckshot. The cool weather of the past two weeks is reported to have improved the appearance of the wheat fields of this county very materially, and they now seem fresher and greener than they did previous to that time. With cool, cloudy weather wheat fills out rapidly.

## SAN LUIS OBISPO.

CAMBRIA.—*EDITORS PRESS*: As near as I can learn, San Simeon township is one of the most favored spots of southern California. We have had enough rain, if it had come at the right time, to give us good crops everywhere. Many ranches in the Mountains, have better grass than in wetter and colder years, they having more rain than those nearer the coast. Mr. Emerson tells me his corn is in the silk, and there was no frost to kill tomato vines this winter. His crops all look well except some volunteer that was hard tramped. Ward and Lindner have extra good grass. Several men have taken claims near Pine Mountain, and are taking stock to pasture. One of our Santa Rosa farmers, speaking of the Champion mower, he was testing, says it is the best he ever saw, and said he was cutting hay that will make four and one-half tons to the acre; he will have 100 to 125 tons.

Mr. J. Wood says his crop will average as good as ever. He has a large stock of hogs to harvest his crop, and will make money this year. Another farmer, on San Pinal creek, will have 100 tons hay; would have had good grain but for grasshoppers, which is the only place I hear of them. J. Bayns rented a part of the old Estrether's ranch, this spring, for five years. He has sold out his right for \$1,500 to a party farther south of us, not so favored with rains. Our livery stable man has bought his yearly supply of hay at \$12 per ton, delivered. I have talked with many men, all say "I will have enough to carry me through."—VULCAN.

## SANTA BARBARA.

EDITORS PRESS:—We, in Santa Barbara county, especially near the coast, are going to succeed much better with our crops than we anticipated. It is truly wonderful to observe crops that have got a fair start, grow right along notwithstanding there is so little rain. It seems as if they live upon the air alone, and the moisture therein, with scarcely any dependence upon the earth beneath. Thorough cultivation tells this year, as, indeed, any year. This subject cannot be too often iterated and reiterated. Where cultivation has been good, fine crops usually result; where it has been poor, no crops at all. My corn and squashes look thrifty, even to the top of my highest and driest hills. This season neither too early nor too late plowing succeeds so well as plowing after the second or third rain. Plowing before or immediately after the first rain seemed to leave the ground too loose, and the subsequent rains being so slight, didn't beat it down sufficiently to retain the moisture. Some of our fruit trees present an anomalous appearance. I have peaches an inch in diameter, and trees adjoining not yet commenced to leaf. So also of most kinds of fruit trees. Would it not increase the fruitfulness and longevity of grape vines to keep them clipped or mowed back during the spring and summer, rather than to let them exhaust themselves maturing numerous and long vines, necessitating the trimming off, during winter, of wagon loads of vines per acre, as is the practice hereabouts. We had a rain the 14th, wetting the ground down several inches, connecting with the moisture below.—S. P. S., May 18.

## SANTA CRUZ.

PAJARO.—*Pajaronian*, May 19: John McGowan, a farmer in the lower portion of the Pajaro valley, says his crops are generally good this year. Wheat is nearly as good as usual, but the barley will probably not yield more than half a crop. We are pleased to know that many persons in this section can speak with like hopefulness. I. M. Clark, farming in the upper part of the valley, on the Carlton place, has a fair crop of wheat, which he estimates will yield 10 sacks to the acre. His corn, potatoes, etc., are growing splendidly, and look as well as in the most favorable seasons. The probabilities now are that he will receive a good return above cost of planting and harvesting, from his labor, notwithstanding he gloomy outlook a few weeks ago.

## SOLANO.

RIO VISTA.—*EDITORS PRESS*: Our haying season is now entirely over, and the heading of barley has commenced. It will be some weeks before the greater part of the wheat crop will be ripe and in good condition for the stack. Farmers are wide awake and perfectly aware that a dry year and its disadvantages are upon them this season, and are using the discretion and sensible management that characterizes the good farmer in all localities. Wheat and barley straw, which is usually burned or scattered to the winds, will be utilized and made to serve its purpose. With but few exceptions the winter-sown crops have been dead and parched for weeks, without having reached the development necessary for blossoming. The summer-fallow crop of Montezuma hills, that old "stand-by" of the farmers, has manifested its true value this season. Many good crops will be harvested, though some shrinkage is anticipated. A little refreshing rain, followed by the other extreme, a "norther," is part of our weather this week.—AMPHION. Rio Vista, May 18, 1877.

## SONOMA.

FINE RAIN.—*Democrat*, May 19: Rain in this vicinity continued for an hour or more. It was quite heavy part of the time and was accompanied with some lightning and thunder. It was sufficient to do much good, particularly to corn, gardens and grass. The prospect for a good corn crop in this county is as favorable as usual at this season of the year. A large area, probably larger than usual, has been planted, and the young corn is growing finely.

## SUTTER.

RAIN.—*Banner*, May 19: Rain fell in this section in pretty copious showers. The weather is cold, and the winter sown grain, which has been looked upon as not likely to make much of a crop, promises much better things than before. We do not learn of any damage being done to hay by the rain. A strong "norther" has set in, and as we go to press is making itself felt.

GOOD WHEAT.—Samples of wheat, some nearly ready for the header, were laid upon our table this week, taken from the ranch of Widow Wynecoop, in this county. It is very fine looking, the heads well filled, and the straw long and even. It must gladden a rancher to go out and look over a field of 100 to 300 acres of such grain as this, in the light of the high prices which grain now commands and is likely to command in the future.





### After the Centennial Year—(A Hope).

Before my eyes a pageant rolled  
Whose banners every land unfurled;  
And as it passed its splendors told  
The art and glory of the world.

The nations of the earth have stood  
With face to face, and hand in hand,  
And sworn to common brotherhood  
The sundered souls of every land.

And while America is pledged  
To light her Pharos-towers for all;  
While her broad mantle, starred and edged  
With truth, o'er high and low shall fall;

And while the electric nerves still beat  
The states and continents in one,  
The discords of the past shall melt  
Like ice beneath the summer sun.

O Land of Hope! Thy future years  
Are shrouded from our mortal sight;  
But thou canst turn the century's fears  
To heralds of a cloudless light!

The sacred torch our fathers lit  
No wild misrule can ever quench;  
Still in our midst wise judges sit,  
Whom party-passion cannot blench.

From soul to soul, from hand to hand,  
Thy sons have passed that torch along,  
Whose flame by wisdom's breath is fanned,  
Whose staff is held by runners strong.

O Spirit of Immortal Truth!  
Thy power alone that circles all  
Can feed the fire as in its youth,  
Can hold the runners lest they fall!

—N. Y. Independent.

### How She Won Her Way.

Wing Rogers was a Quaker who lived upon the hills of Vermont, and notwithstanding the reputation of his sect for meekness, gentleness and magnanimity, he was an arbitrary old fellow who led his wife a most unhappy life. She was a patient, quiet woman, who submitted meekly to her tyrannical lord, and strove to slip through the world as unostentatiously as possible. Friend Wing was possessed of a goodly share of this world's goods. He was an unfailing attendant at meetings; Sundays and Thursdays he was always with his family at the sanctuary. For what purpose he went there was best known to himself, very likely to spend the quiet hour in concocting new schemes for the annoyance and humiliation of his wife; but to her the plain old house, with its uncushioned seats, bare, unpainted floor and great square stove, was a very paradise—the one safe refuge from the persecutions which were fast wearing out her life.

Fat horses and substantial vehicles had Wing in plenty; judge, then of her astonishment and despair when, one pleasant first-day morning in the sixth month, he made his appearance at the door with a yoke of oxen attached to the family trundle-bed, and so complete was her subjection that she actually rode to meeting (about a mile) with her children on the absurd vehicle, while her husband strode by the side with his long whip driving the oxen.

On one occasion they had been spending the long winter evening at a neighbor's. When the kitchen clock struck nine the baby was carefully wrapped up and given to Friend Wing to carry home, his wife passing on before him in the narrow snow-path. But when they reached home there was no baby, and in reply to the mother's anxious inquiries he informed her she would find it about half a mile back in a snow-drift by the side of the road, which she did.

At last the pitying angels set her free. In due course of time Friend Rogers married again, and immediately commenced the course of training to which he had subjected his former slave. It did not take long to demonstrate that the present Mrs. Rogers was constructed of different material from the meek and gentle first. After a brief season of grave and stately visiting the pair came home to renew the interrupted housekeeping. Monday morning he aroused his new wife early, while it was yet dark to get up and attend to the washing, remarking, "I always have the washing done second day."

It was a double awakening to his wife, not only from a morning nap, but also to the knowledge that here was the opening to a struggle with her lord, with whose character she was imperfectly acquainted. She did not rise immediately, but when she did her first act was to remove the wash boiler from the stove with the remark that she did not propose to wash to-day. Her husband looked surprised but bided his time.

The next day he deliberately turned his large herd of cows into the rank meadows, just ready for the scythe, and hurrying to the house called to his wife: "My dear, the cows are all in the meadow; thee must go and drive them out." She took down her gingham sun-bonnet from its nail in the corner, and, without hesitation, started for the field. In a short time she returned, and, as she replaced her sun-bonnet, she said: "My dear, the cows are all in the corn. I think thee had better drive them out." He waited for no second bidding. It would not

take long for 40 cows to destroy his corn crop and he made good speed. But this was not the end of it. Though a wealthy man, as Vermont farmers go, he was very penurious; his house was poorly furnished; especially did it lack crockery. His wife soon decided that she must have dishes. She did not mean to be extravagant, but dishes she must have. Like a dutiful wife she went to her husband with her modest request, only to be refused. The dishes were good enough for Becky and they were good enough for her; at least she must make them do for he should get no more.

But she had no idea of making them do. She went to the village store and made her selection (a modest inexpensive set), ordered them sent home and requested the merchant to charge them to her husband. Of course the merchant was happy to get his name upon his books, and the dishes came home. They were spread out upon the kitchen table when Friend Rogers came in. "Isn't it a nice set, my dear, and cheap too." He looked in utter amazement. Was there a woman in all the world who dared to thwart him, and that woman his wife? He raised the side of the table and tipped it over, and without speaking, left the house. Smilingly she went about the clearing away, and when the men came to supper there was no shadow of a cloud on the domestic horizon. But the next day when Friend Wing came in from the field he beheld a very large set of fine white, stone-ware on the kitchen table. Ah, this wife of his had not yet learned her lesson. It was a pity to destroy so much property, but he must teach her submission. She stood there very calmly and remarked: "I hope thee will like these better; the others did not seem to please thee." With a heavy blow of his foot he upset the table, and started out of the house.

Here the matter rested for nearly a week, long enough for the merchant to order and receive a full set of costly china, which in due time was transferred to madam's kitchen table. The intimidated Quaker saw and acknowledged his defeat. Shaking his head sadly, he exclaimed: "It cost too much!" then with a sigh, "Ah! if Becky had done as thee has she might have been living now."

It is needless to add that thenceforth their domestic life was serene.

### Diamond Thefts.

There is a kind of fascination in the splendor of diamond thefts which dazzles our moral sense and enlists our sympathy on behalf of rascality, which dares so greatly and achieves so skillfully. Many of the more famous diamonds have been repeatedly stolen. For instance, the Regent diamond was first of all stolen from the mines of Golconda; then purchased by princely D'Orleans with money stolen from the people; then stolen by a gang of robbers, one of whom at the point of death revealed the hiding-place of the jewel which now adorns the imperial crown of republican France. There was living in France in 1857 one of the robbers of the crown jewels, who, says Madame de Barrera, was looked up to as the man who had stolen the Regent! The triangular blue diamond then stolen has never reappeared. Then there was the Sanchi diamond, pillaged with many others, including the Lemonstone, of Austrian celebrity, by the Swiss patriots, from the ducal pavilion of Charles the Bold, at Morat. This will-o'-the-wisp was sold for 5,000 ducats at Laerue, and purchased in 1492 by the King of Portugal; in 1580 the Prince of Crats pawned it to Elizabeth for £5,000. The queen returned the pledge without repayment, to escape the importunities of the Portuguese pretender, who in 1594 sold the gem to the peer from whom it derives its name. To aid his impetuous king (Henry IV.) in conquering his rebellious subjects, De Sanchi sent the diamond by one of his retainers, who was waylaid and slain (not without first having swallowed the jewel) by brigands. In the body of the faithful vassal it was subsequently recovered, and remained in the possession of the De Sanchis until sold to the regent. In 1789 it vanished. In 1830 it reappeared in the possession of Count Demidoff. But where it may be at the present time deponent sayeth not. As for our Koh-i-noor, its history is nothing but a succession of thefts from the Rajah of Vjain to Lord Dalhousie. Sultan Mahmoud was a royal thief. At his triumphal festival on Ghizni's plain, four hundred weight of diamonds, plundered from Kolburga's throne and India's thousand diamonds, outflashed the blazing sun.—*Tinsley's Magazine*.

ONE day during the war Mr. Lincoln was called upon by a woman, who, pushing aside other visitors, made a very low curtsy to the President, and, as gradually rising, began in a loud voice, "Mr. Lincoln, my grandfather fought in the Revolutionary War, my father fought in the war of 1812, I have a brother now fighting in the Federal army to put down this wicked rebellion, and I want a commission for my son." Mr. Lincoln looked up with a smile. "Why, ma'am, you belong to a fighting family. You have done your share. Go home and learn the arts of peace."

JAMES RUSSELL LOWELL tells a good story about his butcher. One morning the man expatiated on the loveliness of the moonlight of the night before, and just as the poet was thinking that he had done him an injustice in never having given him credit for refinement of soul, the butcher added, "The night was so fine I couldn't just sleep, and had to get up and go to killin'."

### Labor and Think.

We educate, if we educate truly, for the sake of making more manhood in a man. Education has relation to success, to a reputation, to profits pecuniary. We do not ignore that relation; but it is secondary. The primary reason why men should be educated, is, that they need more manhood. If a man dwells in a tavern all his life, he does not feel the need of much education. If a man pursues a mechanical life, the education is limited that he feels the need of. We send our boys to college if they are going to be preachers, or lawyers, or professors, or literary men; we educate them for the profession they are to follow; but if a man is to be a sailor, or a builder, or a farmer, he is not supposed to need a college education. Education is esteemed according to its marketable value in the department in which a man is employed. Knowledge is sought or neglected according to whether or not it is regarded as an element of success in a man's business relations. It does not enter into the apprehension of men that education is the development of what a man is, and that knowledge is useful because it contributes to that development. They do not look upon the acquisition of knowledge as suaking more of one's self. If you were to look at the whole sphere of men's lives you would find that there is a fundamental low-mindedness, in regard to the mass of mankind, as to the necessity of education. You will find that the great majority of mankind are searching after anything rather than knowledge. It may almost be said of men, in this respect: "Eyes have they, but they see not; and ears have they, but they hear not." Things are every day taking place around about them from which they might derive valuable knowledge, but they never question them. They see in the sky phenomena which might teach them lessons of wisdom, but they do not interrogate them. The might learn many things from the birds and insects which come under their notice, but they do not. The goods which they are continually handling do not provoke inquiry in them. They go into their store in the morning, and stand behind the counter all day, serving their customers, and their object is to win patronage. The fabrics which come from the Orient suggest to them no question of manufacture, or of political economy. They buy and sell them for two, five, ten years, and never think of making any inquiry concerning them.

I perceive that many persons are employed in the manufacture of interesting machinery, who know nothing in connection with it but the mere mechanical routine of their work. I perceive that frequently persons who are conversant with books know nothing about the production of them—neither about the process of binding them, nor about the material with which they are bound, nor about many other curious things belonging to them. They stupidly handle them from day to day, from week to week, from month to month, and from year to year, and all they think of is selling them and getting the money for them.

Men have the price with which to get wisdom in their own callings, whether they are in the store, in mechanical pursuits, or on the farm; their business is filled with elements that should stimulate them to inquiry; and yet there are multitudes of young men who go on and on, with very little curiosity, with very little application, and with very little accumulation of knowledge. It is too bad! There are a great many young men who do not drink, who do not give way unduly to their appetites, who are well dressed, who are obedient, who have the favor of their employers, who are very correct in their conduct, and with whom there is nothing the matter except emptiness. They are empty and they do not know it.—*Henry Ward Beecher*.

WHOLE OX SOUP.—Although we do not suppose the following recipe will be found practical by our Home Circle readers within the ordinary limits of their kitchens, still it may be useful in case of an emergency: In Australia, where the horned stock has increased of late in a more rapid ratio than the population, the supply of meat is much greater than the demand; and at the present time the price of cattle is commonly quoted "at boiling rate;" that is, the animals will fetch no more from the butchers than can be realized for their hides, horns, hoofs, tallow, etc., for exportation. In large establishments devoted to preparing these utilizable portions of the bullock, there was, of course, an immense waste when the ox went into the melting pot; but this loss is now in a great measure avoided by boiling the animal at once into soup, or concentrated extract of beef. After the head, horns, hoofs, etc., are removed, the meat is cut into convenient sized pieces and conveyed to immense steam-tight double cylinders capable of holding upwards of 50 bullocks at a time. In seven hours, during which they are subjected to a pressure of steam of 15 pounds per square inch, the bones and meat are reduced to a pulp. The steam is then condensed, and the tallow, which floats on the surface, drawn off. The pulp is removed and placed in a powerful press, which squeezes out the soup. The latter is, however, not yet sufficiently concentrated; and to render it so, it is placed in a peculiarly constructed boiler, there reduced by evaporation, and finally run off into bladders. When cold, the essence is semi-transparent, of a rich reddish brown color, and sweet to the smell and taste, almost like confectionery. A whole bullock, after being thus treated, yields but 20 pounds of soup.

### In the Sere and Yellow Leaf.

Old age, disappointment and perplexity are heavy burdens. This old man seems to have them all. He looks as though he might appropriate Byron's words, yet without Byron's reasons:

"My days are in the yellow leaf;  
The flowers and fruits of love are gone;  
The worm, the canker and the grief  
Are mine alone

The last days of some are doubtless their best days, but with others, growing old is a painful thing. The work of the world is chiefly done by the young and the middle-aged; hence it is they who give tone to society, and in general determine what sort of a place the world shall be to live in. As manners and customs and fashions change, it is not strange that one who is growing old should think the old ways best. The trouble generally arises, not from simply thinking so, but in treating divergence from the old paths as a moral delinquency.

No one can "grow old gracefully" without keeping in sympathy and companionship with the young. He need not make light of their faults, nor participate in their follies, but he must not regard either as unpardonable sins. He must find something to enjoy with them. Some old people find the world bright and good to the last—which is to say they enjoy the companionship of their kind. They do not frighten children from them by severity and moroseness, nor continually sit in judgment upon the doings of the middle-aged. They do not complain much of their own aches and pains, even though they may be severe. They look at the bright side and try to show it to others. They have a cheery word for everybody, and their rebuke does not so much hurt, as heal what sin had hurt enough already.—*Home Journal*.

### Man's Nature and Destiny.

What kind of a life are you living? Is it an animal life, an intellectual life, a moral life, or a Christian life? Are your aims, your endeavors, your conduct, inspired by selfishness or by benevolence? What are your controlling motives? Is the main idea advancement of your own interests according to the ways of the world, or is it to promote the well being of those around you after the manner of Christ? What is the key note of your disposition? Do you live on the principle, "Everyone for himself and the devil take the hindmost," or do you, in your every day acts exemplify the disposition and the character of Christ? He was amiable, merciful, forgiving, obedient. His soul was all aglow with love to God, and proved it by the continuous manifestation of his love to man. He did not frame a religion; he gave the world example of a life such as it had never seen before nor equaled since, a life that the concurrent opinion of the world declares to be the model that all should imitate. Do you take him, his life, for your model? Are you trying to really live a Christian life? The question is not have you identified yourself with any religious sect; do you believe in any particular creed; are you cultivating what are commonly considered religious habits, such as attendance at church and prayer meeting, reading the bible and other religious books and studying religious doctrines, but the question is, are you living in harmony with your higher nature, according to the example given by the life of Christ? If you are, you have a perfect and undeniable consciousness of the fact, and it is manifest in your everyday life. If you are so living you have had that necessary spiritual birth, the spirit of God witnesses with your spirit and within you generates the spiritual force that transforms your whole life and makes you strive to be like Christ.

A STORY OF BERKSHIRE TRUE LOVE.—A correspondent sends us this: Away back half a century ago there lived in Lanesboro a rich old farmer. Then, as now, rich old farmers were the possessors of daughters and sons. And the daughters somehow would have beaux. In the same town lived an industrious young blacksmith, who sought the hand of the only daughter of the rich old farmer, who, by the way, held higher hopes and aspirations for her, and plainly told the young man that he "did not think an anvil and a piano would sound well together." The blacksmith swallowed the rebuff, and, forestalling Horace Greely's advice by several years, "went West." Meanwhile the daughter had an unobjectionable suitor, whom she was allowed to marry. Ten years or more she lived happily, when her husband died. Then came years of widowhood and all the sorrows and trials the word implies. A consoling and consolable widower, however, happening along, she was again married. Another decade of happy wedded life, and she was again left a widow. It was then she returned to the paternal roof; and after a few years her father followed the two husbands. Now was the first lover's opportunity. Within the present year, the young blacksmith, having nearly reached the age of three-score and ten, while on a visit to Eastern friends, learned the situation, renewed his suit and was accepted. And now there is only perfect harmony in the "Anvil Chorus" in which they both join.—*Springfield Republican*.

"LET us discuss," says the *Woman's Journal*, "the question why a woman can pin on a man's collar the first time trying, when the very same pin, if engineered by a man, would double up and run backward to stick in his thumb."



## Social Statistics.

A paper entitled "Births, Deaths and Marriages, and the Comparative Progress of Population in some of the Principal Countries of Europe," by Mr. Frederick Martin, author of the "Statesman's Year Book," was read recently before the English Statistical Society. Mr. Martin, says *Iron*, taking as the basis of his paper the vital statistics published in the last annual report of the Registrar General, gives the birth, death and marriage rates of nine countries, divided into three groups, the first comprising England, France and Prussia; the second, Austria, Italy and Spain; and the third, Denmark, the Netherlands and Sweden. For all these States except two, Italy and Spain, the calculation of averages per 1,000 of population, spreads over 22 years; while for Italy they comprise 12 and for Spain ten years. Mr. Martin showed in his tables, illustrated by diagrams, the striking differences that exist between the nine countries in the average rates of births, deaths and marriages. While in England and Wales the average annual birth-rate, per 1,000 of the population, was as high as 39.9 in the 22 years from 1853 to 1874, in France it was during the same period as low as 26.1, France standing, as regards births, far below any other country. The death-rate again varies enormously in the different States. While it was as low as 20.2 per 1,000 of the population in Denmark, it was as high as 32.2 in Austria; England filling a place only less favorable than Denmark and Sweden, the average rate having been 22.2 per 1,000 during the period. The marriage-rate, as may be expected, is subject to great fluctuations, springing from trade prosperity or stagnation, and good or bad harvests. The average annual marriage-rate during the 22 years was highest in Prussia, namely 17.3 per 1,000 of the population, and lowest in Sweden, 14.1 per 1,000. Among the tables given by Mr. Martin, perhaps the most suggestive was one giving the surplus of the average annual birth-rate over the death-rate, denoting the increase of population. It was 12.7 per 1,000 of the population in England and Wales; 11.6 in Sweden; 11.4 in Denmark; 10.7 in Prussia; 9.0 in the Netherlands; 7.7 in Austria; 7.5 in Spain; 6.9 in Italy; and 1.9 per 1,000 in France. It will be seen that England was the most progressive and France the least of all the nine countries, the population being almost stagnant. Mr. Martin thinks "France is the riddle of Europe."

WHO ANY GIVEN PERSON MAY MARRY.—It doesn't require any astrologer, or medium or gipsy with a dirty pack of cards. It is very simple, lies in a nutshell, and can be expressed in a very few words. The plan is this: If a girl expresses a fondness for majestic men with large whiskers, make up your mind she will marry a very small man with none. If she declares that "mind" is all she looks for, expect to see her stand before the altar with a very pretty fellow who has just sense enough to tie a cravat bow. If, on the contrary, she declares she must have a handsome husband, look about for the plainest person in the circle of her acquaintances, and declare "that is the man," for it will be. Men are almost as bad. The gentleman who desires a wife with a miud and mission marries a hisping baby, who screams at the sight of a mouse, and hides her face when she hears a sudden knock at the door. And the gentleman who dreaded anything like strong-mindedness exults in the fact that his wife is everything that he detested. If a girl says of one, "Marry him! I'd rather die!" look upon the affair as settled, and expect cards to the wedding of those two people. If a man remarks of a lady, "Not my style, at all," await patiently the appearance of his name in the matrimonial column in connection with that lady's. And if any two people declare themselves "friends, and nothing more," you may know what will come next.

WOMEN IN JOURNALISM.—G. B. Grannis is editor of the *Church Union*, New York, a large quarto of influence and considerable circulation. Grannis publishes the paper, edits it, and canvasses for advertising and does all the heavy work, with the assistance of a young and bright-eyed girl who keeps the books. Grannis receives scores of letters addressed to Rev. Mr. Grannis, Rev. Dr. Grannis, D. D., Elder G. B. Grannis, etc., and beginning "My dear sir," or "Dear Brother Grannis." Grannis, though, is a woman—a little, nervous, active, black-eyed woman, who weighs about 90 pounds. "I have never intended to mask myself," she says, "but I have felt that if the paper suited, my sex was nothing to anybody, and that perhaps my arguments would seem weaker if it were known that a little woman uttered them. I had a letter the other day from a confiding clergyman in Ohio, who saluted me as 'Brother G. B.,' and asked my private opinion as to whether women ought to be allowed to speak in prayer-meeting. I wrote confidentially that I did not think it would do any hurt."

A DANDY of 26, having been termed an "old bachelor," appealed to an elderly gentleman to decide whether he should be called old or not, giving his age as "26." Said the elderly gentleman, "It is owing to how you take it. Now, for a man it is young enough; but for a goose it is rather old."

A HUSBAND, finding a piece broken out of his plate and another out of his saucer, petulantly exclaimed to his wife: "My dear, it seems to me that everything belonging to you is broken." "Well, yes," responded his wife; "even you seem to be a little cracked."



The War in the East.

## Young Folks' Column.

## Our Darling Flo'.

Little feet in motion ever,  
Up and down on every floor;  
Little hands, with proud endeavor,  
Reaching knobs of every door.

Active brain and busy fingers,  
Searching wardrobes everywhere;  
Little form that always lingers  
Watchfully by mamma's chair.

Little one whose laughter only  
Maketh all around her glad;  
Brightening hours that would be lonely,  
Cheering hearts that would be sad.

Fairer than earth's fairest flower  
Is her smiling face to me;  
Chattering, romping every hour,  
In action winsome full of glee.

Oh, I pray that guardian angels  
Will blessings on her pathway pour;  
Smooth each rugged rock before her,  
Keep her pure, my darling Flo'!

## Hints to Girls on Entertaining.

Kate and I started out for the purpose of making some calls one pleasant afternoon. First we went to the Misses Julia and Cora C—'s who had quite recently returned from the city, where they had been cultivating their musical talents. We were received with a great deal of demonstration by Julia, and of course Miss Cora did the same, for she was her sister's echo.

Immediately Julia asked if we noticed Mary R—'s new hat the previous Sunday. Upon answering in the affirmative, she said: "What a fright, isn't it?" Kate replied she thought it quite becoming to Mary. "Your taste and mine differ sadly," said Julia. "Yes," drawls Cora, "Julia and I have laughed about it ever since we saw it," and she at once broke forth in a disagreeable laugh.

Next topic is the concert. "How absurd for Minnie C— to think of singing!" observed Julia. I ventured to say I thought her a very sweet singer. "Her voice may be passable but she has had no cultivation," says Julia. "That's so," adds Cora. "Why doesn't she go to Boston as we did?"

"Have you been able to keep your plants through the winter?" Kate asks.

"No indeed; haven't tried. Don't care for flowers myself, only in a milliner's shop," replied Julia. "Yes, I like to look at flowers in the shops." This from Cora.

We take up the photograph album. The first is the likeness of a gay young man of the village. "Isn't he perfectly splendid?" sighs Julia. "Yes, the best looking of all the young men; and his hands are so white," says Cora.

"He is lazy, is he not?" says Kate, rather pointedly.

"Why no," quickly answered Cora. "To be sure he is above farming, but he has a charming span of horses and drives out nearly every day; of course it takes nearly all of his time to care for them. I'm sure I like him much better than that upstart of a George Gordon, just home from college; he thinks he knows everything now I suppose." We ask the young ladies to sing. "We are very much out of practice," says Julia. But after considerable discussion as to who shall play, and what shall they sing, they begin. There are trills and quivers, ending at last with an agonizing shriek, all of which passes for good music.

Kate gives me a time-to-go look and we take our leave. At Sarah Gordon's we meet with a cordial reception, and a welcome which seems

sincere. The atmosphere of the room seems different from the previous one. She tells us how glad she is to have George home again, offers to lend her new book sent from her aunt. When we ask her to sing she makes no excuses, and really her little melodeon sounded sweeter than the thousand dollar piano to which we had just been listening.

She passes the fruit dish, and while we are discussing the choice apples George comes in. He expresses his delight that Minnie C. has been persuaded to sing at the coming concert. When we leave, Sarah follows us to the door, tells us she has enjoyed our call in such a hearty way that we believe her. Now which way of entertaining do you like best, kind reader, and which is your method?—*Dirigo Rural*.

## GOOD HEALTH.

## Hints on Drainage and Sewage.

Prof. Hilgard, of the State University, writes to the *Oakland Tribune* giving some practical suggestions which we doubt not will be found of value to many readers. He says: It is important to devise some means of relieving the difficulties encountered in avoiding the fearful nuisance of open gutters running with filthy water, which poisons the atmosphere in suburban districts, and bear so large a share in infecting putrid fevers, diphtheria and dysentery upon the otherwise enviable dwellers outside of city limits. The points to be observed are briefly these:

1. To keep entirely separate the more offensive—kitchen and water-closet—sewage from the cleaner run of the wash-stand, bath-tub and wash-tub.

The difficulty in disposing effectually of offensive sewage is directly proportional to its bulk and offensiveness. Hence it is comparatively easy to dispose of the undiluted kitchen sewage alone, either by running it into a small cesspool covered with from six to 12 inches dry earth or charcoal; or else into a small similarly-covered (barrel) tank, from which the solid matter is frequently removed to the manure pile, while the water runs off into a small irrigating ditch in the garden, where the loose soil absorbs and disinfects it promptly. The manurial value of this kitchen sewage is considerable, whether for flower-beds or vegetable-garden.

Water-closet sewage greatly complicates the problem, both from its great bulk and its offensiveness. However convenient apparently, the water-closet is an invention of questionable benefit to mankind, from the frequency with which it gives rise to malarious diseases in the household, and the immense increase of the cost of city sewage which its use involves. It should, wherever possible, be substituted by the earth-closet. It is surprising that this simple and effectual means of overcoming some of the most formidable difficulties in the way of domestic hygiene should thus far have been almost totally ignored on the Pacific coast; at least I have been unable to find in the great city of San Francisco even an agency for the sale of the ordinary appliances for the use of dry-earth closets. Fortunately, the essential things are within such easy reach of everyone, that none need wait for such machinery to be manufactured. A rough box, say, 12 by 18 inches, by 15 inches high, mounted on truck wheels, so as to be easily discharged, will serve as a receptacle for a week in a family of five or six persons. Another box, conveniently placed and filled with dry earth, and a grocer's scoop, hung on a nail above it, completes all the really needful appliances; dry earth, not sand, is not difficult to obtain in California during the greater part of the year; for the rainy season, a supply must of course be hoarded. It should be well raked over, so as to break or remove all larger clods. The contents of the receiving box may, however, be used over and over again five or six times, after drying, which can be done in a shed, without the least offense. The whole arrangement is so simple, inexpensive, and so thoroughly effectual in removing all offense and securing complete disinfection, that few will desire to dispense with after trial; and it disposes, most conclusively, of the most troublesome part of the sewage question.

The sewage of the wash-stand, bath-tub and wash-tub, being comparatively inoffensive, and without any considerable amount of solid matter, can be easily so directed as to serve for irrigation of ground kept loose by cultivation, either through a channel from which it distributes itself, or through the garden hose. I find it very convenient to so interpose a large gauge-cock in the leaden drain-pipe as to make it possible to use the water either way, as may be most desirable or convenient.

In times of scarcity of water, like the present season, the amount of water so contained for garden use is a matter of no small consequence. It is much more than any one who has never measured it would imagine; and when the use of water for garden or lawn irrigation is of necessity restricted or prohibited, an arrangement of this kind may make all the difference between being able to maintain your improvements, or seeing all your grass and flowers fall victims to the drouth.

OATMEAL.—Oatmeal should only be purchased at places where there is a quick sale for it, as it absorbs moisture from the air, and very quickly becomes rancid and unpleasant.

## DOMESTIC ECONOMY.

RUSKS.—Rusks require a longer time for rising than ordinary rolls or biscuits. If you wish them for tea one evening, you must make all your preparations, and begin them the day before. In cold weather, to make up two quarts and a half of flour, prepare early in the afternoon a sponge in this manner: Mix into a paste with one pint of boiling water, two tablespoonfuls of sugar, three of flour, and two large Irish potatoes, boiled and mashed smooth. At seven in the evening make up your dough with this sponge, adding three well-beaten eggs, three-quarters of a pound of sugar, and half a pint of fresh milk. Set it away in a covered vessel, leaving plenty of room for it to swell. Next morning after breakfast, work into the risen dough, which should not be stiff, a quarter of a pound of butter and lard mixed. Make into rolls or biscuits, and let the dough rise for the second time. Flavor with two grated nutmegs, or half an ounce of pounded stick cinnamon. When very light, bake in a quick, steady oven till of a pretty brown color; glaze with the yolk of an egg, and sprinkle lightly with powdered white sugar.

DRESSING A CHICKEN.—Dining one day with a friend, I should have thought her chicken a turkey if I had not seen it, and to my inquiries she said the fowl was of the duck-leg variety, very fat and tender, that she had mixed the stuffing with some roast beef gravy, left from the day before, that she had almost covered the fowl with slices of sweet, fresh, fat pork while cooking; said pork would become very brown and the grease from it kept the chicken basted, and prevented it from getting as brown and dried up as is often the case. When no fresh pork is on hand she substitutes the fat of cured ham, only less of it. Before making the gravy she skimmed off all the grease she thought superfluous. She also said that sometimes she would sprinkle the stuffing slightly with dry mustard before filling the fowl, and frequently added a tablespoonful of brandy or wine to relish it up; never salted or peppered too heavily.—*Germantown Telegraph*.

BROWN SOUP.—One pound of turnips, one pound of carrots, half a pound and six ounces of onions, one and a half pints of peas, four ounces of butter, and half a pound of bread. Cut the vegetables into small pieces, put them in a pan with the butter, cover the pan, and let them stew over the fire till brown, occasionally stirring them; put in the peas with the water in which they were boiled; add sufficient boiling water to make three quarts altogether; next add the bread, which should be browned or toasted before the fire but not burnt; season, and let the soup boil gently for three or four hours; rub it through a coarse sieve, return it into the pan; let it boil, and it will be ready to serve. If dried peas are used, they should be steeped for 24 hours in soft water, and boiled for two hours.

WHAT IS A SALMI?—The *American Agriculturist* says: "The regular salmi of French cookery is a sort of stew made from the remains of game. The meat is all carefully cut from the bones, and these are pounded into small bits and cooked to make a gravy or sauce. The bones are strained out, the sauce variously seasoned, usually wine added, and then the bits of meat warmed up in it. In our restaurants a very indefinite mixture, and a not very delicate one, is served under the high-sounding name of salmi. If you made it at home, you would call it a stew or hash, as there was more or less gravy with it. Very good it is when properly made at home, and served on slices of toast as a breakfast dish."

## TO CLEAN THE WOODWORK AROUND DOORS.

—Take a pail of hot water; throw in two tablespoonfuls of pulverized borax; use a good coarse house-cloth—an old coarse towel does splendidly, and wash the painting; do not use a brush; when washing places that are extra yellow are stained, soap the cloth; then sprinkle it with the dry powdered borax, and rub the places well, using plenty of rinsing water; by washing the woodwork in this way you will not remove the paint, and the borax will soften and make the hands white—a fact well worth knowing. The uses of borax in domestic economy are numerous; and one of the most valuable is its employment to aid the detergent properties of soap.

TO MAKE GRUEL FOR BABIES.—The *Laws of Life*

gives the following: Sift the best of fine ground, unbolted wheat flour from the hand into boiling water, stirring it until it is of the consistence of rather thick gruel. Let it cook for 15 or 20 minutes, then reduce it to thin gruel—so thin that it can be fed through a bottle if need be with the best of milk, using enough to make the quantity of milk about equal to the water. Experience will tell. Strain it while hot through a fine sieve or straining cloth.

## YANKEE BROWN BREAD.—Take equal quantities of rye and corn meal, and mix with water, making a dough that can be kneaded.

Work with the hands until it loses its stickiness, and will readily cleave from the fingers. Let it stand several hours, or over night, and bake in loaves, in covered dishes, in a moderate oven, from three to five hours. Or, it may be steamed three hours, and baked one. Coarsely ground meal is better than fine for this kind of bread.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.  
Four weeks are rated a month.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

DEWEY & CO.

A. T. DEWEY. W. B. EWER. O. H. STRONG. J. L. BOONE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, May 26, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—An English Straw-Burning Engine; Canary Seed; The Cure for Stock Evils, 321. The Week; Improvements; Practical Results with Sumac; Our Agents, 328. The Cheapening of Sewing Machines; Almonds Dropping Off; The Gillis Horse Power; Reflections, 329. Chloride of Calcium for Street Sprinkling; Patents and Inventions, 332. QUERIES AND REPLIES.—Preservation of Grapes and Fish, 328.

ILLUSTRATIONS.—English Portable Straw-Burning Engines, 321. A Cruel Rite of Hindoo Idolatry, 329.

CORRESPONDENCE.—Answers from the Foot-hills; Notes from Anaheim; Kingsburg, Fresno County, 322.

POULTRY YARD.—A Colossal Poultry Yard, 323. THE DAIRY.—A Dairy House of Concrete, 323.

ARBORETCULTURE.—Orange Growing in Fresno, 323.

PATRONS OF HUSBANDRY.—The Agricultural Situation in England; Farmers and Grangers; From the Granges; In Memoriam; The Grangers and Legislation, 324.

AGRICULTURAL NOTES from the various counties in California, 325.

HOME CIRCLE.—After the Centennial Year—A Hope, (Poetry); How She Won Her Way; Diamond Thefts; Labor and Think; Whole Ox Soup; In the Sere and Yellow Leaf; Man's Nature and Destiny; A Story of Berkshire True Love, 326.

YOUNG FOLKS' COLUMN.—Our Darling Flo', (Poetry); Hints to Girls on Entertaining, 327.

GOOD HEALTH.—Hints on Drainage and Sewage; Oatmeal, 327.

DOMESTIC ECONOMY.—Rusks; Dressing a Chicken; Brown Soup; What is a Salmi? To Clean the Woodwork Around Doors; To Make Gruel for Babies; Yankee Brown Bread, 327.

GENERAL NEWS ITEMS on page 332 and other pages.

MISCELLANEOUS.—On Sumac, 323. Social Statistics; Who Any Given Person May Marry; Women in Journalism, 327. Education; Asparagus and Rheumatism; Five Thousand Dollars Reward for a New Invention, 330.

## NEW ADVERTISEMENTS.

The Improved Gillis Horse-Power, Sweepstake Plow Co., San Leandro, Cal.; Magnetic Elastic Truss Co., S. F.; U. S. Camp Lounge, C. H. Mosley, S. F.; Field and Household Pest Poisons, Kearny Chemical Works, 66 Courtland St., N. Y.; Reliable Turnip Seed, Wm. Kenzie, Toronto, Canada; 25 Fancy Cards, J. B. Husted, Nassau, Renss Co., N. Y.; Pure Berkshire Swine, R. S. Thompson, Napa, Cal.; Money to Loan Upon Choice Ranch Property, Jno. D. Hooker, S. F.; The Statistician, L. P. McCarty, S. F.

## The Week.

The days are quiet and warm. In the city the drays roll lazily, the loungers court the sunshine, the sprinklers are constant in their efforts at city irrigation, the stores are empty and the clerks learn their pittance with the dust brush. The ships in the harbor are slowly accumulating. The railway companies are repairing platform cars, and the barges are being fitted for their river voyages. Merchants talk together quietly at the corners and in their counting-rooms. The movement towards vacations is beginning, and though many once plethoric purses are now flat from the elephantine tread of the stock depreciation, there will still be many who will fly the city's summer misery.

It is the dull and quiet of early summer's monotony which rules the days. While the country is awakening to the hurry of the harvest, the city sleeps. Soon the inpouring from the country will reverse the picture, and while the farmer, with his grain in sacks or store, or with the resulting gold in his pockets, seeks the rest and recreation of excursions and visits, we shall have in our streets the bustle of trade, and on our wharves the sound of traffic.

Abroad the war engages the active thought of a continent. The most far-seeing eye cannot discern the complications which may yet arise or the homes which may yet mourn for fallen heroes. Sad, sad indeed is the conflict and its desolation and death. War abroad brings fresh thought of peace at home; peace which brings happiness and prosperity.

## Improvements.

The advices which have come to us from all parts of the State, during the week, fully deserve Horace Greeley's characteristic description: "mighty interestin' readin'." It is, indeed, gratifying beyond ordinary expression to read, as we have, the words of notable improvement which the last two or three weeks have brought to the general agricultural outlook in our State. It is usual for the growth of grain and pasture to be gratifyingly maintained by the cool weather and fogs which the ocean winds bring upon the fields at this season. Our needs were greater this year, in many parts of the State, than fogs and cool weather could supply; and to them was supplemented the quite satisfactory rain which was noted in our last issue. Further particulars concerning the spread and probable effect of the storms are given in our "Agricultural Notes" this week, to which the reader is referred.

The improvement which we would announce with all prominence for the encouragement of our people and the information of our friends abroad, is not a sectional one. It will bring late blossoms to the famished bees of the far south, and though it may not, on the whole, add materially to this year's honey surplus, it will save many swarms from starvation, and release many provident beekeepers from part of the dead expense of moving or artificial feeding. Nor will larger farm stock than bees be less favored. The rain in many parts was sufficient to start anew the green feed, and the outlook for the maintenance of meat and dairy herds and sheep, brightens as if by magic in some counties which needed the cheering most.

The rain brings on hay in considerable and unexpected quantities, and the mower will run profitably on many fields which had been abandoned; thus it is also with the late-sown grain regions where a little moisture, present in soil and air, had kept the weak plants from parching. There will be made grain on fields which were not expected to return seed. Spring-planted crops, corn, potatoes and the like, are grateful for the refreshing and will show its benefits.

While this good change has been in progress in the driest counties, the wet area has gone along with the maturing of its crops in such a way that full average, and more than average yields will be gained in a few whole counties, and in townships and valleys, in other counties, where favorable natural conditions exist. It has been found that this generally unkind year has given some localities a chance to exhibit greater production than ever before, and shown land which was wholly useless in ordinary years to be very productive. This fact goes toward compensation for the areas which the drouth has made sterile.

It is fortunate, indeed, that such late and unexpected favors have come to our farmers. The foreign markets promise rich reward for any grain surplus which we may have to spare, and the assurance now that some of the driest counties will bread themselves, gives the prospect for a respectable surplus for export from the favored regions, and assures the incoming of foreign gold to meet the needs of the producers. Nothing has yet occurred to dim the prospect in grain prices. The Eastern war is being waged with alternate victories and defeats, and questions are arising which bid fair to draw other nations into the conflict. While we regret this most sincerely for humanity's sake, and deplore it as a waste, which the political economists say is productive of good to no one, still there can be no doubt of the immediate effect of the conflict upon market rates, and, if men will fight, whether we will or not, ours will be the philanthropic duty to feed them—at remunerative prices.

The improvement in wheat prices is a matter of rejoicing not in our State alone. Our northern neighbors find that it loosens their bonds and promises new prosperity. Eastern Oregon, according to the *Willamette Farmer*, awakens into new life. We read: "Wheat has been comparatively valueless in the rich farming districts of the Upper Columbia; so low was the price that it was hardly worth hauling 30 miles by wagon to the river, and yet there seems to have been more or less wheat raised every year, and fair stocks have accumulated, not only in the Umatilla and Walla Walla country, but far beyond them, even in Idaho, so that, stimulated by the advance in prices, farmers are hauling it to the river and receiving as high as \$1.10 per bushel for it at Wallula and all the landings beyond, on Snake river, as far as Lewiston. This sudden opening of a bonanza to the hard-run farmers of that distant region has greatly improved the financial prospects of the settlers, and has encouraged them to renewed effort and hopes for the future. It is like the opening of sunshine after a long storm, and in truth the sunshine is in the faces and hearts of the people.

These last words are expressive of the general condition of our people. Even those who have no crop this year are already talking with full hope and confidence of the chances of another year, both in field and market. We trust they will work as well as hope for it.

ON FILE.—"Coffee Growing," A. F. M.; "Food Plants," C. H. S.; "Ducks," T. P. L.; several inquiries for answers.

## Practical Results with Sumac.

EDITORS PRESS.—Noticing an article in the *RURAL PRESS* in regard to sumac, I beg to call your attention to the fact that the native sumac of California, growing in this vicinity, has been prepared in the same manner as the imported or Mediterranean, and tested by the father of the writer (Jos. Anderson) in tanning morocco and sheep skins. He finds it in every way equal to the Sicily and in some respects superior, in being freer of impurities. Samples of this sumac have been sent to the leading morocco and patent-leather manufacturers of Baltimore, Philadelphia and Newark, N. J., and by them pronounced equal to the Sicily. My father, in past years, has used a great many tons of the imported and is convinced of the excellent qualities of the California, and believes it to be the same species. Should you desire to learn more of this sumac, call at Littlefield, Webb & Co.'s, to whom we have sent samples. When the California consumers of sumac want it, we can supply the demand in a very short time. We believe the preparation of California sumac is destined to become an important staple in the productions of this State.—I. W. ANDERSON, Orange, Los Angeles county, Cal.

We are pleased to receive the above speedy and practical approval of our suggestion with regard to California sumac, and to find that enterprising men have anticipated us in founding the industry. We cheerfully give our correspondent all the advertising which the printing of his letter secures, and we hope that he may find his venture to supply the tanners of the United States with California sumac very remunerative. The field which he has taken lies open for others to test and, perhaps, to profit by. The sample of the prepared product to which he alludes, seems to us excellent, but we have not had time to subject it to tests to ascertain the richness of it in desirable qualities. We would suggest to Mr. Anderson to, by all means, send a sample of it to Prof. Hilgard, who, from his deep interest in California industries, will give it a full analysis, the result of which will be an excellent thing to publish, and thus draw the attention of tanners everywhere to give it practical tests in their work.

In the production of tannin, as in some other new industries of which we have made recent mention, there seems to be promise of almost unlimited demand because the old sources of supply are failing. If California can supply the lack, to her will be the profit. The *Prairie Farmer* takes occasion to mention this shortage in tannin, and calls upon California to make tests of the adaptability of her climate in this direction. The following quotation, which we make from the journal, shows the need of increased production and hints of ways of supplying it: "The continued and increasing scarcity of substances containing tannin has induced the Tanners' Society of Bristol, England, to officially bring the matter under the notice of the Linnean Society of Great Britain, in the hope that new tannin plants may be discovered, or that the cultivation of plants containing tannin may be stimulated. The supply of valonia, one of the most important tannin agents there, is reported to be falling off. This is brought from Greece and Surzena principally.

"Among the new plants noted is a small gall of the tamarix, a tropical plant. This, owing to its scarcity, has hitherto been used exclusively in medicine. It yields 40% of tannin. Another medium noted is the pod and seed of a bean, *Balsamo carpon*, found growing in the mountainous districts of Chile. From the extreme solubility of the seed-pods in water, this plant can only be grown in a dry climate, and, in this connection, we would suggest that it be tried in California. The bean is said to yield a tannin-gum of great strength.

"The increasing scarcity of tannin material has excited the attention of the trade in the West for some years past, and it was hoped that the increased price might enable the sumac to be cultivated with profit. Such, however, does not seem to have been the case, except in a few localities. So at one time much was expected of a species of smart-weed; but of late we have heard nothing of this plant as an agent for tanning.

"If Dr. Vasey, the botanist of the Department of Agriculture at Washington, could find in the *Polygonum*, or buckwheat family, a species that could be made available for the purpose of dressing leather, he would be doing a great service to the country. The species are all easy of cultivation and, if applicable to the purpose, there is plenty of space in the West for cultivation."

PHOTOGRAPHING.—We have received a number of fine views taken by Mr. S. P. Sanders, photographer of San Jose. We learn also that Mr. Sanders has decided to visit some of the prosperous towns of the State this summer, and has chosen the somewhat novel manner of taking pictures in a tent. It will be commodious, cool and airy, and a great improvement over the small cars which are sometimes the only local accommodation afforded our country friends. Mr. Sanders takes with him some three hundred select stereoscopic views, which he sometimes exhibits, and which will repay any one who embraces the opportunity of seeing them. We have known Mr. Sanders since 1862, and can recommend him as a competent artist and a worthy and reliable gentleman.

IN MENDOCINO.—Mr. Joseph Dimmick, of the *PACIFIC RURAL PRESS*, paid us a visit yesterday. The gentleman is on a tour in the interest of that paper, the object being to collect matter, from personal observation, of the real state of the country. Mr. Dimmick says that our county, and particularly our valley, has reason to be very grateful to a beneficent Providence, as it surpasses anything in verdure he has witnessed in his travels.—*Mendocino Dispatch*.

## QUERIES AND REPLIES.

### Preservation of Grapes and Fish.

EDITORS PRESS: Please oblige by replying to the following questions in next issue of your journal: 1. Can you recommend any small, cheap book on the preserving of fruits? 2. Can you give some particulars as to the preserving of grapes in sawdust? 3. Would it be profitable to preserve in tins the ordinary fish obtained on the Pacific coast?—JAMES BITNER, Anaheim, Los Angeles county, Cal.

We do not know of any such book, but we think a handbook on the subject adapted to California conditions is a desideratum, and we hope it will be forthcoming. We have had conversations on the subject with a gentleman who has the ability and the information which are necessary to such a work, and we trust he may yet be enlisted.

The following is the method followed by Mr. Charles Barker, of Grass Valley, which resulted in fine grapes in April. If any one has a better we should be glad to know it: "The grapes are picked when thoroughly ripe by cutting a short piece of the wood to which the stem is attached out of the cane on which it grew. Care is taken not to handle any of the berries so as to destroy the bloom of the grapes or in any way bruise them. All imperfect or bruised grapes are then cut from the stem with a sharp and pointed pair of shears, and the bunches are ready for packing. The boxes are so shallow that two layers of bunches will fill them, and the material used in packing is old pine sawdust that has lain in a heap a number of years, and gone through a sweating or heating process, and lost all its aromatic or piney nature. A layer of sawdust of the description above stated, and well sun-dried, is then spread on the bottom of the box about an inch thick. On this is then laid a layer of bunches of grapes in such a manner that they touch or lay on each other as little as possible, and not allowing any to touch the side of the box. Then another layer of sawdust is covered over these about the same thickness, not allowing any of the grapes to protrude above the sawdust. The boxes are then covered and nailed up tight, and set away in a dry but cool place, and not opened until opened for use."

It depends very much upon what fish are meant by the term "ordinary." We understand that there is a profitable business done in the local manufacture of sardines from the small fish which abound along this part of our coast. Some fish which we have up here are not fitted for preservation. Some are too coarse and some are too tender. If our querist finds a fish that would make a good sardine, we should think an enterprise to preserve them would be profitable. It seems but natural that southern California should make sardines, if they have the proper fish. The great quantities of olive oil which are and can be produced, could, perhaps, be best marketed as sardine surrounding, and if good, pure olive oil is used in the manufacture, it would produce a better kind of sardines than the market is flooded with, and which are made on the Atlantic coast from the cheaper oils which are olive only in name. The subject is worthy of consideration, and if our querist follows it up we should be pleased to hear from him.

### Our Agents.

The agents of the PRESS who go out into the country aid us greatly in extending the circulation of our paper, and thus widen the field of its usefulness. They also do good service for the country through which they pass in noting facts of industrial progress and placing before our wide circle of readers in this and other States trustworthy information concerning the different parts of our coast territory. We have continual reason to thank our patrons for their kindness to our agents and the assistance which they render them in the prosecution of their work. We bespeak for those agents who are now in the field, a continuance of past favors. We make the following notes of the whereabouts and destination of some of our field workers.

Mr. Joseph Dimmick will visit upper Mendocino, Humboldt and Del Norte counties.

Mr. A. C. Champion labors in parts of Mendocino and Sonoma counties.

Mr. B. W. Crowell has his present field in Amador and the more southerly counties.

Mr. A. C. Knox labors in Sierra county and southward.

Mr. A. U. Strong will visit the people of Lake, Napa and Sonoma counties.

Mr. C. N. West will do good work in Santa Cruz and Monterey counties.

We trust that our friends in the counties named and elsewhere will aid our agents with notes of their doings and the progress of their localities, so that they may be enabled to furnish us with fresh correspondence full of practical notes and interesting descriptions. We ask also that they will aid them in the prosecution of their business for us, and will pave the agents' way with good words for our paper, to their neighbors whom they may meet. Our correspondence from our readers is full of kind, encouraging words concerning the value of our paper, and we can but remind all who feel friendly toward us that a word fitly spoken to one who should aid us with a subscription, will be a direct and substantial contribution to the improvement of our journal. Our aims are all for the advancement of our paper in the sphere of usefulness. Will not every reader help us to this end as occasion may offer?



## The Cheapening of Sewing Machines.

It is a matter for general congratulation that the future price of sewing machines will be but half of that which has been their cost hitherto. This will place these useful implements in the hands of hundreds who could not afford to purchase them at the old prices. The *Call* says: No event of the year has occasioned such general rejoicing as the expiration of the last patent on sewing machines. There is not a well-regulated family in the land where the machine is not a welcome visitor, and but few families, with the means at their disposal to make a purchase, that are not provided with one. But then, again, there are thousands of poor women in the land to whom the machine was a forbidden luxury so long as it sold at a price so high as to place it beyond the possibility of their reach. To this class \$40, \$60, \$80 and \$150 is a small fortune. Only the poorest machines could be obtained for the first-named figure—that is, of the kind of machine needed for general work—but it was as impossible to attain to the minimum as the maximum sum, and the fingers were compelled to perform, by the slow process of hours, labor which the machine manipulated in a few minutes. Now, it is asserted by those familiar with the subject, that machines of the finest finish can be manufactured and sold at a profit for \$25 and \$30. This will bring the machines of plainer construction down to \$10 and \$15, and render it possible for many a poor woman to own one.

But if the great masses of the people are rejoiced at the prospective reduction in prices, not so the former patent-holders and manufacturers. There are two establishments in the country that have been turning out the machines on a large scale, in one of which it is said \$12,000,000 are invested, and in the other \$8,000,000. These factories had their agents, who employed traveling solicitors, and between the two from \$20 to \$50 were divided in commissions, according to the quality of the article sold. From statistics on file in the Patent Office, it appears that during the single year, 1874, there were 410,000 sewing machines manufactured and sold by the five principal companies in the business in this country, besides about 120,000 more produced by ten other and smaller concerns. Of one kind of machine, nearly 1,000,000 have been sold, and of another 276,000 were sold last year alone.

The gains have been so vast to the manufacturers that they were enabled to pool a million of dollars with which to operate upon Congress to procure an extension of patent; but there was a powerful opposing sentiment, and they were defeated. Those who have accumulated large fortunes from the monopoly can afford to stand back, after twelve years of rich pickings, and let the public at large have a chance to enjoy the benefits of the invention. The loss to manufacturers will be more apparent than real. The bulk of profit passed by middlemen after the machines left the shops. A new scale will be adjusted, and if the manufacturer gets less for his machines than formerly, he will be enabled to make up a portion of the difference in the increase of his sales.

WASHINGTON COLLEGE.—As we go to press the Commencement exercises of Washington College, at Washington, Alameda county, are being held. We acknowledge the compliment of an invitation to be present. This year's class of graduates will sustain the high standing of the institution and the classes which are coming forward are composed of some of our best young men and women. Rev. President Harmon and Mrs. Harmon are well known throughout the State as educators; their long service and their thorough devotion to the work have endeared them to many of our citizens. Students are now present in the institution from all parts of our State and from Nevada. The next year will begin, with a full corps of instructors, on the last Thursday in July.

## Almonds Dropping Off.

EDITORS PRESS:—My oldest almond trees are six years old; trunk of trees about eight or nine inches through. They blossom very heavy, but the fruit drops shortly after nuts are formed. We had light frosts last spring, after the trees blossomed, but the nuts formed and grew to be about the size of peas, then dropped mostly. This year we have had no frost after the trees blossomed. One orchard I watered up to November last, but we have had a very dry winter; not more than two rains in all winter, and even then the ground did not wet more than six inches either time. The trees blossomed, however, very full. While in blossom I gave them water. About a week ago we had quite a rain for about two days. Since that rain I notice that most of the nuts have dropped; whether knocked off by the drops of rain or not, I can't say. The winds have been light all the spring. I have another orchard which has had no water since last September, except the rain of which I speak. These trees blossomed full as heavy as the other orchard. Since the rain I have been among them, and find nearly all of the nuts have dropped. I see what few nuts are left, are all sizes, from the size of peas up to half-grown nuts, but all those that dropped are none of them larger than peas I think. Those that hang on, until they get to be one-quarter inch through, seem to have no further trouble. My trees are the Languedoc variety.—D. C. Twogood, Riverside, San Bernardino Co., Cal.

The above queries were forwarded to us for transmission to Mr. Clough, of Centerville, for reply, as he furnished Mr. Twogood the trees some years ago. Mr. Clough calls in to tell us that he is a great sufferer from an affection of the eyes and head, and cannot read or write without great pain. He cannot, therefore, fully reply to the questions asked, or study the problem carefully. He assures us, however, from the impression he gets from the letter as read to him, that the trouble with the trees is an unreasonable application of water. He believes

## The Gillis Horse Power.

During our recent visit to W. L. Overhiser, Esq., at Stockton, we had a fine opportunity to see the Gillis horse power in motion. This apparatus found birth on Mr. Overhiser's ranch, and the original machine is now doing good duty at his pump. We saw a light horse walking around the course at a quick pace and showing no signs of fatigue, for the wheel seemed to follow him around with the ease of a ball rolling on a smooth surface. At the same time some idea of the work done could be seen from the stream of water which was flowing into the tank at a point 30 feet from the ground and more than twice as far from the surface of the water in the well. The immense tank was full; all the troughs around the cattle yards were full, and a large garden and orchard had been but lately irrigated from the work of the walking horse and the Gillis horse power. We were gratified to see the machine doing such good work for it is not long since we made an illustration of it in these columns, and we are glad when a device which we make prominent gives satisfaction to our readers. Mr. Overhiser pronounces the power one of the most useful inventions he had ever used and warmly recommended it.

We are told that over 100 of these powers have been put into operation during the last year in the Sacramento valley, and we hear

## Reflections.

It is well, ever and anon, as we are pushing on in active pursuit of our varied aims and purposes, to pause for a moment and reflect upon the blessings which we have in our civilization, enlightenment and Christianity. Without them what would be our condition, what our ambitions, what the manner of our daily lives? Would we dwell in a country crowned with freedom, girt with intellectual advancement and shod with industry? Would we, in this our favored region, be putting forth every effort for the development of our heritage, for the promotion of our honorable industries, for the securing of every possible benefit for our children? What would be our intellectual condition? Would we be watching incessantly to advance our labors by the discoveries of science, and to improve ourselves by the education of schools and the teachings of experience? And what would be our moral condition? Would the true heart of the people shudder at the crimes which are daily coming to light in our affairs? Would the strong will of the people declare, as it does to-day, that the progress of evil, both in public and private places, must be checked, and pure life and upright action be the condition of confidence and honor? We are not of those who profess to believe that the present condition of men is all wrong; nor do we believe that it is all right, but we have full faith in the strength of

the people to enforce what we think is their easily discerned purpose and that is to right wrongs and to fight wrong doers. This is the ground upon which we base our hope and faith in the present progress of our people in civilization, in enlightenment and in Christianity.

To aid the thought in picturing the condition which might have been ours were it not for the influences of enlightenment and Christianity, we have selected for illustration on this page, a scene which has long been typical of barbarism and heathen darkness. Many readers will recognize it as one of the forms of religious murder practiced by the Hindoos. It is a voluntary sacrifice on the part of the poor



A CRUEL RITE OF HINDU IDOLATRY.

the almond must have its water only in the winter, and when the ground is thoroughly wet in the winter the tree will do best if it has no farther wetting. The almond, he says, does not need much moisture and it is absolutely fatal to apply it when the period of growth is on the tree. Summer irrigation he considers dangerous for many kinds of fruit trees, and he tells us of whole orchards in Alameda county which have been destroyed by it. Mr. Clough thinks if Mr. Twogood will let his trees alone in the summer they will soon yield him good crops of nuts. By the method of culture which he had followed, he had secured a growth of root and wood, but no tendency to hold the fruit. Having attained the growth they will fruit if they are not artificially watered. The late rain of which Mr. Twogood speaks, would act like summer irrigation and destroy the fruit. Mr. Clough tells us that the fruit trees in his neighborhood show signs of being severely injured by the unusual season which they have undergone this year. Many trees, he thinks, will die. They exhibit the unnatural phenomenon of fruit near the trunk, and blossom farther up and no signs of growth in other parts of the trees. The early October rains started the growth; the long drouth which followed interfered with its progress, and the trees are afflicted with a very abnormal growth, which seems the result of the unusual conditions.

As Mr. Clough is not able to examine our querist's case carefully, we should be obliged to other of our almond-growing readers if they would send us their experience and observations on the points mentioned in Mr. Twogood's letter.

VER MEHR, the defaulting clerk of Parrott & Co, has been sentenced to six years imprisonment in the State's prison.

nothing but satisfactory reports of them. Nurserymen have introduced them in the place of windmills, or as a surety of water when the windmill lies around doing nothing. Vegetable gardeners around Sacramento and Stockton, and in Los Angeles county are employing this simple and cheap means to gain their supplies of water for irrigation. It seems, indeed, as though this happy thought of a man on a San Joaquin ranch has in it the power to turn large tracts of land, which are now too dry to produce crops, into hundreds of small farms, orchards and gardens. Thousands of acres in our valleys and elsewhere, can be made productive by an exceedingly small outlay of money, for wherever water can be had by wells this simple arrangement, drawn by one horse, will soon place the water where gravity will carry it to all parts around the place. It drives pumps of two to six inches capacity with ease and is thus available for all needs. We speak of the device in this place because we regard it as a genuine agricultural improvement, and for the purpose of calling the attention of all interested to a full showing of the merits of the powers which is made by the manufacturers in our advertising columns.

RETURNED TO STOCK BREEDING.—It seems that we are not to lose Hon. Cyrus Jones of Santa Clara from the ranks of fine stock breeders. The announcement is very satisfactory, for Mr. Jones is a man of wisdom and fairness in stock matters. We read in the San Jose *Mercury* as follows: "Hon Cyrus Jones has purchased a half interest in the twenty head of Short Horn cattle bought from Jones & Co., by Henry Hogan of Alameda, at the auction sale recently held to settle up the partnership affairs."

benighted wretch who thinks he can propitiate his senseless idols by permitting the cruel iron to be thrust into his flesh, and he be whirled aloft until he falls to the ground a lifeless mass—a ruined, wasted and destroyed remembrance of that which was made in the image of his creator. And this is but a small part of the degradation. The destruction of a single life, the ruin of a human form, great as are these crimes, become but tiny shadows when one thinks of the mental and moral darkness which makes such a sacrifice a part of a religious faith. Here is the opportunity for a contrast. Who can think of the power which has released us from such darkness and restrain a heart full of gratitude?

But it may be said this Hindoo crime was a thing of other years, and should not enter into contrast with the thoughts and sentiments which actuate us to-day. It is true that the sacrifice in the form our illustration shows has not been lately known in India, but it is not yet two months since that other of the twin horrors, which are best known as marks of Hindoo idolatry, "the burning of the widow," was actually consummated in what is now a British province.

Evil is not yet too old to afford a contrast with the good; wrong is not too feeble to point to the strength of right. Nor need the scene be in India. Take the features of the illustration in a figurative sense and the lesson is as good. How far need we look to see a degraded being scattering symbols of purity and innocence, as though they were expressive of his thoughts and deeds. How far need we look to find hired criers and gong beaters employed to drown the cries of victims of some foul conspiracy against the welfare of helpless men? Oh no; there is yet abundant material for denunciation.



## Education.

Report of a Special Committee Appointed by the Educational Convention held under the Auspices of Golden Gate Grange.

At the recent Educational Convention of Grangers, held in Golden Gate Grange, a Committee of Seven was selected to prepare a report embracing the views of the Order on the educational system of California. Following is the full text of the report as submitted by the Committee and adopted by the Convention:

Report to the Public Educational Convention Called by Golden Gate Grange.

Your resolution appointing this Committee mapped out its duties as follows:

Resolved, That a Committee of Seven be appointed to examine into and, at the next meeting of this Convention, report upon the status of the several departments of the public educational system of California, to the end that evils, if they exist in the same, may be clearly seen and remedies applied, if such there may be found.

As a compliance with the foregoing resolution we beg leave to submit the following report:

I.—As to the Status of the Several Departments.

We regard a statement of the cost of, and results from the several departments a compliance with this portion of the resolution.

Public education in California is divided into three branches, each of which is a system separate from the other in its management, viz: The Common Schools, the Normal School and the State University.

First.—The Common Schools.

The number of these, according to Superintendent Bolander's last report, is 2,190; number of pupils enrolled, 130,930; average daily attendance, 83,391; value of school property, \$5,065,678.30.

The common schools are supported by direct taxation, interest on funds resulting from the sale of those portions of the public domain known as School Lands, and interest on bonds held in trust for the School Fund. Their cost to the State for the year 1876 was \$2,874,677.11, being about \$34 per child of average daily attendance, exclusive of cost of books, and interest on the value of school property.

Mr. Swett, in his history of education in California, brought down to 1875, states that the total amount expended by the State was then in round numbers, \$25,000,000, not including any interest; to this add the amount since expended, and we have at least \$28,000,000 spent for common schools.

The results from this outlay cannot be shown with any detail or exactness; a negative statement may truthfully be made that your Committee has learned of no instance in which, by a common school education, has a child in California been given such an industrial training as enabled it to make a livelihood.

Whether as a result from the common school system, or from circumstances foreign to it, your Committee is unable to decide, there exists, in the rural districts, a condition of things more apparent than desirable.

Farmers are compelled to give up their homes and move into towns, or abandon the hope of giving their children good educations at the public expense. There appears to be no just relation, as to efficiency, between the public schools of the cities and those in the country.

Second.—State Normal School.

The time which your Committee has had at its command has not been sufficient for making a compilation from the State Comptroller's reports of the State appropriations for this purpose, made for the establishment of the State Normal School in 1861-2. There has been a steady increase in prosperity and usefulness, and no other department of the State educational system has been managed with greater economy.

The cost of buildings was about \$250,000. The first annual appropriation for the support of the State Normal School was \$3,000, which sum yearly, with the growth of the institution, has been increased and the appropriation for last year was \$24,000.

The number of instructors, in 1876, was 12, of pupils, 550, and the whole number of graduates has been 456.

The cost of instruction for each pupil about \$65 per annum.

Third.—State University.

The endowments of the University of California, as per information furnished by the Secretary of that institution, are as follows:

From sale of Seminary lands (U. S. donation)....\$ 57,000  
"M-rill bill" lands..... 750,000  
"Tide and overland lands..... 750,000

Total permanent endowment.....\$1,557,000  
Present income from 122,776 acres of land for which certificates are issued.....\$33,710  
From rent of endowment about..... 53,000

Total present income.....\$109,710

The University has in charge also the Lick Fund of \$750,000, the Tompkins Fund of \$50,000, the Toland Medical College property and some smaller endowments which, like those last above enumerated, as yet, bring in no revenues available for the general purposes of the University.

The Constitution of California, (Art. IX, Sec. 4), makes it the duty of the Legislature to protect, dispose of and secure from loss, all grants of lands and accruing funds by grant of the Uni-

ted States or any other person or persons for the use of a University. All donations, therefore, from private sources have now become public property, and the University endowment is in round numbers two and a quarter million of dollars at least, without including the value of the University property or any interest on the amount expended, or the appropriations for its support hitherto made by the State, which amount in the aggregate to about a million dollars more; it should, however, be borne in mind that the income from \$1,545,600 alone is available for general purposes.

The instructional force in the University consists of 35 persons, 35 of whom are salaried officers. This does not include the Secretary, and persons other than instructors, employed.

The amount expended in salaries for the year ending July, 1876, was \$84,000; the number of students now in attendance is 305, of whom two are in the agricultural department, and 69 in the mechanical department, which includes the colleges of chemistry, mechanics, mining and engineering. Total number of graduates, 128, of whom 11 graduated in the agricultural department and 43 in the mechanical department. Cost per annum of each student, for instruction alone, and without counting board, etc., about \$350.

Summarizing we find that hitherto in California there has been devoted to the cause of public education, in money—

For Public Schools, about.....\$23,000,000  
State Normal School, about..... 500,000  
State University, about..... 3,250,000

Total, about.....\$31,750,000

This sum cannot be regarded as an investment from which a money income is to be expected other than in the case of the University endowments, which yield now about \$106,000 annually; the "Lick," "Tompkins," and "Toland" donations being of so special a nature, in the purposes to which they are devoted, as that they ought to enter but little into a general consideration of the subject of public education.

The above estimates of amounts in no case include interest upon the sums donated or appropriated, neither is any account taken of the expenditures of money for books, etc., by parents or pupils. Most of the donations and appropriations have been made within the past 15 years, and the magnitude of the amounts, we think, fairly indicates the appreciation of the importance of education by the public at large and individuals of liberal views and large means. The endowment of institutions of learning by those who have wealth at their disposal, has properly come to be regarded as among the best of all ways of doing good. The gratitude of the people of California is due, and your committee believe, is most cheerfully given, to the men who have so fully appreciated the high character and great usefulness of the University of California by making the liberal donations known as the "Lick," "Tompkins" and "Toland" endowments. The best return possible, and probably the most in consonance with the desires which prompted the making of these princely gifts, is to add to the fame of the institution with the names of which it was the ambition of the donors to associate their own.

II.—Evils of the Present System of Public Education.

Before entering upon the discharge of this disagreeable part of our duty, "drawing attention to such evils as we find to exist," your committee gladly places on record here its conviction that no State in the Union has, according to the old standard, a better educational code, a superior corps of teachers, or makes more liberal provision for public education than California; but your committee desires not to be understood as admitting that either the present educational standard; or the system now in vogue, is the best possible to be devised. We live in an age of progress; with the march of events education has kept step and been advancing with rapid strides. In no respect has educational progress been more conspicuous, in Europe and some of the United States, than in the introduction of what has come to be known as industrial education; that is, of such practical training of children in the useful arts and industrial pursuits as immediately tends to render them competent to support themselves, and add to the commonwealth by their own labor.

Your committee regard as a serious evil the absence of this important characteristic from the common schools of California; moreover, it is by us regarded as the root of some of the chief evils which are to be found in it. In the city schools nothing is taught which is intended to interest or instruct children in work as artisans; nothing in the country schools to encourage them to become good farmers. This defect is unfortunately but too apparent throughout the entire working of the system, but it becomes most painfully so at what may be regarded as the culmination of it in the University. As is shown in another part of this report, out of 305 students now there, but two are in the agricultural course and 69 in that of the mechanic arts.

In the minds of some persons, blame, for this result, has attached to the management of the University. Your committee think it should not be placed there, but upon the whole system, whence it results.

Lack of Industrial Instruction.

There are in California special reasons for regarding the lack of industrial instruction an evil in our system. The old method, by apprenticeship of learning a trade is not available

to boys in California; for the master to keep an apprentice, the time of a journeyman must be paid for to teach him the use of tools; the amount paid in that way alone, to say nothing of the boy's board and clothes, will cost more than to hire a Chinaman to do all the work which can be got out of the boy. Moreover, in those days of freedom and absence of power of restraint over youths, there is here no security to the master that an apprentice would remain with him a day after he had been so far taught as that his labor would be of value. It is also to be observed that now boys cannot learn the use of tools in primary work, because it is all done by machinery; all, in that connection, which they could do, would be to "tend" a machine—work that would teach them nothing, and which a Chinaman always stands ready to do.

But if a boy could learn the use of tools, acquire a knowledge of the controlling principles of some useful art, or of the appliance and working of machinery in the schools, when he left them it would be with such preparation for labor as would enable him at once to enter upon it and earn living wages. Without some such preparation at the public expense, your committee do not see how the youths of California cities are to be introduced into the industrial callings.

A result similar in effect to that last above noticed is rapidly becoming apparent in the portion of the State devoted to agricultural pursuits. Nothing taught in the schools makes prominent or interesting to the children the business of carrying on the farms on which their parents are at work. The teachers are not selected because of their peculiar fitness or special training, and in the schools no children become learned in the theory or skilled in the arts of husbandry. The tendency of the present system appears to be not only to foster in the child a desire to remain on the farm, but rather to urge him to leave it for a life in the city.

Your committee would shrink from believing to be correct the conclusions to which they have arrived were it not that others, working in the same field of thought, came to much the same result; even in New England, where, if at all, the present system has been successful, grave doubts as to its value have been entertained.

Public Education in New England.

That we may be seen not to be standing alone on the ground we occupy, and that our somewhat startling propositions are similar to those advanced elsewhere, your committee respectfully represent that they find the views and opinions which are herein given to be concurred in by most of the writers upon educational topics at the present time. Long extracts and quotations are not here in order, but in forming our own we ought to give due weight to the opinions of others, whose powers and means of observation entitle their views to respectful consideration. The Board of Education of Massachusetts, in one of its late annual reports to the Legislature of that State, says:

"The public school system of New England, so well adapted to a former state of society, fails to meet the demands of our modern civilization."

Hon. John Eaton, United States Commissioner of Education, commenting upon this declaration, pronounces it to be "the indictment of the thinkers of to-day against the present school system."

In a later report the same Board says: "How to educate our children and secure the best results, with the greatest economy of time and expense, is the great problem of the day, and demands the best thoughts of all our educators. There is an opinion prevalent among such educators that, while our schools are doing a great and noble work, they are not accomplishing all that might reasonably be expected of them. If a portion of the time wasted, and worse than wasted, in the attempt to memorize the endless and senseless details of geography and history, the technicalities of grammar, at an age when they cannot be understood, and long examples in mental arithmetic, which, with their complicated solutions, must be given with closed book, and in precise, logical terms, could be given to some studies that would really interest children, develop their perceptive powers, accustom them to the correct use of language, and be of real practical value to them in after life, more satisfactory results than are now attained would be exhibited at the close of the child's school life."

In reply to a letter of inquiry upon educational subjects, and especially as to the working in Vermont of a system similar to our own, Hon. Z. E. Jamieson, Chairman of the Educational Committee of the State Grange of that State, to a like Committee of the State Grange of Kansas, says in his published letter of December 3d, 1876:

"You ask what we are doing in Vermont. I do not know of a common school in Vermont that has much furniture besides a water pail, tin cup and a rickety chair, except the immovable desks and blackboards. Occasionally outline maps are hung upon the wall."

"Writing in some schools is not taught at all some terms, while with the change of teachers it will be taught so far as to have a time to write for those who buy copy-books, and to set copy for those who bring paper. Nothing is taught of music or drawing, or of the soil, stones, vegetation, birds, insects, or anything relating to any craft or vocation. The better the teacher is educated the less inclined she is to consider industrial pursuits worthy of being taught. I say she, as a majority of teachers in common schools are females."

"The education the common people get does not enable them to exercise that fearless, independent action that should result from independent thought and a consciousness of existing wrongs."

"That is, in caucuses, conventions and legislatures, the best farmers are no match for the ordinary lawyers; and the mass of farmers are as helpless to demand and secure their rights by speaking or writing as children in swaddling clothes. There are about 80,000 children in the State, and the cost of schools is annually about \$600,000, yet from this great taxation and this number of scholars if there are a dozen farmers manufactured that can exert the influence of one second-rate lawyer, the fact does not appear. Our present system does not allow of a thorough education without driving from the mind a love of the farm and a respect for all manual labor."

Public Instruction in Illinois.

Hon. Newton Bateman, ex-Superintendent of

Public Instruction for the State of Illinois, and now President of Knox College, in his annual report for 1876, makes a forcible arraignment of the defects in the common school system, similar to our own, there prevalent. A part of his report is in these words:

"Look at the facts as they have existed in this State from the beginning of the free-school system and for years before. What have been the studies prescribed by law? Spelling, reading, writing, arithmetic, grammar, geography and United States history. Who first marked out this course of study, or what consideration led to its original adoption and subsequent tenacious retention does not appear."

"But if the author of this common school curriculum is still living, a contemplation of its results will hardly induce him to come forth and claim the honor of his achievement. It was distinctly proposed to devise a scheme whereby the schools might be rendered the least profitable, that which compels the youth of the State to spend the whole of their school-going life upon the famous seven branches of the old Illinois law, to the total exclusion of everything else, must be regarded as a reasonably successful solution of the problem. It is not to be denied that the confidence of our people in that great American institution, the public school, is in danger of being disturbed; nor is this state of things peculiar to Illinois, but is substantially common to all the States and to the whole country. Doubts, questionings, murmurs of discontent mingled with voices of direct opposition or appeals for reconstruction and improvement are coming up from every quarter of the Union."

Education in Nebraska and Iowa.

Substantially to the same effect are the views entertained and published by the Hon. J. M. McKenzie, State Superintendent of Public Instruction in Nebraska; Hon. S. Burt, State Superintendent of Schools in Minnesota; Professor Phelps, President of the National Educational Association, the highest educational authority in the country; J. M. B. Sill, Superintendent of the Detroit Public Schools; J. B. Merwin, editor of the *American Journal of Education*; General John Fraser, State Superintendent of Public Instruction in Kansas; Hon. D. H. Carty, late Superintendent of Public Instruction in Kansas; Professor M. V. B. Knox, of Baldwin University, Kansas; and so large a number of other distinguished writers upon educational topics that a mere list of their names would unduly swell the bulk of this report.

One other "evil" in our present system is apparent to your committee in this connection, viz., the forcing of all teachers up or down to a common standard, so that the teacher in city schools is not especially fitted to instruct the children of artisans, or so-called business men, in such manner as to interest them in the avocation of their fathers, and the persons who preside over the country schools are no more than their brother professionals in the city, skilled in such arts and sciences that he can so teach children as to fit them to become farmers. In commenting upon a condition of things in Iowa similar to that existing here, G. Sprague, editor of the *Western Home Journal*, published at Des Moines, says:

"There is no denying the fact that our system of education is too much confined to a rut. Teachers become enthusiasts, not in the direction of making education simple and practical, but in aiming at the greatest attainable evidences of the strain to which the young mind is susceptible, overlooking useful results and practicable applications."

And your committee find in the working of the present system here a like tendency to getting the teacher into a false condition at the outset of his career, and starting him upon it only in such manner as that he must run his course in a groove, out of which he cannot get, even if the same conducts to no results of practical value.

Want of Unity in the Common and Normal Schools and the State University.

To another thing your Committee draw attention as a possible "evil" in the present system. That is the independence of the three several systems: the common schools, Normal School and University.

Serious doubts upon this proposition have been entertained by competent persons whose attention has been called to it. On one side it has been contended that, as parts of one educational system, a common management and control would conduce to harmony and the best use of the funds at command; that the common purpose of all concerned, the proper education of children in California, would be best observed by unity of action. On the other hand it is by some persons thought that greater efficiency can be reached in each branch by independence in the management of its affairs. Your Committee is of the belief that unity of plan is desirable, but refrain from suggesting any specific mode of attaining that object.

(Concluded next week.)

ASPARAGUS AND RHEUMATISM.—The advantages of asparagus are not sufficiently appreciated. It is said that those who suffer from rheumatism are cured in a few days by feeding on this delicious esculent, while more chronic cases are much relieved, especially if the patient avoids all acids. The Jerusalem artichoke affords a similar relief. It may be well to remark that most plants that grow naturally near the sea-coast contain more or less iodine, and in all rheumatic complaints iodine has long been used.—*Dietetic Reformer*.

FIVE THOUSAND DOLLARS REWARD FOR A NEW INVENTION.—The Directors of the London General Omnibus Company offer to award a prize of £1,000 for an invention or a scheme for effectually recording or checking the receipts of their passengers' fares, and which may be accepted by them as being so effectual. But the acceptance of any invention or scheme is to be entirely in the discretion of the Directors, who will not be bound to accept any invention or scheme at all, nor to give any reason for non-acceptance.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berkshires, all ages. Perfect pedigrees. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

## Poultry.

## I. P. LORD,

RENO, NEVADA. BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. Game Bantams and Rouch Ducks. Send for Price List and Terms. *State where you saw this.*

## Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few settings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.

## LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

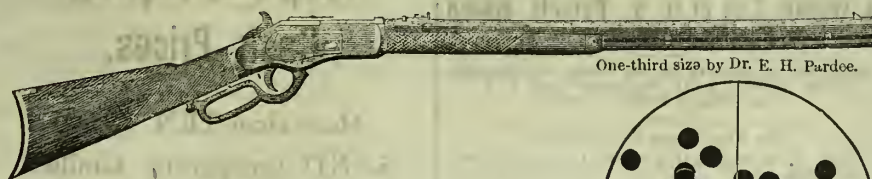
In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,  
Nos. 215 and 217 Main Street, San Francisco.

Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

## GREAT

## IMPROVEMENTS

ARE NOW

BEING INTRODUCED

## IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

-AT

THIS OFFICE,

WHEREBY

Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,

433 Montgomery St., S. F.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries

THE HIGH SCHOOL CHOIR, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD,

President Business College, San Francisco, Cal.

## Ground Fresh Bones for Poultry.

Owing to increased demand, I have reduced the price of bone meal as follows: 100 pound sack, \$4.00; 50 pound sack, \$2.50; 25 pound sack, \$1.50.

Carbolic powder 25 cents per pound or ten pounds for \$2.00. The carbolic powder can be packed in the mouths of the bone meal sacks, thus saving freight expenses.

Fresh bones ground up raw will stimulate hens to lay, hasten the laying of young pullets, and feathering out of young chicks; the natural result of the animal food and jelly they contain; while burnt bones pounded up being reduced to phosphate of lime or animal charcoal, will not produce the same result.

One ounce of carbolic powder will destroy more vermin common to poultry than a pound of sulphur, and not liable to injure the eyes of chicks; it will also drive ants and other insects from dwelling houses. Correspondents can remit coin, currency or postal orders at par. Address

C. P. STONE, Healdsburg, Cal.

Refer to Postmaster, Bank of Healdsburg or Wells Fargo & Co.'s Agent.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

## THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

## THE ALDEN FRUIT PRESERVING CO.,

OF CALIFORNIA,  
No. 426 Montgomery Street.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.

VICE-PRESIDENT.....JOHN LEWELLING.

TREASURER.....J. V. WEBSTER.

CASHIER.....ALBERT MONTEPELLIER.

SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,900 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE.  
Napa Co., Cal. P. O. Napa City, Box 51

## H. F. ROCKEY,

Dealer in

AMATEUR PRINTING

Presses,

Small Fonts of Type,

Printing Materials,

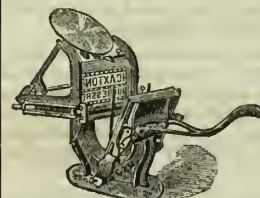
Plain & Fancy Cards, &c

22 Kearny St.

Ret. Market & Post, S. F.

(Up Stairs)

Send for His Circular.



## MOUSTACHE PROTECTOR.

Will fit any Cup.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.

## DAVIS &amp; SUTTON,

75 Warren St., New York,

## Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## TO FISH RAISERS.

I am now ready to sell "Carpi" which were imported from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

WAR MAPS, largest variety, published by E. STEIGER, 22 & 24 Frankfort Street, New York. Send for list. Liberal terms to canvassers.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.

Don't waste your time in reading cheap trash.



### Chloride of Calcium for Street Sprinkling.

Hearing that there had been successful experiments made abroad in the use of a solution of chloride of calcium for street sprinkling, and of its great advantages for such use, we interviewed Mr. E. L. Ransome, No. 10 Bush street, San Francisco, who is a large dealer in the substance, to gain what information he had on the subject. He informed us that according to a statement recently made before the Academy of Sciences, of Paris, by M. Housseau, great advantage arises from the use of chloride of calcium instead of water in laying the dust of public thoroughfares. The salt is, as we all know, highly deliquescent, and is applied in solution, one application sufficing for a period of from five to seven days. Thus a roadway of one kilometre in length by five meters in width, which would require in hot, dry weather four waterings per diem with water, at a cost of 60 francs per week, supposing the water to be supplied free, would require only one application of the chloride, at a cost of 40 francs only, that is to say a difference of 20 francs in favor of the chloride. Trials have also been made in Rome of a solution of chloride of calcium as a substitute for water in laying dust in streets, and the results are said to have been highly satisfactory. The dampness communicated to the road remains for a whole week. The road remains damp without being muddy, presenting a hard surface, on which neither the wind nor the passing of pedestrians or horses has any effect.

This subject seems to us worthy of experiment, both in San Francisco and the towns of the interior. Besides laying the dust it might prove serviceable as a disinfectant in some putrid streets where diseases generate, thrive and run riot during the sultry months.

### General News Items.

THE President has dismissed the charges against Governor Potts of Montana.

THE New York *Herald's* London special says: The Chinese question is looking up. A shipload of Chinese laborers is expected in London, and an immense Chinese laundry is to be established in Holland park.

News is received of the total destruction of the town of Creswell, near Plymouth, North Carolina, by fire, on Friday night. All the mails in the postoffice were consumed. But little insurance was held by the property-owners and the greatest distress prevails.

ADVICES from Peru to the 28th, state that an uneasy feeling prevails in financial circles, and fears of a crash were entertained. Senor Pedro Bernales, the banker and merchant had failed for a million and a half soles, and the associate banks were thought to be in a precarious condition.

GENERAL SHERIDAN proposes to send an expedition to the scene of Custer's fight with Sitting Bull, for the purpose of getting the remains of the gallant band who were massacred upon that occasion, and giving them burial with proper military honors, at such a point as may be designated by the War Department.

SECRETARY SHERMAN is pleased with the New York Custom-house investigation, and will probably repeat the experiment at Philadelphia and Baltimore. A great reduction of force is everywhere expected. A new Naval Surveyor and Appraiser will probably be appointed at New York.

At a coal meeting in New York, on Monday, all the companies were represented, and every one present voted to suspend mining from June 15th to July 15th, with the exception of Mr. Hoyt of the Pennsylvania Company, who did not object to the arrangement, but declined to vote for it.

THE forty-seventh call for the redemption of 5-20 bonds of 1865, and consols of 1865 was issued on Monday. It is for \$6,000,000 of coupons and \$4,000,000 of registered bonds, instead of \$7,000,000 of coupons and \$3,000,000 of registered bonds, as originally intended. The principal and accrued interest will be paid at the Treasury at Washington on and after the 21st of August, when interest will cease upon the bonds.

THE Secretary of the Interior to-day issued an order requiring cash reports of receipts, disbursements and balances to be made to him weekly, by all disbursing officers and other agents of the department in Washington and throughout the country. The order is issued with the two-fold purpose of exercising more intelligent supervision and affecting a control of business expenditures, and with a view to preventing the perpetration of clerical or other errors.

THE Postoffice Department gives notice that the schedule days of departure from San Francisco of mails for Japan and China, have been changed, and the number of trips increased as follows: The Pacific Mail Company will dispatch its steamers from San Francisco, May 29th, June 20th and July 14th. The vessels of the Occidental and Oriental Company will leave the same port on June 9th, July 3d and July 27th. Increased frequency of trips will continue throughout the season.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, and Ponds and Skating Rink.

## PATENTS AND INVENTIONS.

### A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

FOR WEEK ENDING MAY 15TH, 1877.

190,655. FRUIT DRIER.—H. Kelly and D. Cole, East Portland, Ogn.  
190,690. PICTURE HANGER.—I. Piles, Yankton, D. T.  
190,771. MACHINES FOR PUNCHING AND SHEARING METALS.—A. Lee, Forest Grove, Ogn.  
190,794. HOP DRIERS.—S. R., J. C. and J. H. Templeton, Brownsville, Ogn.  
190,806. HORSESHOE BAR.—A. Barton, Nevada City, Cal.  
190,808. ORE WASHER.—D. Beaumont, Sacramento City, Cal.  
190,838. BLOWING MACHINE.—T. A. Cochran and J. Hendy, S. F.  
190,840. GASK EDDERS.—D. Evans and W. Snyder, Salmon Creek, Cal.  
190,911. WATER REGULATOR.—L. A. Scowden, S. F.  
190,912. EFFLUVIA EJECTOR FOR WATER-CLOSETS.—W. Smith, S. F.  
190,923. ROTARY ENGINE.—T. F. Sparrow, Denver, Col.  
7,679. SLOP-HOPPER.—J. Marquis, S. F.

A COUNTY ASSESSOR WHO KNOWS WHAT IS RIGHT.—In an article on the taxation of growing crops the Santa Cruz *Courier* says: "The farmers of Santa Cruz are not burdened by this onerous exaction, as County Assessor Hoff, in the face of positive instructions from the State Board of Equalization, has taken the responsibility of refusing to assess the crop on the ground, believing it to be illegal, and knowing it to be unjust and oppressive."

GOOSEBERRIES.—Mr. Robert Ashburner brings us a fine sample of gooseberries, the first fruit from some ships he brought from England at his last visit thither. The fruit is from one inch to one and one-half inches long, and is not yet fully grown as Mr. A. did not wish to let the berries mature on the young bushes. The skin is as clear of mildew as the cheek of a cherry.

WEST SIDE REJOICING.—We acknowledge the receipt of an invitation from A. C. Lander, Secretary of the committee, to the celebration and ball given by the people of the West Side irrigation district to the retiring and incoming Board of Commissioners, at Grayson, Tuesday, June 5th, 1877.

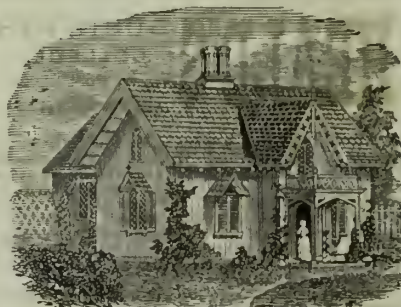
PERSONAL.—Wm. J. Lawrie (or his alias). Description.—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

### EXCHANGE.

An eight acre farm near Redwood City, fenced, common house, two wells water, pipes laid through ground, fruit trees, etc. Cost \$3,500, will sell for \$2,500, or would take improved land near San Francisco in exchange. Address J. L. Tharp, this office.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

### CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA.  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

Choose a good companion only—one of Dewey & Jordan's "New York watches."

## Superior Pianos for the People at Popular Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

### The Brilliant and Durable GOLDEN PIANO

Which we now offer the readers of this paper

### At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

### Prices of the Golden Piano:

The Installment Plan Prices.	Our Reduced Cash Price.
The Golden Piano, \$500	\$350
(UPRIGHT—C.)	
The Golden Piano, \$375	\$300
(SQUARE—No. 1.)	
The Golden Piano, \$500	\$350
(SQUARE—No. 2.)	
The Golden Piano, \$600	\$400
(SQUARE—No. 3.)	
The Golden Piano, \$800	\$450
(SQUARE—No. 4.)	

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.

## DEWEY & CO.

### American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual confidence of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

### DEWEY & CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 23d, 1877.

Trade has experienced another quiet week. Receipts of most kinds of Produce continue small and everyone is apparently waiting for the incoming crops before making investments, except such as are in demand for immediate use. There are indications of the beginning of harvest, and the supplies for harvesting machinery depots comprise a large part of the shipments to the interior. Otherwise trade is dull and speculation in Produce at a low ebb.

Wheat has shown rather a weakening tendency during the week, in sympathy with a lower rate in Liverpool. Most of the trade, however, is in talk and not in sacks of Grain, and it is too soon to form an idea of what will be done when the new material comes on.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	12s	7d@13s	2d	13s	3d@13s	6d
Friday.....	12s	7d@13s	—	13s	3d@13s	6d
Saturday.....	12s	7d@13s	—	13s	3d@13s	6d
Monday.....	12s	7d@13s	—	13s	3d@13s	6d
Tuesday.....	12s	6d@13s	—	13s	2d@13s	6d
Wednesday.....	12s	6d@13s	—	13s	2d@13s	6d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1875.....	9s	—@9s	2d	9s	2d@9s	6d
1876.....	9s	8d@9s	10d	9s	10d@10s	4d
1877.....	12s	6d@13s	—	13s	2d@13s	6d

## The Foreign Review.

LONDON, May 22d.—The *Mark Lane Express* says: Winter sown Wheat has improved in appearance, and the damage which the plant was thought to have suffered in some districts from the recent severe night frosts, has not apparently proved serious. A higher temperature also arrived very opportunely for Barley. Agricultural prospects on the Continent are also promising. The growing crops in France and Italy especially, give general satisfaction. Although the supply of home-grown Wheat in Mark Lane has been again very light, farmers have offered rather more freely at the Provincial markets, as the somewhat weaker aspect makes an increased desire to realize. Business, however, has not been brisk, as growers have in most cases declined to make any concessions. The imports of Wheat into London have now begun to increase, chiefly owing to the action of Germany, which appears to possess a larger surplus for export than the reports of a deficient crop last year led us to expect. Large shipments have also been made from Revel. It is probable that the large quantities which are usually shipped from Odessa will be sent for shipment from Baltic ports. We must therefore look for increased arrivals of Russian Wheat, which will probably, for a time at any rate, depress values, although political complications or adverse weather affecting the home crop would speedily counteract the downward tendency. The recent advance in the price of Wheat was, perhaps, too rapid. Still, admitting that 70 shillings can scarcely be maintained under the existing circumstances, it by no means follows that the same may be said of 60 shillings, and it appears very probable that the range of Wheat values will be between these two prices this harvest.

The local Wheat trade has been quiet throughout the past week. Millers bought very sparingly, at about one to two shillings less. Business in floating cargoes has also been very dull, and with larger arrivals at ports of call, there has been a decline of three shillings to four shillings on Wheat, and six pence on maize.

## Freights and Charters.

There have been a few charters of Wheat ships reported at £2, but they have long lay days and may be held for the first of the new crop. The rate for wooden vessels to Liverpool, at this writing, is £2. The following engagements are reported: Ship A. M. Simpson, 1,525 tons, Wheat to Cork; ship Alameda, 1,474 tons, Wheat to Cork; ship Indiana, 1,488 tons, Wheat to Cork; British ship Lock Doon, 812 tons, Wheat to Cork. At the beginning of the week we had in port 2,252 tons engaged to load Wheat and Salmon; 35,756 tons disengaged, and 13,052 tons miscellaneous.

## Eastern Grain Markets.

New York, May 20th.—The Grain Trade has been flat all through the week, with prices lower to sell. Exporters generally are holding back for the first fleet of canal-boats of the season, now nearly due, with supplies of Wheat from the upper lake ports, that has been detained by ice. About all the 500,000 bushels on the market is held by one or two strong houses, who are not inclined to make concessions until they are forced to do so. That Wheat is to rule materially lower in the near future is now believed, and yet exporters are very reserved and inclined to throw away the chance. No 2 spring Wheat has been sold in small quantity at \$1.90@1.95, and at nearly an equal price for July delivery. Corn is lower and quite active for export at 69¢@70¢ for good shipping quality. Rye is quoted at \$1.10. Barley is dull, with 20,000 bushels California sold at 90¢; Western, for export to Great Britain, 60¢. Flour is lower, but still too high for activity. The crops are still progressing favorably as a whole.

Chicago, May 20th.—The week's Grain markets have shown the effects of a European war, and their rapid fluctuations have rejoiced the speculator. On Monday, June Wheat sold at \$1.65@1.71; Tuesday, \$1.65@1.68; Wednesday, \$1.60@1.64; Thursday, \$1.60@1.63; Friday, \$1.63@1.65; Saturday, \$1.60@1.65. Corn, which is still the speculative cereal, has sold down to 49¢, to-day, and up to 53¢, which price was reached Monday. Receipts for the week have been—Wheat, 64,000 bushels; Corn, 872,000; Oats, 268,000. Shipments—Wheat, 181,000; Corn, 627,000; Oats, 268,000. Receipts same time last year—Wheat, 272,000; Corn, 670,000; Oats, 225,000. Shipments—Wheat, 529,000; Corn, 898,000; Oats, 243,000. Wheat stocks are diminishing as fast as the market can stand, and very little is arriving, while reports of small stock in the country come in daily. Hopes of a large crop the coming fall appear, however, from all newspaper and commercial reports, to be well founded.

## Eastern Wool Markets.

New York, May 20th.—There has been a very light inquiry for Wool from manufacturers during the week, but dealers have purchased quite liberally in anticipation of better prices. Manufacturers, finding a very limited outlet for their goods, confine their purchases to parcels that are actually required for present necessity. Spring California meets with most favor, owing to the fact that prices current here are said to be lower than those ruling in San Francisco. Fall California is in a great measure neglected, and sales can only be effected by the aid of

concessions. New Texas is now arriving in large quantities, but business is restricted, owing to what are considered the high views of holders. Western Texas sold quite freely and at full prices, owing to extreme sales of carpet materials. Shearing is now in progress through some of the smaller States; but in Ohio, Pennsylvania, and other large sections, work will not begin for some two weeks yet.

Further advices from the London sales are to the effect that prices are somewhat steadier, superior Port Philip selling at 14½d; burry, 12½d; and average, 11d. The Liverpool sales of East India will open on the 29th inst., when 18,000 bales will be offered. Lower prices are anticipated.

The sales for the week were: 287,000 lbs new spring California at 20½c, the outside price for choice; 18 bags seconds do, 63c; 14,000 lbs fall do, 17½c; 5,000 lbs Oregon, 28c; 15 bags scoured Texas, 53c; 60,000 lbs Western do, 18c; 5,000 lbs new Eastern, 25c; 10,000 lbs XX Ohio, 40c; 4,000 lbs X do, 36c; and 50 bales Australian, 51 do Buenos Byres, — do Cape, 122 do Donskoi, 100 do Greek, 50 do China, 50,000 lbs Western Texas, 10,000 do Eastern, 15,000 do burry Georgia, 1,000 bags combing pulled, 25 do lambs' do, 25 do super do, and 20 do X do, on private terms.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK.	WEEK.	WEEK.	WEEK.
	May 21.	May 9.	May 16.	May 23.
Flour, quarter sacks..	56,251	36,103	29,136	19,852
Wheat, centals.....	23,137	38,493	28,009	46,800
Barley, centals.....	12,783	10,156	14,353	12,580
Beans, sacks.....	483	1,018	1,712	1,240
Corn, centals.....	1,919	2,757	3,574	4,082
Oats, centals.....	3,775	5,091	6,164	2,611
Potatoes, sacks.....	13,180	12,745	12,957	13,750
Onions, sacks.....	1,105	353	563	253
Wool, bales.....	6,863	8,610	6,786	5,323
Hops, bales.....	9	5	20	22
Hay, bales.....	1,329	1,150	1,295	991

Bags—Dealers report their prices for Grain Bags ½c higher than one week ago. The talk is that the concentration of stock, of which we have given rumors before, has been accomplished and the bulk of the Bags outside of jobbers' hands are believed to be covered by English capitalists, with the evident design of making our farmers who have Bags yet to buy pay them an advanced price. It is impossible of course to tell what will be the result of this unholy combination against the progress of legitimate trade, but such combinations heretofore have shown weak links and this may also fail ere its object is accomplished. It is, however, impossible to state what measure of success may be gained by the ring, who are now believed to hold the stock.

Barley—Barley is still selling within the limits quoted last week. We note sales: 2,000 sacks choice San Joaquin Feed, \$1.60; 350 sacks Feed Chevalier, \$1.65, silver; 200 do good Feed, \$1.65, silver; 1,200 do fair Brewing, \$1.65, gold. Many holders of Brewing are asking \$1.80@1.90.

## Beans—Beans are unchanged.

Buckwheat—A lot of Buckwheat, which has been held for 10 weeks at \$1.75, was closed out this week by peremptory order for what it would bring, and the best bid was \$1.60, which was accepted. This represents the present state of the market, so far as we know.

Corn—Corn holds its price and is firm. Sales have been chiefly at \$1.90@1.95 per cbl.

Dairy Produce—Receipts of fresh Butter are ample for the demand, although there is not so large an apparent supply in the city as a week ago. Fancy brands now bring 32½c by the single box. Cheese is unchanged.

Eggs—The supply of imported Eggs is getting smaller and there is a firmer feeling on fresh Californias. The price as yet will bear perhaps but little change; 4¢ per dozen on the best, but the feeling is better.

Feed—The only change in Ground Feeds is a reduction of \$2.50 per ton on Middlings. The price is now \$35. Hay has last week's limit, \$21, as the extreme for the best Wheat. We note sales: 30 tons new Volunteer, \$15; 9 tons new Barley, badly cured, \$13; 12 do good Volunteer Wheat and Oat, \$17.50.

Fruit—There are some changes in Fruit prices, as may be seen in our tables. No novelties are reported this week. The *Call* makes the following note on the Orange trade: "Receipts of Los Angeles Oranges are rapidly falling off, and it is evident that the crop has been nearly all sent forward. The new Tahiti crop is arriving in large quantities, but owing to the considerable quantity of Californian still on the market, and the abundance of other domestic Fruit, the demand for it is not very active. The imports of Tahiti Oranges thus far this season have been 1,504,000 Oranges. Other cargoes are due and on the way."

Hops—We find nothing new in the local trade. Our prices represent the extreme for small lots for brewers' use, 20c, and the shippers' price, 15c, or thereabouts. Emmet Wells reports the New York market, for the week ending May 13th, as follows: Receipts considerably on the increase; the shipments to Europe are also heavier than last week by some 300 bales. Larger Brewers complain somewhat of the cool, unseasonable weather; the demand for beer, they say, is unusually light for the time of year. Good shipping Hops readily command 15 to 17 cts, and are scarce. The war in Europe and failures in the Hop trade in London have thus far produced no effect upon this market. Quotations—New York, choice to fancy, 15 to 17c; New Yorks, common to prime, 10 to 13c; Eastern, 10 to 13c; Wisconsin, 8 to 12c; Yearlings, 6 to 10c; Olds, all growths, 4 to 6c; Californians, nominal, 12 to 17c; Oregon, nominal, 12 to 17c.

Oats—Oats are selling at last week's prices. We note sales: 220 sacks fair Feed, \$2.10; 50 do choice Bay, \$2.25; 60 sacks choice Surprise, \$2.25 per cbl.

Onions—Old Onions are scarce and have advanced to \$3 for the best lots. New are now rather plentiful and are firm at \$1.50 per cbl.

Potatoes—Old Potatoes are weak and scarcely maintain last week's prices. The receipts are still very large. New Potatoes are a few points lower. Prices may be found in our table below.

Poultry and Game—Prices are without change. It has been a week of unusual monotony in this line.

Provisions—Trade is quiet and prices without material change.

Rye—Sales of 200 sacks, \$1.95, silver.

Vegetables—There are no novelties reported this week. Asparagus has advanced, and Cucumbers, Garlic, new Potatoes and Tomatoes have cheapened considerably. The common price to-day for all kinds of Tomatoes is 7c.

Wheat—Wheat sales are few. Shippers do not meet holders' views, although they advanced nearer in to-day's bids than yesterday. We hear of a lot of Shipping held at \$2.60 for which \$2.55 was bid to-day. This is about the condition of the trade. Our quotations are mainly nominal in default of sufficient transactions to warrant change. We note sales of 250 sacks fair, \$2.55; 700 do good Shipping, \$2.55; 1,000 do do, \$2.60; 4,000 cbls choice Milling at \$2.55; 1,000 cbls do at \$2.60, and 700 cbls good Shipping at \$2.55 per cbl.

Wool—The week's transactions are within the limit fixed a week ago; 27½c is the extreme for choice Northern although small fancy lots sometimes go beyond this. The receipts of Wool are now declining and probably the high of the season is past. The receipts thus far this year are 74,000 bales, against 64,000 last year. We have reported sales during the week of 500,000 lbs at 14½c.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., May 23.	
<b>BEANS.</b>	
Bayo, cbls.....	5 00 @ 5 25
Butter.....	2 00 @
Pea.....	3 25 @
Red.....	4 00 @
Pink.....	4 50 @ 60
Sm White.....	3 00 @
Lima.....	3 25 @
<b>BROOM CORN.</b>	
Common, lb.....	2 @ 2½
Choice.....	3 @ 4
<b>CHICKORY.</b>	
California.....	4 @ 4½
German.....	6½ @ 7
<b>COTTON.</b>	
Cotton, lb.....	15 @ 18
<b>DAIRY PRODUCE, ETC.</b>	
<b>BUTTER.</b>	
Cal. Fresh Roll, lb	25 @ 30
Point Reyes.....	30 @ 32½
Pickie Roll, Old.....	22½ @ 25
do New.....	22½ @
Firkin.....	27½ @
Western Reserve.....	16 @ 20
New York.....	20 @ 25
<b>CHEESE.</b>	
Cheese, Cal., lb.....	14 @ 16
Old.....	8 @ 12
Eastern.....	— @ —
N. Y. State.....	— @ —
Cal. fresh, doz.....	22 @ 23
Ducks.....	19 @ 20
Oregon.....	17 @ 18
Eastern.....	19 @ 20
<b>FEED.</b>	
Barley, con.....	25 @ —
Corn Meal.....	44 @ 46 50
Hay.....	10 @ 21 00
Middlings.....	35 @ 00
Oil Cake Meal.....	40 @ —
Straw, bale.....	75 @ —
<b>FLOUR.</b>	
Extra, bbl.....	8 50 @ 25
Superfine.....	6 50 @ 7 50
Graham.....	8 00 @ 8 50
<b>FRESH MEAT.</b>	
Beef, 1st quality, lb	6 @ 6½
Second.....	5 @ 6
Third.....	4 @ 5
Mutton.....	3 @ 4
Spring Lamb.....	6 @ 7
Pork, undressed.....	4½ @ 6
Dressed.....	7 @ 8
Veal.....	7 @ 8
Milk Calves.....	6 @ 8
<b>GRAIN, ETC.</b>	
Barley, feed, cbl.....	1 50 @ 60
Brewing.....	1 70 @ 1 75
Chevalier.....	1 70 @ 1 75
Buckwheat.....	1 60 @
Corn, White.....	1 90 @ 2 05
Yellow.....	1 90 @ 2 05
Small Round.....	2 00 @ 2 10
Oats.....	1 25 @ 2 20
Milling.....	2 25 @ 2 40
Rye.....	1 95 @
Wheat, shipping.....	2 60 @ 2 75
Milling.....	2 60 @ 2 75
<b>HIDES.</b>	
Hides dry.....	18 @ 18½
Wet salted.....	13 @ 15
<b>HONEY, ETC.</b>	
Beeswax, lb.....	25 @ 27½
Honey in comb.....	13 @ 13½
do No 2.....	10½ @ 11
Dark.....	8 @ 9
Strained.....	6 @ 8
<b>SEEDS.</b>	
Alfalfa, Cal.....	27½ @ 30
Canary.....	10 @ 12½
Clover, Red.....	25 @
White.....	50 @ 55
Cotton.....	6 @ 10
Flaxseed.....	34 @ —
Hemp.....	5 @ —
Italian Rye Grass.....	35 @ —
Perennial.....	10 @ 12
Millet.....	10 @ 12
Mustard, White.....	10 @ —
Brown.....	34 @ 4
Rape.....	3 @ 4
Ky. Blue Grass.....	30 @ —
2d quality.....	29 @ —
Swedish Grass.....	75 @ —
Vetchard.....	30 @ 35
Red Top.....	25 @ —
Hungarian.....	8 @ 12
Lawn.....	50 @ —
Mezquite.....	20 @ 25
Timothy.....	10 @ 10½
<b>TALLOW.</b>	
Crude, lb.....	6 @ 6½
Refined.....	6 @ 8
<b>WOOL, ETC.</b>	
<b>SPRING.</b>	
Short Free, dusty.....	13 @ 15
Good Southern.....	15 @ 18½
Choice Northern.....	22 @ 27½
Burly.....	12 @ 16
do Northern.....	18 @ 23

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., May 23, 1877.	
<b>FRUIT MARKET.</b>	
Apples, bx.....	2 00 @ 3 00
Apricots, bx.....	50 @ 75
Bananas, bch.....	2 00 @ 3 50
Blackberries.....	12½ @ 15
Cherries, pk, lb.....	12 @ 15
do, Red, lb.....	5 @ 12
Cocconuts, 100.....	5 00 @ 6 00
Currants, Chest.....	3 50 @ 5 00
Gooseberries.....	7 @ 10
Limes, Mex.....	8 00 @ 12 50
Cal.....	10 00 @ 15 00
Lemons, Cal M.....	15 00 @ 22 50
Sicily, bx.....	10 00 @ 12 00
Oranges, Mex.....	— @ —
M.....	— @ —
Tahiti.....	15 00 @ 20 00
Cal.....	15 00 @ 35 00
Pears, bx.....	1 00 @ 2 00
Pineapples, doz.....	6 00 @ 8 00
Raspberries.....	12 @ 25
Strawberries, ch.....	7 00 @ 12 00
<b>DRIED FRUIT.</b>	
Apples, lb.....	4½ @ 6
Apricots.....	10 @ 12½
Citron.....	28 @ 30
Figs, Black.....	5 @ 7
White.....	6 @ 8
Peaches.....	7 @ 10
<b>VEGETABLES.</b>	
Asparagus, bx.....	1 25 @ 1 75
Beets, cbl.....	60 @ —
Cabbage, 100 lbs.....	50 @ —
Carrots.....	75 @ 1 00
Cauliflower, doz.....	50 @ 60
Cucumbers, doz.....	50 @ 75
Garlic, New, lb.....	5 @ —
Peas, Sweet.....	1½ @ 2
Lettuce, doz.....	10 @ —
New Potatoes.....	1 @ 1½
Parsnips, lb.....	1 @ —
Rhubarb, lb.....	4 @ 4½
Squash, Marrow.....	5 @ —
fat, tn.....	— @ —
Summer, doz.....	4 @ —
String Beans.....	4 @ 8
Tomatoes, lb.....	7 @ —
do, L. Angeles.....	7 @ —
Turnips, cbl.....	5 @ —
White.....	1 00 @ —

## RETAIL GROCERIES, ETC.

WEDNESDAY M., May 23, 1877.	
Butter, California	35 @ 40
Choice, lb.....	35 @ 40
Cheese.....	18 @ 30
Eastern.....	25 @ 30
Lard, Cal.....	18 @
Eastern.....	20 @ 25
Flour, ex fam, bbl.....	60 @ 68
Corn Meal, lb.....	24 @ 3
Sugar, wh, crshd.....	12½ @ 13½
Light Brown.....	12 @ 13
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Adm't.....	15 @ 25
Soap, Cal.....	7 @ 10
Rice.....	8 @ 12½
Yeast Food, doz.....	1 50 @ 2 00
Can'd Oysters, doz.....	60 @ 65
Syrup, S F Gold'n.....	75 @ 80
Dried Apples, lb.....	10 @ 12
Fig's, Cal.....	12½ @ 14
Peaches.....	11 @ 15
Oil, Kerosene.....	35 @ 40
Wine, Old Port.....	35 @ 40
Cal. do.....	30 @ 35
Whisky, O K, Gal.....	3 50 @ 4 00
Frank Brandy.....	4 00 @ 4 50

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]  
SAN FRANCISCO, May 23, P



## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOW-ERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABBREVIATED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

THE DINGEE & CONARD CO'S  
BEAUTIFUL EVER-BLOOMING

## ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

## SPANISH CHUFA

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants. Spring Lists free. F. K. PUGH,  
Six, Bloomington Nursery, Illinois.

## Nurserymen.

SANTA BARBARA NURSERY,  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor

CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Ever-  
green Shrubbery.

HENRY SHAW,  
VENTURA, VENTURA COUNTY, CAL.,  
Wholesale Grower of  
ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street,  
San Francisco, has samples and will fill orders. Trees  
sacked and boxed so as to be safely transplanted at any  
season. Summer months the best for removal.

SQUILLS, Camellias, Pond Lilies, Begonias, Ferns,  
Dahlias and Roses, sent safely by mail  
at any time of the year. Send for new price list. Address,  
W. A. T. STRATTON,  
Petaluma, Cal.

## Agricultural Articles.

HILL'S PAT. HOG RINGER,  
RINGS AND TONGS  
OR HOLDER.

A full line of these salable goods at manufacturers' prices. Address,

JAMES E. GORDON,  
WHOLESALE HARDWARE,  
254 & 256 Market, and 8 & 10 Front Sts. S. F.

## NEW PATENT HARVEST SHARPENER.

This cut represents an new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or unlatching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, A, is regulated by a set screw so that in grinding, the exact level can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address,  
WESTER & CO.,  
17 New Montgomery St., San Francisco.

## PALMER BROS.

726, 728, 730, 732, 734 Market Street, San Francisco.

## OUR BOYS' AND MEN'S CUSTOM MADE CLOTHING

Are Elegant Fitting and Strong Made, and the Prices within the reach of everybody

New Styles in Ladies' Hats and French Millinery, New Shades.

PARASOLS FROM 25 cts. to \$5.00.

LADIES' GLOVES, TWO TO SIX BUTTON, 50 CTS. TO \$2.00

LADIES' UNDERWEAR, Cotton and Merino.

Ladies' Linen Dusters. Morocco Traveling Bags.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). JOHN LEWELLING, (TREASURER). W. L. OVERHISER.  
A. D. LOGAN, (VICE PRESIDENT). G. W. COLBY. A. T. HATCH.  
AMOS ADAMS, (SECRETARY). I. C. STEELE. O. HUBBELL.

W. W. GRAY.

THOS. FLINT

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## STATISTICIAN.

## MONTHLY.

Each issue of the Monthly contains matter revised to the day of publication, regarding Distances, Modes of Travel, Rates of Fare, and Telegraphic Tariff of the Pacific Coast; Postal Regulations, Rates of Domestic and Foreign Postage; List of Post Offices; Prices, Assessments and Dividends on Mining Stocks, and new matter pertaining to general information, and the questions of the times.

## RATES OF SUBSCRIPTION.

One Copy, one year ..... \$2 50  
One Copy, six months ..... 1 50  
Three Copies, one year ..... 6 00  
Single Copy ..... 25 cents.  
Annual for 1877 will be issued June 1st.

P. O. Box 2272.

L. P. McCARTY, Publisher, 423 Washington St., S. F.

## ANNUAL.

Each issue of the Annual contains all matter previously included in the Monthly, and presents information of a general and statistical nature in a convenient form for reference and revised to the day of publication. Accuracy in compiling, care in revising, system in arrangement, and freedom from prejudice in selecting, are faithfully observed in the compilation of this periodical, which is offered to the public as a reliable epitome of general information.

## RATES OF SUBSCRIPTION.

One Copy ..... \$4 00  
One Copy Annual, and Monthly one year ..... 6 00

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,  
HORTON & KENNEDY,  
Managers for California and Pacific Coast.  
ALSO BEST FEED MILLS FOR SALE.  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

## TO FRUIT MEN.

## LILLIES' FRUIT PITTEER,

Patented March 7th, 1876.



This machine pits all the different kinds of stoned fruits, (clinging-stones included,) both rapidly and well, and without waste, and with entire satisfaction to all who have used it.

It does the work without waste and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully.

For further particulars and terms, address

H. JONES, Sole Agent for California.

419 and 421 Sansome Street, S. F.

HEAD & SCHEMOITH'S  
STRAW-BURNING ENGINES

At the Vienna Exhibition of 1873, the Diplome of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwells Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

Best & Cheapest. Jenks' Portable Lawn Sprinkler, attached to water-head, is used to irrigate & ornament Lawns, Gardens, Flower or Strawberry Beds, etc. A patent non-clogging distributing nozzle is used on tube, & held firmly upright, or at any angle, by PATENT BUNDLE.

Order Circulars. Styles and Prices: "A" (No. 1 spray), \$3.50; "B" (all styles spray), \$5; "C" (large "B"), \$6. Weight, 5 lbs. Prepaid by mail to any part of U.S. for 75 cts. extra. Express and C.O.D. Order of W. L. WORTHINGTON CO., BOSTON, MASS. of Dealers, or GEO. E. JENKS, Patentee, Concord, N.H.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,905, 157,124, 157,503, 164,181, 165,061, 172,700, 173,491, 173,007, 180,351, 181,433, 183,399, 187,128, 187,172; re-issue, Nos. 7,136, 6,970, 6,902, 7,035, 7,036, 6,913, 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUFACTURING CO.,

Worcester, Mass.

L. L. ELLWOOD & CO., DeKalb, Ill.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## Fraud! Fraud!!

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

We can recommend the New York watch, of Springfield, Mass., as A 1.



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT.

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

## H. H. H. HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

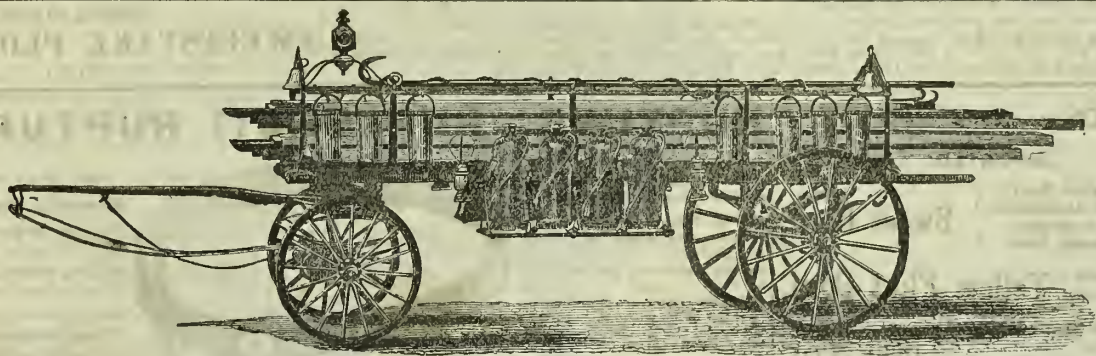
WILLIAMS & MOORE, Prop's,  
Stockton, Cal.



CALVERT'S CARBOLIC  
SHEEP WASH,  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

The BABCOCK.



The BABCOCK.

## Village Hook and Ladder Truck.

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

Address PARKE & LACY, 417 Market Street.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine. Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.

### LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

**ROWELL & CHESMAN**  
Advertising Agents,  
THIRD & CHESTNUT STS., ST. LOUIS, MO.  
Publish a look on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulation, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.

**E. GROTKASS,**  
COLIMA, MEXICO.  
DEALER IN REAL ESTATE.  
Information given free of charge. Lands procured for sale or for rents on easy terms.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

VER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

YOUR NAME PRINTED ON 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.

\$55 & \$77 a Week to Agents. \$10 Outfit Free.  
P. O. VICKERY, Augusta, Maine.

Get the best. Take the RURAL.

Farmers, write for your paper.



# THIS IS THE HORSE-POWER FOR STOCKMEN, RANCHMEN, ORCHARDS, and NURSERYMEN.

No Outlay for Repairs—A Small Horse Will Run a Large Pump With Ease.

## THE IMPROVED GILLIS HORSE-POWER

Is what the Stockmen of California, Nevada, Arizona, and the whole Pacific Coast have so long required to enable them to furnish a

### Cheap and Sure Method of Pumping Water

For their herds of cattle, horses and sheep during the hot summer months and dry seasons.

The great trouble with Horse-Powers has been, not only their high price, but too much machinery; too much gearing and breaking of cog-wheels, and getting out of repair when most needed, incurring a constant expense; so much so, that the Stockmen on our plains, distant from towns, where extras could be obtained and repairs made, have been deterred from buying the geared power, and have been obliged to pump water by hand, which is slow, tedious and expensive; or else purchase a wind-mill at a large outlay, and trust to "fickle winds" for motive power, which are very uncertain on this Coast, as the past season has demonstrated.



## THE IMPROVED GILLIS HORSE-POWER

Does away with all unnecessary machinery; giving in place a Power combining both Novelty of Construction, STRENGTH AND DURABILITY.

There is not any Gearing nor Cog-Wheels to break and get out of repair. The Iron Work is of the best material and workmanship; will last for years and not break, with fair usage. The Wood Work is strong and easily constructed; can be made complete and set up in running order by any farmer, whether a mechanic or not, by simply following the design as a guide. The cast center post should be bolted to a plank and set in the ground of sufficient depth to make it firm. It is not necessary that the track for the wheel should be perfectly level, as the journal box of center post is flexible and permits the wheel to work over an uneven surface without affecting the power of the pump.

### WILL GUARANTEE ITS WORKING AND GIVING SATISFACTION,

If set up according to cut and directions, and that the parties in ordering, shall give the size of pump to be used, depth of well to water, and height above the top of well or platform to which it is to be raised, as we manufacture three sizes of Powers, for Small, Medium and Large pumps, using a weight in the Traction Wheel to steady the motion on large, single-acting pumps. It is not required in using a double-acting or force pump.

Will furnish the Iron Work alone to parties wishing to make their own frame-work, and thereby save the freight on the timber.

## THE GILLIS HORSE-POWER

Is a New, Novel and Valuable Invention, possessing many important advantages over others yet introduced, and is unsurpassed for all ordinary purposes of raising water for Irrigation, Watering of Stock, and for House, Barn and General Use, and is the ONLY CHEAP HORSE-POWER that has proven a Complete Success. It has a crank motion with from 4 to 12 inches sweep, and will make from 40 to 50 strokes per minute.

We wish to call the special attention of Gardeners, Nurserymen, and those having large Orchards, to the Gillis Horse-Power for IRRIGATING PURPOSES as being superior to any other power on this Coast. Read this advertisement carefully, examine the cut of power minutely, and you will see its peculiar advantages which we claim over other Horse-Powers, and that it is much more durable, consequently much cheaper. Patent Issued April 10th, 1877.

THE LIGHT POWER is intended for small force and deep well pumps under three inch and suction; or shallow well pumps to four inch. MEDIUM POWER for force and deep well pumps to four inch, and shallow wells, or single suction pumps to six inch. HEAVY POWER for eight, nine and ten inch single suction pumps, and six and eight inch double.

It may be used for four inch pumps and upward in raising water 100 feet; over 100 feet it may be better to use a smaller pump and the MEDIUM POWER, which gives a quicker stroke. The Iron Work and Frame Complete, with the two connecting rods are furnished at the following prices; neither the pump, pipe nor tank are included:

#### RETAIL PRICE LIST.

Light Power, complete, at Factory	\$75 00
Medium Power, complete, at Factory	80 00
Heavy Power, complete, at Factory	85 00

For Iron Work alone will deduct from \$8.00 to \$10 from foregoing prices for light and heavy frames. The Frame shown in cut is intended for Light Power. For Medium or Heavy, we use posts 6x8 14 feet; walking beams, 4x10 and 4x12—14 feet; braces, 4x4 8 feet; and instead of one piece 4x8—14 feet for stringer, we use two pieces, 2x10—14 feet and run braces between same, fastening with bolts at each end.

## TESTIMONIALS.

For want of space we only append the following letters from among the many we have received:

OAK HOME, May 12th, 1876.  
SWEEPSTAKE PLOW CO., San Leandro, Cal.—GENTLEMEN:—In reply to your letter of inquiry respecting the Gillis Horse-Power, I would say that I am using the original Gillis Power, built by him at my place, and that it is running two six inch pumps for Garden and Orchard purposes, and that I am running a four inch lift pump 62 feet long, raising water 45 feet from the surface of the water to top of pump, into a tank 30 feet high from the ground. I consider it the best power I have ever used, or seen used for such purposes, and for irrigating in general, doing the same amount of work of other horse-powers of twice the cost. A small horse can run it, and it takes no more power to start it than it does to keep it in motion, while all geared powers require a steady, hard pull to start. This power starts easily, and no danger of breaking cogs or levers. There is no danger of its getting dry and cutting, if oiled once a day while in use. Yours respectfully, WM. L. OVERHISER.

RIO VISTA, July 31st, 1876.  
SWEEPSTAKE PLOW CO., San Leandro, Cal.—GENTS:—Your horse power came to hand ten days since. I found no trouble in putting it up, and, on trial, found that it forced the water up my hill 140 feet perpendicular, through a 300 feet one inch pipe, without any effort on the part of the horse; and think he could force a four or six inch column as well. The Improved Gillis Horse-Power is the best for pumping of any in use; and I cannot see any chance of its ever getting out of repair. Yours truly, A. B. ALSEP.

BAKERSFIELD, February 2d, 1877.  
SWEEPSTAKE PLOW CO., San Leandro Cal.—GENTS:—For cheapness, simplicity of construction, durability, and ability to perform its work, the Gillis Power is superior to any we have ever seen used. Respectfully yours, JEWETT & ANDERSON.

Address all Orders and Communications to the Manufacturers.

SWEEPSTAKE PLOW CO., Or, BAKER & HAMILTON,  
SAN LEANDRO, CAL. SAN FRANCISCO and SACRAMENTO.

## SEEDS.

## SEEDS.

### IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton

Yellow Flint Corn.

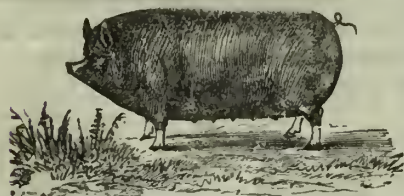
Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco



R. S. THOMPSON,

IMPORTER AND BREEDER OF

PURE BERKSHIRE SWINE,  
NAPA, CAL.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,  
Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

EGGS, \$5.00

Eggs Shipped to

Any part of the

Coast to Hatch Af-

ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

Take the paper that stands by your interests.

## RUPTURE! RUPTURE!! RUPTURE!!!

Use no more Metal Trusses! No more suffering from iron hoops, or steel springs! The patent

Magnetic Elastic Truss

is now superseding all others, being adopted everywhere by the leading physicians and surgeons all over the land. All cases of reducible Hernia are permanently relieved by it, without regard to the age of the patient, or the duration of the injury.

Experience shows that all tempered spring Trusses necessarily press upon and often disease parts of the body that before were in a perfectly healthy condition. Lumbago and other equally distressing ailments are not unfrequently the outgrowth of such pressure, and in view of this fact it becomes a matter of decided consequence to avoid like calamities, if possible.

Beware of worthless imitations! Our trusses are not left with Agents, or Druggists for sale, and notice is hereby given that all persons who infringe on this patent will be dealt with as the law provides. For the genuine article send direct to the

## MAGNETIC ELASTIC TRUSS COMPANY,

Illustrated Book and Price List Free.

609 Sacramento Street, San Francisco.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings,  
Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal

OUR FIELD AND HOUSEHOLD PEST POISON is a safe, sure and cheap destroyer of all insects that infest houses, fields and gardens—Bugs, Rats, Mice, House Flies and all vermin. Unlike Paris Green or Arsenic, it dissolves in water, and is applied by sprinkling or with syringe. Not injurious to plants. Safe to use. Put up in one-quarter pound boxes, free by mail for 30 cents. Circulars sent with testimonials.

Kearney Chemical Works,  
66 Courtlandt Street, New York.

FARMERS write for your paper.

## MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco.

HEADQUARTERS

FOR THE

PACIFIC COAST

OF THE

U. S. Camp Lounge

COMPANY.

C. H. MOSELEY, Agt., 415 Sansome Street, S. F.

25

FANCY MIXED CARDS, with name, 10 cents; 20

Elegant Mixed Scroll Cards, no name, 10 cents; 10

Comic Shadow or Comic Photo Cards, 10 cents,

post-paid J. B. HUSTED, Nassau, Rema. Co. N. Y.

WHEN so many poor watches

are being sold, it is not too much

for us to say that those who buy

the New York Watch Com-

pany's movements will be sure of

a good article at fair prices.

## R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote March 7th, 1877, that RENNIE'S PRIZE SWEET TURNIP yielded more than three times as much as the common seed. Price, per pound, (in American currency, pre-paid,) thirty cents. WM. RENNIE, Seedman, TORONTO, CANADA.

Dewey & Co., { 224 } Patent Ag'ts.  
{ Sansome St }

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.

B. W. CROWELL—Amador, Placer, Calaveras and Tuolumne counties.

G. W. MCGREW—United States.

A. C. KNOX—Plumas, Sierra, Lassen, Placer and Nevada counties.

C. N. WEST—Santa Cruz, Monterey and San Benito counties.

A. C. CHAMPION—Sonoma, Marin and Mendocino counties.

A. U. STRONG—Lake, Napa and Solano counties.

Ed. T. PLANK—Dakota Territory (Black Hills.)

JOSEPH DIMICK—Mendocino, Humboldt and Del Norte counties.

This paper is printed with Ink furnished by

Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia, & 59 Gold St., Cor. Ann, N. Y.





Volume XIII.]

SAN FRANCISCO, SATURDAY, JUNE 2, 1877.

[Number 22.]

### The Fish-Crow.

The fish-crow (*Corvus ossifragus*) is confined almost entirely to the maritime districts of the Southern States, where it abounds at all seasons. This species is gregarious; yet, as flocks of it sail high above the water, they appear to be paired off. These aerial excursions last for hours of a fine morning, after which the whole descend near the surface of the water, and fish for half an hour, when they alight on trees near the shore, and keep up their gabble, pluming themselves for hours. Again repairing to the water, they fish until sunset, and then fly off thirty or forty miles to roost on the loblolly pine, uttering scarcely a single note as they retreat; but on the approach of the day, the woods echo to their matin cries of gratulation; and they promptly return to the sea-shore noisy and happy, and are soon employed over the bays, rivers, wharves, salt-ponds and marshes, searching for any sort of garbage to appease the appetite. They do not scruple to rob other birds of their eggs and young; even watching the departure of the cormorant and white ibis from their nests, which they rob at the first opportunity. In the salt-marshes they catch and eat the small fiddler crab. They pursue with alacrity the smaller gulls and terns, which they compel to disgorge the small fish caught by them within sight of their oppressors. But the fleet wings of the gulls often enable them to escape. They are able to catch fish alive with considerable dexterity; but cannot feed upon the wing, and are obliged to retire to some tree, stake, or sand-bank. They also seek on the backs of cattle for the larvæ of the "hot fly," which frequently are geoculated in their skin. In the winter and spring, they are fond of many kinds of berries, such as the cassena, (*Ilex cassena*), holly, (*Ilex opaca*), and the tallow-tree, (*Stillingia sebifera*), a South Carolina tree of Chinese origin. As the mulberry ripens, they flock to it, and the fig-trees sometimes require to be guarded from their depredations. They are also fond of pears, and have been seen feeding on at least one species of smilax.

In Florida, Georgia, and the Carolinas, the fish-crow breeds on moderately-sized loblolly pines, (*Pinus taeda*), making its nest about thirty feet from the ground, and towards the extremities of the branches. In New Jersey, where they are frequently killed in the company of the larger crow, they are more careful, and place their nests in the interior of the deepest and most secluded swamps. The nest is smaller and more neatly finished than that of the common crow, and is composed of sticks, moss and grass, neatly finished or lined with fibrous roots. The eggs are from four to six, resembling those of the crow, but are smaller. It probably raises but one brood of young in a year.

The cry of this species, *ha, ha, hae* is like a faint mimicry of the common crow; at other times, it is more like an interrupted or half-stifled expression of pain. During the breeding season, the notes are much varied, and not disagreeable. The flight is strong and protracted, and at times very high. They also move gracefully on the ground, frequently expanding and contracting their wings. They may be approached and shot very easily; and when one is brought to the ground in this manner, its companions sail over it in numbers, and may be readily killed.

**THE STRAWBERRY GROWERS.**—The strawberry growers whose lands lie in the vicinity of Alviso are continuing their deliberations on the subject of marketing their fruit. A large meeting was held last Friday. Conferences were held with merchants from San Francisco. Their seem to be rival claims presented before the growers, one from the retail dealers that the berries be sold at the wharf to the highest bidder at a certain hour each day so that all interested can attend. Another proposition is from a group of the wholesale commission merchants who think they can do better for the growers by having the fruit confided solely to their handling. These rival propositions are still under the consideration of the growers, and future meetings will be held for discussion and action.

### Farmers' Meeting at Stockton.

There have been several meetings of farmers in different parts of the State, which have been characterized by a desperate determination to make the producer's influence felt in the removal of certain measures which seem both unjust to the farmer's interests, and also inimical to the constitution under which we live. The assessment of growing crops has called for vigorous protest, and the result of the exhibition of purpose and resolution which has been made

Messrs. S. V. Tredway, F. J. Woodward, Geo. H. Castle, T. E. Ketchum, S. Dunham and Dr. C. Grattan. A fund to defray the expenses of the committee was called for, and \$87.15 was secured. The committee is to pursue its investigations and report at a meeting to be held on Saturday of this week. Other points of the meeting we quote from the *Independent*, as follows: A motion was made by Judge Woodward to the effect that a committee be appointed to draft resolutions to be sent to the Supreme Judges, expressive of the sentiments of the meeting toward their decision in relation to the

### The Advance of Agriculture.

The advance of the farm must come from the farmers. Men of science can contribute invaluable aid in resolving many vexing problems which their habits of investigation and thought will give them power over; but the following up of these solutions, and the application of their teachings, must be accomplished by the farmers themselves. They must learn to investigate, to observe, and to draw correct conclusions from what they see, and soon every item of their practice will feel the improving and vivifying influence of new truth and fuller understanding. We receive, ever and anon, such direct evidence of the fact that farmers are rising to the needs of their industry, and arming themselves with the best means of study and investigation, that we become filled with bright anticipations of the elevated plane of progress upon which the industry will soon be moving. We have received, during the week, a letter from one of our readers, who is one of the best known dairy farmers of our State, which breathes such a noble spirit of true progress that we cannot resist the impulse to print it, to show all readers that the thirst and aspiration after truth are not alone the glory of philosophers and scientific men, but that men of the sternest and most successful practice are coming to stand abreast of them in the honorable race. The letter to which we refer is a personal one, addressed to the editor, but we are sure the writer will pardon the printing of an extract, for the purpose of illustrating the positions which we have assumed. He writes:

"Like yourself, I feel an abiding interest in agricultural improvement, and the elevation of the agriculturist. If by careful study and the diligent use of the microscope I can gain one item of useful knowledge of general application I shall feel well paid for the effort. "Since I saw you I have been as far south as Soledad, and from there via San Jose to Martinez. The trip afforded a good opportunity for observation. Nature is a great study; its material forms yield so readily to intellectual power. It would be only a repetition of your own observations to tell what I saw; but what I heard will, I trust, encourage you in the noble work of educating the people through the Press. From a free interchange of thought with people along the entire route I can assure you that men and women are waking up to the necessity of a more thorough culture of the soil, and honesty in dealing with it. Everywhere the farmers are inclined to listen to the suggestions of science. The effects of careless ignorance are so apparent this season as to challenge the attention of all. To see a field of fine grain in the midst of failures, resulting from difference in culture alone, compels reflection. I have seen such fields in different localities, and have listened to the comments of farmers. They are thinking about it, and will no doubt gain wisdom by the experience of this dry season."

This is indeed encouraging to all who believe and labor for agricultural advancement. A thousand farmers in this State believing and acting as the writer of the above quotation believes and acts, would put the agricultural industry in advance of all the industries in those characteristics which are the key to improved practice and widened successes.

**A FRENCH PROPOSITION AGAINST THE PHYLLOXERA.**—If propositions were insecticides the phylloxera would have died long ago. The following is the latest French theory of destruction: There is nothing to record in the way of a remedy having been found for the phylloxera; pamphlets continue to be written, and the authors to fight over the priority of remedies whose efficacy has yet to be demonstrated. American stocks continue to have ardent admirers, and a M. Quercy brochures the idea of resorting to grafting on the wild vines, clematis, honey-suckle, etc. According to custom, M. Fourchon publishes his annual statement, that his vineyard has totally escaped the attacks of the bugs, while his neighbors are next to ruined by their devastations. His plan is autumn floodings and spring manurings; he invites the incredulous to come and visit him.



THE FISH-CROW.

and will be made, will, we doubt not, be productive of good. The Stockton meeting adopted no definite form of expression or of action; indeed, the best thing to do, under the circumstances, does not appear at first thought. The meeting was assured by the county assessor that he would proceed with the assessment of growing crops as personal property, according to the instructions given him, and a committee informed that a lawyer in whom they had confidence, assured them that the assessment of such character was a wrong classification of property. The meeting appointed a committee to take such measures as were thought necessary to protect the interest of the farmers, as follows:

exemption of mortgages and solvent debts from taxation. He considered such exemption as practically an injustice and a hardship, and believed it a measure designed to work detrimentally to the interests of the farmers and in favor of capitalists. The motion was carried, and Messrs. Woodward, Kerrick and R. C. Sargent were appointed the committee to draft the resolutions.

On motion of General Ketchum, a committee of three, consisting of Messrs. Ketchum, H. E. Wright and J. Smythe, were appointed to draft resolutions expressing the sense of the meeting relative to malfeasance of public officers and the necessity of proper punishment of public officials found guilty of such malfeasance.



## CORRESPONDENCE.

### Honorary Names in Scientific Nomenclature.

EDITORS PRESS:—A few weeks ago an article appeared in your columns by E. C. Parker, of Lake county, criticising my action in naming a new flower—*Gilia Parryæ*—"to honor a noble lady, who has done eminent service for botany," etc.

As the criticism is couched in respectful language, and, moreover, as it contains a protest quite often heard, to the use of honorary names in science, I propose to discuss the subject a little and explain the propriety of admitting a few such names to the records of science in accordance with the practice of the masters in each, to the annoyance, it appears, of a few persons, who have evidently not given the subject much thought.

The plea for descriptive names is an old one, and many a scientist has kept strictly to the practice of giving them only, and by this very method has introduced confusion of the worst character into our nomenclature.

Let us look first to the origin of science and of scientific names. "Science is knowledge systematically arranged, so as to be conveniently taught, easily learned and readily applied."

Art is this knowledge applied to use. Coming down the steps of time, a master-mind arises one after another, seizes the materials at hand, arranges, names, publishes his book and departs, leaving his impress upon the science more or less indelible, according to the strength of his mind or the admiration of his followers. When all the known objects of a particular science or branch of a science are thus collected and compared, no difficulty is found in distinguishing each from each, and very appropriate names are generally given them. As research continues, however, and more genera and species are added, many of the established names are found no longer distinctive, others are vastly more applicable to the new forms, etc.

Again, descriptive names sometimes prove indefinite afterward, because of the accumulation of material, showing that the first name was given to an aberrant form or variety, totally different from the typical plant or animal.

Still again, the early scientists, working with inferior or no instruments, made continual errors, both of observation and interpretation, hence their names are now mainly inappropriate or misleading. With every re-organization of a science, there comes an attempt to correct these manifold errors, followed in turn by confusion and contest, measured by the amount of re-naming done and the weight of the new authority. We can never hope to have our scientific names crystallized into a nomenclature as permanent as the conglomerate rock until research has revealed every form of plant that grows and every kind of animal that lives on the earth.

One of the first things we teach our pupils in science is the appropriateness and beauty of scientific names. We expatiate upon them with great pleasure and generally make the theme attractive, but no sooner does our tyro get well into the meshes of a science, than he finds one after another of its nice distinctions failing utterly, and that to follow the literal meanings would often totally mislead. Thus we learn to regard technical names, especially those coming down from the old masters, as distinctive only, not necessarily descriptive. Names denoting locality are often quite as unfortunate as descriptive ones. I could fill the *RURAL* with proofs that descriptive names as often fail in time to distinguish objects, as they continue to distinguish them. The name becomes merely a meaningless term, retained out of reverence for the author or to show the early conception of the object.

Linnaeus and Cuvier—worthies held in reverence by every true lover of nature—were the pioneers of modern research, and no better proof of their ability is needed than the statement that they studied and gave scientific names to every plant and animal known at their day, many of which names are retained to the present and, no doubt, a few will be until the end of time; but, as a matter of history, nine-tenths of their names have been quietly dropped or boldly overruled by subsequent scientists.

The thing aimed at in nomenclature is *distinctiveness*; the giving of such a name as will forever distinguish the object from every other in creation. In the naming of large families the distinctions become less prominent and certain, while upon the accession of a large number of species, the whole family has again and again to be revised. Each scientist aims as far as possible to give descriptive names, but each learns from his predecessors how meaningless most of them become; so he casts about him for other names that will stick he hopes, through time.

And right here comes in one of the most beautiful and touching characteristics of the true scientist—the recognition of the labors and merits of others. Full well he knows the toil and exposure of the explorer, the study and

pains-taking of the discoverer; and also how illy both are requited with this world's goods; so he is ever ready to give the poor meed of honor to whom honor is due. With an object before him, the result of severe exploration or research how natural that the discoverer's name should be indelibly associated with the new object; and with what love and loyalty he coins it into a technical distinction for the object given by unmeasured toil to science and the world.

Generic names are Latin nouns arbitrarily formed often from some medicinal or other virtue, real or supposed, or some resemblance to other objects, or they are derived from a country, or they are old classic words of no meaning whatever; and lastly they are sometimes coined from the name of a distinguished scientist or patron of science. Specific names are Latin adjectives, singular in number and agreeing in gender with the name of their genus. They are mostly founded upon distinctive characters, resemblances, uses, etc., and quite often are commemorative names. Specific honorary names are of two kinds: possessive and dedicative. If the person honored is the discoverer, his or her name is used in the form of the Latin genitive (or possessive case); as, *Viola Nuttallii*, *Cheilanthes Cooperæ*. If the name is conferred as a recognition of merit, it is used as an adjective ending in *nus*, *na* or *num*; as *Ceanothus Veitchianus*, *Cnicus Mariana*, and *Lilium Bloomerianum*, when the object is said to be dedicated.

The number of commemorative names of necessity will always be few compared with descriptive ones, but as every science has a small number it is quite certain that each will always retain a few in accordance with the law of human kindness, which, it is hoped, will always meet return.

What warm heart does not cheerfully acquiesce in the grateful affection of eminent scientists who have dedicated certain small genera of plants or animals to Linnaeus, Cuvier, Jussieu, De Candolle, Levoisier, Maximowicz, Agassiz, Adanson, Audubon, Berlandier, Bentham, Brown, Bigelow, Baykin, Brewer, Cady, Cary, Chapman, Clayton, Chamisso, Clinton, Dahl, Davy, Dana, Descartes, Engelman, Eaton, Eschscholtz, Douglas, Faraday, Franklin, Fuller, Gay-Lussac, Gray, Hooker, Hudson, James, Jefferson, Kuhn, Lamark, Lavater, Le Conte, Lindley, Ludwig, Marsh, Marshall, Menzies, Michaux, Mitchell, Nuttall, Olney, Packard, Pursh, Richardson, Riley, Sprengel, Sullivan, Silliman, Thurber, Torrey, Tonnerefort, Tyndall, Wood, Watson, Wilson, Willdenow, Whitney, Wright, Parry, Palmer; and our Californians, Bolander, Kellogg, Bloomer, Davidson, Harford, Harkness, and Edwards.

Please permit a few words in regard to my practice of suggesting names and how I commenced it. In September, of 1873, I was suddenly informed that a plant had been named for me by Dr. Asa Gray, of Harvard University, at the instance of Prof. Bolander, who had recently been botanizing Sierra valley with me. I was thus ushered into the large and interesting family of *Astragalus*. I found myself in good company. There was Pursh, Gray, Hooker, Geyer, Coulter, Menzies, Douglas, Horn, Anderson, Morton, Parry, Whitney and Bolander.

But other good people to my knowledge were outside; I at once determined to try to get them within. I traveled extensively, collected largely and noted carefully. With every package of plants sent to Dr. Gray went up petitions of this import: "Should such and such a plant prove new, and it does not name itself by obvious characters (which is always best), please dedicate it to so and so, for the following reasons," etc.

My petitions have often been granted, and with great joy I have celebrated the admission, one after another, into the family of *Astragalus* alone, Mrs. Pulsifer-Ames, Dr. D. G. Webber, Prof. E. L. Case and Mrs. R. M. Austin; and, did your readers know these parties, I don't think one would protest.

Now, Dr. Gray, the generous soul, who confers all these honors, has been a writer of books for 30 years. He is the leading botanist of America, and stands even with Dr. Hooker, of England, as authority in Europe. He is not only the best authority in botany, but in zoology as well. Almost every page of "Webster's Unabridged" bears his name as authority for scientific terms. In view of these facts, I submit that the deliberate acts of one so eminent and of such universal capacity, are far above criticism, in any particular, by common minds; and I rejoice that his greatness is so admirably illustrated by his goodness. With what charming beauty stands out his generous character portrayed against the dark background of selfish money-getters, city plunderers and corporation despots, so amply filling the picture of everyday life in this naughty world!

I am astonished and almost overwhelmed by the latest kindness of Dr. Gray in conferring upon me the crowning honor of a new genus.

I beg the reader's pardon for the personal mention in what follows, but the sentences so finely illustrate the animus of good Dr. Gray and his enthusiastic manner of conferring honors, that I cannot forbear offering them for record in your columns.

During the past winter, while studying natural history at Webber lake (where also I celebrated, with bon-fires for three months, the victory of *Gilia Parryæ*), a certain little plant found the May before, on the Mohave river, along with *Gilia Parryæ* and other new things, attracted frequent examination, and every time left me more and more puzzled to determine where it belonged in our new botany of Cali-

fornia. At last I took courage to describe it briefly and send my only remaining specimen to Dr. Gray, to whom I had sent a plant at the time of collecting, but who, for some reason, had omitted to report.

As afterward appeared, at the same time my letter was on its way to Dr. G. asking for a name, a letter from him was on its way to Dr. Parry, at Davenport, Iowa, stating that he had just came upon a mislaid plant "that was received May 16th, 1866, from our worthy Lemmon," and which "proves to be not a *Colexia*, as at first supposed, but a neat, new genus," etc. "And now Lemmon's devotion to Mrs. Parry," (alluding to *Gilia Parryæ*), "is rewarded. I mean to rejoice the coxcomb of his sensitive heart, and do a just deed by naming this humble but interesting plant, *Lemmonia Californica*! I take the specific name," (*Californica*,) he adds, "in order to send Lemmon's name down to posterity along with that of his adopted State, in which the most of his arduous labor for botany has been performed. Please forward this letter to him," he concludes, "with my continued regards and a rousing cheer for *Lemmonia Californica*! Hurrah! Yours, ever, A. Gray." J. G. LEMMON.

Sierra Valley, May 18th, 1877.

### Food Plants—No. 2.

EDITORS PRESS:—The edible roots have filled an important place among foods. They are deficient in albuminous substances, but they are rich in starch, and so have often become the chief food of whole nations. Root crops play an important part in every system of rotation, and are raised to the greatest extent in those countries which are most highly cultivated, so that a glance at their history will not be unimportant.

The potato (*Solanum tuberosum*) was already cultivated in the Andes and along the Pacific coast of South America when the Spanish began their rapid career of conquest in the New World. The soldiers of Pizarro learned to like the strange tuber during their sojourn in the Inca capital, and the potato was carried by them to Panama, and thence taken to Mexico. In 1586 the potato was carried to England, and its culture soon extended over Europe. In some cases, notably in Ireland, it became the too exclusive food of the people, yet, on the whole, it has proved a vast boon to the toiling millions. The potato is now found growing wild in Chili, along the seashore, and has rather tasteless tubers about an inch through, at the best. We have a shrubby *solanum*, very common in rocky places, which on rare occasions will produce a few insignificant tubers. Other varieties are known whose shoots sometimes thicken into tubers.

South and Central America claim the sweet potato (*Convolvulus batatas*), which has been cultivated by the natives since, time immemorial. Columbus carried it to Spain among other products of the fair islands he had found. It became a favorite with the Spanish and Portuguese, and they seem to have distributed it over the East Indies. Since the Chinese have a name for the plant, some writers have been led to imagine that it is of Asiatic origin, but this seems improbable because the *convolvuli* are chiefly American, and the weight of evidence points to an origin in the tropical parts of America.

The yam (*Dioscorea alata*) has its common name from a negro word meaning to eat. Although its flavor is poor it abounds in starch, and hence has extended from island to island and from coast to coast, as far as its culture was possible. Farther India and Malaysia seem to have had it first, and Africa next, from whence it was brought to South America. The yam is cultivated to some extent in our Southern States, but the Chinese variety (*D. batatas*) is preferred.

One of the most useful tubers is the mandioc or cassava (*Jatropha manihot*) of tropical America. Abundant starch is found in the rhizome, or underground part of the stem. A peculiarity of this plant is that it contains a poisonous sap, which must be pressed out by mechanical means or driven off by heat. The starch thus obtained is granulated to form the tapioca of commerce. The mandioc belongs to the *Euphorbias*, to which order also belongs the croton, which yields croton oil, the castor bean, the valuable boxwood and the deadly manchineel tree of the West Indies. More than forty varieties of the mandioc are known in Brazil, some of which are without the poisonous juice. It will not grow in the temperate zones.

The Jerusalem artichoke (*Helianthus tuberosum*) is a native of North America, probably from the region of the Great Lakes, and was taken to Europe by the French explorers, who found it in use among the Indians. The name Jerusalem is a corruption of the Italian name for sunflower, *girasola*.

The small tubers of several species of *Ocalis* are cultivated in Peru and Mexico. One variety is found on the Falkland islands. There also grows on the higher Andes a curious plant bearing small tubers on the ends of creeping stems, and known as the *Ulluco*. None of those minor plants possess any great importance as articles of food.

Of much more interest are two leguminous plants, the turnip-bean found in the East Indies, and the potato-bean, found in the West Indies. The roots are large, and very catabolic, forming a favorite food among the people. I

may observe that several species of lupins, in particular *L. littoralis*, have lumpy roots abounding in starch, and are eagerly sought after by the various Digger tribes. They also use the *Brodeas* and several *Alliums*.

Leaving the plants with tuberous roots, we come to a class of roots which are rendered peculiarly useful by the presence of sugar. The Swedish turnip (*Brassica campestris*) and our white turnip (*B. rapa*) are descended from a wild turnip found in Russia, Siberia, and Scandinavia. We may give the Celts and Germans credit for its improvement. The acid principle which most of the *Cruciferae* have is here dispersed by the presence of saccharine and mucilaginous matter, and the turnip crop has become a vast interest in all suitable climates. It is a main dependence of the English farmer.

The radish (*Raphanus sativus*) is a native of China, from whence some improved winter varieties have been obtained in later years. In Japan a curious variety, *R. candatus*, is found, bearing immense twisted seed-pods, which are supposed to be edible, but do not appeal strongly to the Anglo-Saxon taste.

The common beet (*Beta vulgaris*) grows wild on the Canary islands, and along the shores of Greece. It shows a great tendency to sport, the latest variety having colored leaves. It was cultivated by the Greeks, for a Grecian writer says that his rival's mother was a market-woman, and sold mangolds. Charlemagne introduced it into France. CHAS. H. SHINN, Niles, Cal.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Care and Management of Ducks.

EDITORS PRESS:—In presenting this article to the readers of the PRESS, I shall base my statements mainly on personal experience, and although we shall be obliged to quote from other sources, we shall, in every instance, seek first-class authority.

There are several varieties of ducks, the most popular being Rouen, Pekin, Aylesbury, Cayuga and Muscovy. Each of these have their respective admirers and their certain qualifications.

The Rouen ducks have always ranked first in size, and not until the recent importations of the Pekins has there been any discussion on this subject. There are some who now breed the latter, who claim them to be larger, and as many, if not more, that are in favor of the former. My experience and acquaintance with both varieties, leads me to cast one ballot for the Rouens. J. Y. Becknell, Esq., of New York, one of the largest poultry breeders in the United States, and one who makes ducks a specialty, reports that in his yards the Rouens stand foremost in size. He also states that at the many different poultry shows, where he has acted in the capacity of judge, that the Pekins fell below the Rouens in almost every instance, and where they had received the same chances, it was invariably the case. The Pekins, when placed beside the Rouens, appear much larger, but, when put on the scales and weighed, fall below them.

Ducks should be raised in close proximity to water, and from a pond, slough or river they will obtain the greater part of their food. Rouens and Pekins can be successfully reared with simply enough water for dipping their heads and drinking, but owing to the white plumage of the latter, they show the dirt more distinctly, and thus an abundance of water is necessary if you wish them to present a clean appearance.

They lay their eggs early in the morning, and, as they will drop them in most any place, should be penned at night, and not allowed their freedom till about 8 o'clock in the morning. Ducks are very regular layers, and seldom miss a day from the time they commence till they show a desire to sit. I have had Rouen ducks lay 110 eggs in 119 days, and not until then wish to sit.

In my next I shall give a few hints as to the setting of eggs and care of young ducks.

I. P. LORN.

Reno, Nev., May 15th, 1877.

### Fly Trap, Chicken "Mother" and Items.

EDITORS PRESS:—Whatever other crop is likely to be short this inauspicious season, there is no likelihood of a dearth of flies. In the first place we had not enough cold weather last winter to kill off last year's crop; and the number of rotting carcasses that already are sacrificed to Baalzebub (the god of flies) ensures an enormous

#### Fly Harvest.

The trap I am about to recommend is cheap, simple and efficient. Take a common glass tumbler and fill it two-thirds full of soapy water, cover with a piece of bread half an inch thick, having a hole half an inch in diameter through the center, having previously well smeared the underside with honey or syrup. In any fly-infested kitchen the glass will be well-nigh filled with drowned flies in less than 24 hours, and half a dozen traps running, net



quite a supply of chicken feed for a dry season. I learned this at Mr. G. W. Gordon's place in the Corral de Tierra.

From a near neighbor of his, Mr. W. Harris, I received another lesson that may be useful to some of your readers to whom it is new. To raise chickens without a hen make a box of 5x2 feet and 10 inches in height, cover four feet of the top with lath, leaving one inch space between each; take a small box 2x1 feet and six inches high, knock out top if it has one, and one side, then tack a number of strips of old woolen rag and tear them to the bottom, inside of this small box, so that when it is turned bottom upwards, inside the large box they will hang down like rows of fringe to within an inch of the bottom.

Take your chickens away from the hen when they are 48 hours old and put them under the rag-mother (inverted in the big box so that the strips of rag are pendent) at night. They will remain there quite happily, and come out to be fed under the laths in the morning, brisk and hungry. A hundred can be raised this way about as easily as a dozen could be with a hen, and with as little loss. Those of us in this neighborhood who have tried it are much pleased with our success. Time, trouble and food are economized.

#### Yield of Butter.

Yon inserted a record of my cows from the Salinas Index, in a late issue. It read rather small after the record I sent you last year. I was feeding some rather poor cut barley at the time, and had the cows in corrals. Since then I've turned them into a barley field that was too patchy to cut for hay, and I am now making 12 pounds daily from six cows and three heifers, which, for a dry year, is not amiss. One of the heifers I brought in the end of March from an outside range where she was almost starving.

This is being a most peculiar season; about four and a half inches of rain has been our total since May, 1876. The benefits of rotation of crops are most apparent in such a year as this. On land cultivated to green crops last season, crops this season are doing, or have done, well. I find that where I had squashes growing last season and am repeating the crop this season the moistures meet, but where wheat grew last season I can find dry dirt about 24 inches below the surface.

Thanks to the cool weather and frequent sprinklings of rain we are now getting, my squashes and mangels look well on both classes of land; but had the usual hot days of May come on us, the chances for a crop on last year's wheat land would have been slim.

Fruit trees seem to be suffering much from the drouth, even on well cultivated land. Peach and plum trees are not yet in bloom, that in ordinary seasons would have the fruit set ere this.

Barley sown on land cultivated to squashes or corn last year, without any plowing, has given fair crops.

Of course the drouth pinches us all more or less, but by using a little extra foresight, and making the most of things, many farmers in this valley will have a not unprosperous season.

E. BERWICK.

Carmel Valley, May 23d.

## THE SWINE YARD.

### Foxtail and Pigs.

There is a variety of grass known by farmers generally as foxtail. It can be found on most all kinds of soil and in most all seasons. It comes very early in the season, and mixes itself in with most all other kinds of grass. It crowds out the clovers and other cultivated grasses, and frequently becomes so thick in alfalfa fields as to speedily bind the surface of the soil, and finally necessitate a replotting and sowing. While young it is very good feed for most kinds of stock, but if allowed to go to seed the head is of such character that it becomes a great nuisance. The seed pods or husks are bearded and very brittle, and break up and stick in the mouth, eyes and ears of animals, and frequently give them great annoyance. There is no kind of stock to which the foxtail is more annoying than to swine, and especially to young pigs. It gets into their ears and eyes, and renders them deaf and blind, and frequently kills them. It also chokes in parts of their mouths and throats, and sticks them to death.

If your shoats begin to have sore eyes and run at the nose, and have the snuffles, or lop their heads on one side and shake their heads, be on the lookout for the foxtail, and attend to them at once, or you will very likely lose them. Catch the little fellows at once, and examine their eyes and ears, and if the chaff or beards of the foxtail are to be found in either, pull it out, or you will surely lose them. They will shake their heads and rub their eyes, and make all kinds of exertions to get rid of it, but they seldom succeed without assistance. If in the eye or eyes the beard generally can be seen sticking out of the corner next the nose, but sometimes it has buried itself in the ball of the eye, and caused blood to flow. In looking for it, turn the eyelids, and when discovered, pull it out with the thumb and finger or a small pair of tweezers. If in the ear, it may be only in the hair inside the ear, and then it can be pulled out easily; but if it has penetrated further, tweezers may be used. In either case the pig seems to suffer very severely, and sometimes becomes almost frantic or crazy, and appears

like one with the blind staggers. After extracting the beard and husk from the eye, it is a good plan to put a little alum water in the eye to make it run and clear it of any matter that may have collected and to heal the wounds. There is nothing that will take the flesh off a pig sooner or make his coat look rougher than to be thus afflicted, and there is nothing that will kill a lot of pigs quicker if not promptly attended to. Pigs from three to four months old seem most subject to this trouble. In the Western States—the great hog field of this country—we have no doubt they would call such affliction hog cholera, as they call all the ailments of the swine kind by that name. It will seem to produce all other troubles if allowed to run unchecked. Those who are raising pigs would do well to see that all the foxtail is cut close to the ground before it goes to seed.—Record-Union.

## SHEEP AND WOOL.

### Public Shearing in Colorado.

The Colorado Farmer gives an account of an affair which will possess some interest to our shepherds. It says: "The first public shearing of sheep occurred on the 24th and 26th of April, at the ranches of Mr. Ivory Phillips, near Bijon Basin, El Paso county, and Willard brothers, on Running creek. A number of invitations to attend the shearing were extended to the sheep men of the State, but owing to the very stormy weather but a few could get there, nevertheless the sheep were shorn as per programme and below will be found the results. Mr. Phillips' rams were brought from Vermont last season and were two years old, and had about one years growth of wool on them. They were in fair condition and taken altogether were a good lot of rams.

Those owned by Willard Bros. were rams they had used for some time or bred by themselves with the exception of the ram "Kiowa," which was bought last fall of Samuel Archer. This lot was larger and probably in better flesh than Mr. Phillips' sheep. A close examination of the list will show that they were of extra size, and those who think Merino sheep are of no account for mutton will be surprised at the "heavy weights."

"Kiowa" sheared a remarkable fleece and if he lives we will look anxiously for next year's fleece. If he improves as his owners predict, he will be the heaviest shearing sheep on record.

Our readers can see the percentage of wool to weight of carcass in the footing up of each lot.

These gentlemen deserve great credit for inaugurating these shearings; it will not be long until Colorado will have much better sheep than she now has if this is kept up. And next year we hope to see graded Mexican sheep added to the list, and instead of only two enterprising shepherds contending in this friendly strife we hope to see scores. And even at this early day would suggest that at the meeting of the wool growers this fall steps be taken to make arrangements for an annual shearing, and arrange a programme of prizes, the place and time.

Col. Phillips' rams shear the following fleeces. The percentage is a trifle over 19 per cent., which is very good.

	Weight.	Age.	Carcass.
Fancy.....	18	2	98
Colorado.....	17 1/2	2	91
Rich.....	17 1/2	2	118
Merrick No. 2.....	17	2	93
Big Sandy.....	20 1/2	2	90
(No Name).....	20 1/2	2	94
Yottingham.....	18 1/2	3	90
Bingham.....	17 1/2	2	97
Merrick No. 1.....	16	2	65
Compact.....	16	2	96

Average fleece, 17 1/2 lbs.

Average carcass, 93 1-5 lbs.

The Willard Bros. rams shear the following weights. It will be seen that a number of these rams were aged and had passed their days of heavy fleeces; taking this into consideration the fleeces are remarkable for unhusked sheep. The ram "Kiowa," if a good breeder will do these gentlemen much good, and enable these gentlemen to breed their own rams as they own about 150 Merino ewes. The percentage of wool to weight of carcass is a trifle over 17 per cent.

	Age.	Fleece.	Carcass.
Kiowa.....	3	32 1/2	122
Lofly.....	6	24 1/2	142
Captain.....	3	23 1/2	118
Reliance.....	3	21 1/2	131
Michigan.....	6	21	130
Homs.....	6	21	156
King Wm 2.....	2	20 1/2	113
Pr. Bismarck, No. 2.....	2	20 1/2	107
Charlie.....	5	20	135
Defiance.....	3	18 1/2	143

Average weight of fleece, 22 1/2 lbs.

Average weight of carcass, 129 7-10 lbs.

No. of ozs. of wool to the lb., 2 7-10.

HORSE SHOEING.—Travelers in Europe describe two different ways of shoeing horses in Turkey and Russia, which may seem very awkward compared with the simple method of American smiths. In Turkey and Serbia the horse's head is held by one man, another holds the leg on his arms, while the third operates on the foot. In Russia the horse is placed in a square cage made of rough planks of wood, and is strapped around the body with wide leather straps attached to cross-bars of the framework; his head is also tied safely; the foot is fixed to a stake in the ground and held by an assistant while the smith places the shoe on.

## HORTICULTURE.

### Olive Trees in Asia Minor.

W. M. Thompson gives the following information of the olive in his "The Land and the Book," Vol. I., page 69. He spent 25 years in Palestine and Syria. His observations on this tree may be instructive to us in California. He says:

This tree does not flourish in Syria more than 3,000 feet above the sea, and in the interior not so high. The noble grove, spreading like a silver sea along the base of the hills, and climbing their ascending terraces, is perfectly charming; and it speaks of peace and plenty, food and gladness. It delights and flourishes best in a soil of chalky marl, abounding in flint, overlaid with sand, through which it insinuates its roots into the cliffs of the rocks and crevices of this flinty marl and draws its richest stores of oil. If the overlying mold is so deep that its roots cannot reach the rock beneath, I am told that the tree languishes, and its berries are small and sapless.

In its wild state it bears but few berries and these small and destitute of oil. There is a tendency to degenerate, and it is an improvement to graft even a good tree with one that is better. It is the most prodigal of all fruit-bearing trees in flowers, literally bending under the load of them. But then, not one in a hundred comes to maturity. The tree casts them off by millions, as if they were of no more value than flakes of snow, which they closely resemble.

The tree is of slow growth, and the husbandman must have long patience. Except under circumstances peculiarly favorable, it bears no berries until the seventh year, nor is the crop worth much until the tree is 10 or 15 years old; but then, the "labor of the olive" is extremely profitable, and it will continue to yield its fruit to extreme old age. So long as there is a fragment remaining, though externally the tree looks dry as a post, yet does it continue to yield its load of oily berries, and for 20 generations the owners gather fruit from the faithful patriarch.

This tree requires but little care or labor of any kind, and, if long neglected will revive again if the ground is dug or plowed, and begin afresh to yield as before. I saw the desolate hills above Antioch, covered with these groves, although no one had paid attention to them for half a century.

Like other trees it yields only every other year. Even with this deduction it is the most valuable species of property in the country. Large trees, in a good season, will yield from 10 to 15 gallons of oil.

The value of this tree is enhanced by the fact that its fruit is indispensable for the comfort and even existence of the mass of the community. The berry pickled, forms the general relish to the farmer's dry bread. He goes forth to his work in the field at early dawn, or sets out on a journey with no other provision than olives wrapped up in a quantity of his paper-like loaves, and with this he is contented.

Then almost every kind of dish is cooked in oil, and without it the good wife is utterly confounded; and when the oil fails, the lamp in the dwelling of the poor expires.

Early in autumn the berries begin to drop themselves, or are shaken off by the wind. When ready a proclamation is made by the Governor that all who have trees go out and pick what has fallen. Previous to this they are guarded by watchmen of the town, not even the owners are allowed to gather olives in the grove. This proclamation is repeated once or twice according to the season.

In November comes the general and final summer. No olives are now safe unless the owner looks after them, for the watchmen are removed, and the orchards are alive with men, women and children.

It is a merry time and the laugh and the song echo far and wide. Everywhere the people are in trees shaking them with all their might to bring down the fruit. The effort is to make a clear sweep of all the crop, but in spite of shaking and beating, there is always a gleaner left. These are afterward gleaned by the poor, who have no trees of their own, and by industry they gather enough to keep a lamp in their habitation, and to cook their mess of pottage.

When the proclamation goes forth to shake, there can be no postponement. The rainy season has already set in; the trees are dripping with the last shower, or bowing under a load of moist snow; but shako you must, drenching yourself and those below in an artificial storm of rain, snow and olives.

No matter how piercing the wind, how biting the frost, this work must go on from early dawn to dark night; and then the weary laborer must carry on his aching back a heavy load of dripping berries two or three miles up the mountain to his home.

To comprehend the necessity of all this, you must remember, olive groves are without fences, walls, or hedges of any kind, mingled together like trees in a natural forest.

The vast orchards we are describing has a thousand owners, and in shaking time every one must look sharply after his own or loses all.

It does not injure the quality of the oil, to keep the olives long, if proper care be taken to prevent heating and fermentation.

The olives are ground to a pulp in a circular stone basin by rolling a large stone wheel over

them. The mass is then put into small baskets of straw work, which are placed one upon another, between two upright posts and pressed by a screw, or else by a beam lever.

After the first pressing the pulp is taken out of the baskets, put into large copper pans, and, being sprinkled with water, is heated over a fire, and again pressed as before.

This finishes the process, and the oil is put away in jars to use, or in cisterns, to be kept for future market. It purifies itself by settlings on the lees. The poorer quality of oil is made into soap.

## ARBORICULTURE.

### Coffee Culture.—Experience in Ceylon.

EDITORS PRESS.—I observe you are interested in coffee culture, and occasionally have letters in your columns in regard to it. It would take up too much of your space to remark on the different letters I have seen, and the sometimes erroneous ideas that are indicated. To describe the system and all the requirements for profitable cultivation would need an essay.

I have had only one season's experience in this country, and I have not been further south than where I am now, and I consider this country, in regard to climate, so far as my experience goes, entirely unsuitable.

Coffee can be grown on the sea coast, and it can be grown on the top of Adam's peak (7,500 feet high), but in neither case can it be grown profitably.

The tree adapts itself readily to various climates, but it fails to yield profitably except under certain restricted conditions of weather, soil and climate. During the last few years coffee production has been stimulated by high prices, but, taking the average of years, coffee planting is not by any means the profitable business you seem to imagine. Witness the hundreds of abandoned estates throughout the coffee regions, I have been some twelve years a coffee planter in Ceylon, where the cultivation is more thorough and scientific than anywhere else, and I like the business much better than I do wheat raising, but I would not put a dollar in coffee anywhere I have been in California.

Then you are utterly unprovided with labor. The average size of estates in India and Ceylon is 200 acres, and on a well-managed property the labor force on the check roll is about one person to the acre; the average wages on the check roll (including overseers or kamganyas, men, women and children) is 17 cents per day of American money, and they provide their own food.

Coffee is a tropical product, suitable under certain very restricted conditions of soil and climate for tropical countries where the natives live on a cheap food like rice and have no \$10 hoots, and \$5 hats, and \$40 suits of clothes to provide.

Should you, or any of your readers desire further information in regard to coffee planting, I am ready to give it. I may remark, in connection with letter by Chas. S. Shinn, that coffee cannot be shaken from a tree and then passed through a pulper. It would be too dead ripe and much of it would be cut and injured by the pulper, were it in such a condition. I am aware that it is so gathered in Arabia, but in the West Indies and elsewhere they have adopted the better and cheaper method of gathering the berries by hand, at a uniform ripeness, where they can go through the pulper at a minimum of injury. All pulper-pricked berries rot.

I have raised many thousand cinchona plants, and some time ago a gentleman in Santa Barbara sent me some seed to propagate. I am more hopeful of cinchona than coffee, though it is too early yet to state the result of my experiment.

I fear, however, the climate here is too cold and dry.

I have prickly comfrey growing on my land, and I am encouraged to believe that it will be a useful forage plant for this country. Yours truly,

ALEX. F. MACHIN.

Nordhoff, Ventura Co., Cal.

[We thank our correspondent for his letter. What we desire on this and all kindred subjects is to draw out the best light and the widest experiences to ascertain the practicability of all enterprises which are suggested. We should like to hear further from Mr. Machin, and if our readers desire to draw upon the results of his long experience in tropical cultures, we doubt not he will answer their queries through the PRESS.—EDS. PRESS.]

INVISIBLE INK FOR POSTAL CARDS.—The Deutsche Illustrirte Gewerbezeitung proposes the general use of what may be called "postal card ink," for messages which are sent on such cards, or otherwise unsealed. A solution of nitrate or chloride of cobalt, or chloride of copper, mixed with a little gum or sugar, produces a "magic ink," which is made visible by warming, either by holding against the stove or over a burning match. Potassium ferrocyanide in solution may also be used; but this requires a developer, for which either copper or iron sulphate may be employed. With the former the writing will appear in brown, and with the latter in blue color.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and Davis Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

**GRANGE DIRECTORY.**—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### Our Industrial Condition.—No. 3.

**EDITORS PRESS:**—Throughout all portions of the country the cry for relief from excessive and unequal taxation comes from an oppressed and suffering people, who have been for years vainly struggling against the tide which is sweeping them into the vortex of bankruptcy. California is not exceptional in this respect, as her citizens, no doubt, are paying more per capita, for the benefits of a quasi legal protection, than those of any other State. The point has been reached with the tax-paying portion of the people, when it is no longer a question of political economy or governmental policy, but one of self-preservation, which is declared to be the first law of Nature. It would be well, therefore, for those who have controlled to accept the warning before desperation shall force the sufferers into revolution, which is the only resort, where legislation fails in relieving or abating great and universal evils.

In our belief, however, an appeal from the people is not consistent, within a republican Government, but an appeal to them for relief accords with our ideas of what we profess to be, a free democratic nation. By the constitution, power is vested in the people, who select their representatives to legislate (make laws), in accordance to their wishes and for meeting their necessities. Here, then, is the foundation upon which the entire superstructure rests. Theoretically speaking, this is our condition; but practically, it has been, and is the reverse, as partisanship, demagoguism and bulldozing has controlled until every semblance of freedom in politics or selection of officials has long since departed. With the means of redress in hand, should the people suffer long or quietly? or resort to petitioning their self-constituted rulers? Our reply is most emphatically, no. Let each individual, rather, who is aggrieved, interest themselves in public matters; throw off their blind allegiance to party; invest no one with power to think or act in determining public policy, or in the nomination or selection of representatives; do not refuse to exercise the right or choice, because no direct or personal benefit is expected; be more patriotic and be less selfish, and the contest will be won in a legitimate manner, and without resorting to petition or revolution.

Correction or relief being insured, let us turn to what is necessary for carrying on the Government, viz.: taxation—and adopt that form of revenue by which the people are most benefited and individuals least injured. From reports of legislative commissions, as well as from the working of the system where it has been adopted, the so-called *special tax system* is shown to operate most favorably, by relieving the agricultural and creative interests of a State from taxation, and imposing it upon those classes and interests which are the results, rather, and that are not directly engaged in the development of that which sustains the community. The State of Illinois ranks among the most progressive in all that tends to benefit her citizens; at the last session of her legislature a Senatorial Commission was appointed to investigate and report upon the subject of taxation. For want of space we are unable to give it *in extenso*, but copy their reasons for advocating the adoption of this system, which are:

First. This system divorces entirely the State from local taxation. While towns, cities and counties are permitted to vote a tax on themselves for any amount permitted by the Constitution, they cannot vote it on any other town, city or county, and when the people know they have themselves to pay any tax they may order, it will naturally make them guarded in the amount so levied—in other words, it brings the tax down to the people without the intervention of State authority.

Second. This system does away with the State Board of Equalization and its difficulties, as there is nothing to equalize beyond the counties. It has saved a large amount of money to the people of the State, and a still larger amount of discontent and acrimonious feeling between sections.

Third. It saves the percentage paid assessors, collectors and treasurers, with the losses by abatement or defalcation, sometimes placed as high as 15% of the amount assessed.

Fourth. It saves those persons, towns, counties and municipalities that pay their tax upon the call of the collector, the necessity of paying an additional tax for those who decline to pay and fight the payment of their tax to the State.

Fifth. It would go far to do away with the local jealousies engendered by different sections of the State toward other sections, as there would be no friction of interest. The needs of large commercial cities demanding one class of legislation, would not be brought in conflict with and in antagonism to the wants of a rural district demanding another; also, it would enable each section to adjust its taxation to its needs, avoiding the half and half legislation, which, under the present system, makes a general law necessary to carry out a local purpose, in the end proving neither satisfactory nor adapted to the wants of either extreme.

To every one in the least familiar with the

operation of the revenue laws of this State, with the injustice done individuals, classes and sections, and with the baleful influence upon our industries, the advantages of such a system as that recommended is most obvious.

Illinois has scarcely any State indebtedness. The seven per cent. paid by the Illinois Central railroad upon the gross earnings of the road, relieves the people almost entirely from taxation for State purposes; at the same time over one million dollars is paid annually out of the State treasury for school purposes.

Pennsylvania is working under the special tax system. She levies a tax of nine-tenths of a mill on each one per cent. of dividends on transportation companies, or where there is no dividend a tax of six mills of the appraised value of the capital stock; a tax of half a mill on each one per cent. of dividend on the capital stock of all other corporations except banks and foreign insurance companies; a tax of three mills on capital stock of banks; a tax of three mills per ton on all coal mined; a tax of three per cent. on gross receipts of foreign insurance companies; a license tax on brokers, saloons, etc., etc.

This serves to carry on the State government without levying any tax upon real or personal property. The amount realized is over six million dollars, a portion of which is required for paying the interest and reducing the principal of a large State debt, incurred in making internal improvements.

What a contrast is offered by comparing the condition in such States and that of California, where according to the report of the State Controller in 1875 the rate of taxation for State purposes only for the 25th fiscal year was 50 cents, and for the 26th fiscal year 64 9-10 cents on each \$100 valuation of property (farms, improvements, crops anticipated and realized, stock in sight and unseen, all are included in the assessment). How will it be now, when bonds and mortgages, notes and money almost to a dollar are exempt? It is that last straw, not the ideal, but real one, which will break the backs of those long-suffering taxpaying farmers, who modestly approach the Captain's office on collection day, pay their bills without question and meekly retire until another demand is made. "Quosque tandem abutere patientia nostra," exclaimed a celebrated Roman in opening one of his great orations in behalf of the people against a man who had trampled upon their rights. Would that every taxpayer's response to such a call of "How long shall our patience and forbearance be abused," be decisive and prompt: "Not a day longer, as we have determined upon the management of affairs ourselves, and that taxation shall not be confiscation."

G. C. PEARSON.

South Vallejo, May 29th, 1877.

### Assessment of Growing Crops and Other Evils.

**EDITORS PRESS:**—The taxation of growing crops in this State seems to meet with the just condemnation of almost every farmer, judging from the numerous comments in the papers and the action taken by the Granges in different localities. It is to be hoped that such an abominable system will be overruled. There is also the mortgage tax question, that is equally absurd in its present workings, although many hold that the present system of exempting such property is right according to the laws of the State, and this, too, in spite of what our State Constitution says, viz., that all property shall be subject to taxation and that equal taxation shall exist. It seems to me that if any law had been enacted conflicting with our Constitution in these premises, that it would not stand the test when tried for the constitutionality of the present manner of exempting such property. It would be a great satisfaction to many to know how other and older States fare on this subject, and I have thought that it would be a very appropriate theme for your paper. I have no data at hand to give me any information, and thought perhaps you might have facilities for ascertaining the situation in other States. I have thought that to give the list of States recognizing mortgages, notes, etc., as taxable, and also of States that do not, also whether the indebtedness of the borrower is deducted from his assessment and assessed to the lender or holder of the security. I confess I cannot see any plausible reason why such chattels should not be taxed directly to those holding them, and not in an indirect manner to those giving them to secure the payment thereof.

The borrower has to pay a high rate of interest, and in addition has also to pay a tax on that which others have invested in the property he controls, and which he has given as security. The money lender gloats over his success in keeping the borrowers yoked with this abominable system, and it is time we had a change. The borrowers would have enough of the burdens to carry without being compelled to shoulder the taxes of the monopolists. If you could compile some information regarding the situation in the older States on this subject, you can rest fully assured that it will be greatly interesting to every one having the welfare of the whole community at heart.

We are now in the midst of our hay harvest, of which we will have an average crop. Our grain crops are fully up to an average also, a dry season being more favorable to our farming interests in this section than otherwise. Stock

of all kinds is fat, but there is an unpleasant prospect ahead for next winter, if reports are true that stock from the lower counties are to come here. There is not more than feed enough here to carry what stock is already here in safety. Unless we have a very favorable and open winter, like the one just past, stock men will assuredly suffer great loss. This county is already overstocked, and with the limited amount of feed at present in sight, and the innumerable herds on the way hither to eat it up, it will surely prove disastrous to both resident and transient stock men. I know this to be true from the past, and during a residence of upwards of seventeen years. I do not state this in the interest of stock men living here, but for the interests of all. I have no stock except what I can carry through with ease on my farm, besides having a surplus of feed to dispose of to others. It will be a profitable season to such as have plenty of hay and grain. The former already rates at \$10 per ton in the shock. Old grain is scarce at \$2.50 per hundred pounds. The growing crop bids fair to be high also. Hogs are low, and no sales made for some time. Small beef cattle four cents, mutton sheep from \$1.50 to \$2 per head. Wool clip good, and price at Ukiah from 25 to 26¢ cents.

E. S. BIGELOW.

Potter Valley, Mendocino county, Cal., May 21st, 1877.

[We would like to give the position of other States on the points made by our correspondent, but we have not the data at hand. One of our leading lawyers whom we interviewed on the subject could not, at the moment, tell us where we could get the information in collected form, thinking statutes of all the States might have to be searched and compilation thus made. This would be a search nearly as long as a California "abstract of title." We have an idea that the compilation has been made by some student of public affairs, and if we can find such a one we shall be pleased to give it to our readers. Meantime, if readers can help us on this point we should be pleased to hear from them.—EDS. PRESS.]

### Co-operation in Sale of Wheat.

**EDITORS PRESS:**—I am so far impressed with the importance of the subject above indicated that I am led to hazard wearying the readers of your excellent paper by asking of you space sufficient to express my views.

By employing many men to sell grain, the producers help buyers in cheapening the commodity. Persons who desire to purchase an article would properly regard with alarm the circumstance that there was but one who had it for sale, that no competition existed and, generally, what is against the buyer is in favor of the seller.

Each broker employed must be paid enough to support him and his family if he has one. Every time this necessity is avoided a gain ought to occur to the seller. Buyers of wheat, in this market, have always understood and acted upon these two propositions: they have, as far as possible, avoided coming into competition with one another, have given their business to one man to such an extent as that it has become at times apparent, and doubtless was often true when not apparent, that he was the only buyer of California wheat.

Every coalition of wheat sellers has also been an advantage to them as a class; hitherto it has been difficult, perhaps impossible for them to sell together to a considerable extent. Fortunately for the State at large, drouth years and short crops have been so exceptional that the rule has come to be that the supply either was, or could be made to appear, in excess of demand; that buyers had to be sought and their terms acceded to; while sellers had to submit to the disadvantage of acting under the dictation of parties adverse in interest to them.

This year the condition of things is reversed, and if producers fail to avail themselves of the advantages which circumstances present they will manifest the truth of the claim sometimes advanced, that farmers are not acquainted with and cannot act upon the rules of trade and business principles. It is true that the customary programme of the buyers will be carried out this year; they will "bear" the market, say the price is too high, and as to the war, "Gentlemen may cry peace! peace! when there is no peace." All of this is to be expected, but it is disrespectful to the intelligence of readers of an agricultural paper to assume that credence will be given to such reports.

All persons are more or less the servants of habit; when one has been unfortunate in having acquired a bad one, duty to himself and his dear ones at home demands that he should avail himself of all means to cure himself of it. The most pernicious of all business habits which has characterized the wheat growers has been "promiscuous selling" at harvest time. Each seller has become a competitor with his fellow; necessities have been magnified; men who are timid have been scared and the weakness of the sellers has become a clear recognizable factor in the computations of the buyer. Now, if ever this habit can be broken up, the buyer has temporarily lost his strength, while those who have hitherto been in his power are possessed of a strength to which they have been strangers.

Much might on this theme be said; the subject is full of interest, but time and space at command will not permit that in this article

more be said than just so much as may lead to consideration of the matter. The course pursued last year worked well; the convention of wheat growers so far resulted in success as that a good foundation was laid for operations this season. The Grangers' Business Association got a good grasp of the situation, is available for service at a moment's notice, and it does seem, as a consummation to be hoped for, that another convention be called to act properly in concert upon the important proposition of co-operation in sale of wheat. GRANGER.

### From the Granges.

Santa Rosa Grange.

**EDITORS PRESS:**—I see that you do not often receive communications from this part of the State, and why it is I cannot tell. There are plenty of people here and surely there is enough to write about. The wheat prospects in these beautiful valleys of Santa Rosa and Mark West was never better. We hear farmers estimating their grain at from 30 to 40 bushels per acre this year, while last year they only raised from 15 to 20 bushels per acre on the same ground. Bro. John Adams, near Santa Rosa, says he has the finest crop this year he ever had. He has 150 acres of wheat which he thinks will average 30 bushels per acre, and 50 acres of barley which he thinks will make 40 bushels per acre. Bro. L. Hendrix has 70 acres which will make, at a low estimate, 20 bushels. Our W. M., S. T. Coulter has a small field of very fine looking wheat. Bro. Gauldin has 70 acres of wheat, some of which looks very fine. The late-sown grain does not look so well. The early-sown all looks finely, but that which was sown after the first of January does not look so well. We have had a very nice rain this forenoon, which lasted some hours, with a prospect of more to-night. This, with the occasional showers that we have had this spring, will help the late wheat very much. It is thought that the fruit crop will not be so heavy as last year, especially apples.

Santa Rosa Grange, No. 17, is plodding along about the same as usual. A few staunch members still keep up the regular meetings, and are always ready for business. Our Grange is not dying, as perhaps some may think, but only taking root. There is many a loyal Granger in this valley, and we hope the time will soon come when we can show to the world that we, too, have been at work. Do not become discouraged, brother Grangers; let us toil on; we will reap our reward by-and-by. A. B. KINNEY,

Sec'y of Santa Rosa Grange.

Fulton, Cal., May 28th, 1877.

### Notice of Meetings.

**EDITORS PRESS:**—Patrons and others will please bear in mind the following open meetings of Golden Gate Grange, which all who can are cordially invited to attend:

There will be a meeting the second Tuesday in June, the 12th, at 7:30 P. M. Question for discussion, "Taxation."

June 19th, the third Tuesday, at 1 P. M., an adjourned meeting on "Co-operation."

On the same date at 7:30 P. M., there will be held the adjourned meeting on "Education."

J. D. BLANCHARD, M. G. G. G.

San Francisco, May 28th, 1877.

**GRAND LECTURE AND PICNIC.**—From Mr. V. E. Bangs, Worthy Master of Stanislaus Grange, of this place, we learn that a public address is to be delivered at the Grange warehouse, at this place, by Worthy Lecturer of the State Grange, Blake Pilkington, on the 7th of June, at 11 o'clock A. M. A general picnic will be held at the same time and place, to which all are invited to attend and bring their baskets. The excellent choir from Ceres Grange is expected to be present and furnish music for the occasion. Worthy Master Bangs is anxious that not only members of the Order but farmers generally will attend. The press throughout the State, where Mr. Pilkington has spoken, speak of him in the highest terms as a lecturer. By all means let the farmers give him a hearty welcome.—*Stanislaus County News.*

**GRANGERS' UNION OF THE SAN JOAQUIN VALLEY.**—During a recent visit to Stockton we enjoyed a short visit to the Grangers' Union store, and were pleased to find a full and fine selection of all kinds of implements and supplies to meet the farmers' need. We met the President of the Union, Mr. Andrew Wolf, a gentleman of wisdom and enterprise, the Secretary, Mr. S. S. Burge, who gave us the details of his management of the store, and Mr. J. C. Hussey, who stopped between two lines of figures in his books to give us a cordial welcome. The Grangers of the valley have reason to be proud of their enterprise.

### In Memoriam.

VACAVILLE GRANGE, No. 5, Vacaville, Solano county, Cal.

WHEREAS, The relentless hand of death has removed from our midst our beloved sister, MRS. LEONICE LONGMIRE, therefore, be it

Resolved, That in the death of Sister LONGMIRE, this Grange has lost a worthy and efficient member, and her family a dear mother.

Resolved, That we tender her bereaved family our heartfelt sympathy in this their deep affliction.

Resolved, That these resolutions be entered on the minutes of this Grange, a copy sent to the afflicted family and a copy to the PACIFIC RURAL PRESS for publication. —(Committee: Mrs. Mary A. Willard, Mrs. Eliza Davis and Mrs. Mary E. Coburn.)



## AGRICULTURAL NOTES.

## California.

## BUTTE.

**EMPTY HEADS.**—*Record*, May 26: Mr. H. Silver has shown us a bunch of wheat gathered from a field near Butte City, which contains the shortest and poorest filled heads of grain we have ever seen. The field, it is said, looks as fine as grain need to look to give an abundant crop. The stalks are tall, but the heads are fearfully short, and the kernels shrunken and consumptive looking. We trust that such is not the character of many of our wheat fields. Nor do we know why this particular field should have fallen into such deceptive ways.

## COLUSA.

**CROP PROSPECTS.**—*Sun*, May 26: The weather since our last has continued favorable, and most of the wheat crop is already made. Most of the summer-fallow will make a fair average crop. The twice-plowed summer-fallow will be excellent in every case. Crops on the tule lands will be magnificent—some of it being estimated at 60 bushels to the acre. Wheat everywhere is filling out splendidly. This is the bright side. Except on the low land the winter-sown wheat will not turn out well—some of it will make ten to 15 bushels to the acre, but much of it will not be cut, and much that will be cut will not average over a sack to the acre. We had a surplus last year of about 150,000 tons, and the year before some 60,000 tons, and it may be that we will come in the neighborhood of the latter figure this season, with more ground fallowed than the county has ever had before. With prices anything like what the present prospects indicate, our farmers will yet handle some money. The trouble is that there are some who will have nothing.

**WILLIAMS.**—Harvesting has commenced in earnest in this section of the county, but farmers have a very small task before them. Those who in better seasons employed 10 or 15 hands, will this year need but three or four, and instead of being a month or two harvesting will get through in two or three weeks. A large portion of the grain is being cut for hay. Messrs. Williams, Zumwalt and Stovall have considerable grain which will be quite good, and we understand the grain on the Big ranch is all good. With cool weather, such as we are having now, many fields will yield more abundantly than was anticipated.

**SOME FINE WHEAT.**—Isaac Howell brought into our office as fine specimens of Australian club and Proper wheat as we have ever seen. He has some 1,300 acres that he thinks will average at least 30 bushels. Judd Frazier thinks he has some that will yield 60 bushels to the acre. The heads are very long and there are four or five plump heavy grains in a mesh. These fields are on low land on the island. Wm. Ash, on the "Big ranch," commenced heading Monday, and finds the heads full of wheat and the grains very plump. He will have a great deal more wheat than he thought he would have when he commenced heading.

## CONTRA COSTA.

**CROP WEATHER.**—*Gazette*, May 26: Excepting on Friday and Saturday of last week, when we had rather hot northerly winds which the grain could not long have withstood, we have had weather for more than a month past that has been very favorable, and has largely compensated for the small supply of moisture in the earth for feeding the growth. All the grain that was brought out of the ground by the October rains, whether sown before or immediately after, promises a fair yield, and here and there there are places that only got out of the ground after the first of the January rains that will give a light yield if the present favorable weather continues, but of the late wheat little hope can be entertained should the trial of a three days' scorching northerly befall it. Of the late barley there would be better hope should it be subjected to such a trial.

**KIMBALL'S ISLAND.**—*Ledger*, May 19: Across the river from Antioch, and distant about half a mile, lies Kimball's Island, containing nearly one hundred acres of securely leveled, well cultivated, productive land. In company with Wm. T. Oden, the present lessee, we rowed across to this refreshing spot a few days since, and found it a second Eden. The contrast between the freshly growing grain, fruit and vegetables of that enchanting place and the parched, burnt plains on this side, causes one to look with much favor, especially this season, upon the reclaimed lands. Mr. Oden has growing in profusion in all stages of growth, barley, wheat, potatoes, tomatoes, beets, strawberries, blackberries, figs, plums, pears, apples, apricots, etc., etc.; also a poultry yard of three hundred fowls, a dairy, and alfalfa of wonderful growth. One crop of strawberries has been sent to market, and a second crop will be ripe in a few days. One may realize a greater profit from fifty acres of this land than a quarter section of the upland in the valley.

## FRESNO.

**GRAPES.**—*Republican*, May 26: We have seen a bunch of Zinfandel grapes weighing now at least a pound, the grapes being somewhat larger than peas. They are from the Eisen vineyard, and are samples of 120 acres, which, it is estimated, will yield this season 60,000 gallons of wine. The grapes this season are at least six weeks more advanced than at the same time last year. The vines have been three times pruned this season, the last two prunings

cutting off the over-abundant bunches of grapes. The entire vineyard seems one dense mass of grapes, and three men are kept constantly pruning.

## LOS ANGELES.

**SOUTHERN CALIFORNIA HORTICULTURAL SOCIETY.**—*Herald*, May 26: The Committee on permanent organization of the fruit growers of Southern California met at the law office of Captain C. E. Thom, Saturday. Present—L. M. Holt, J. deBarth Shorb, T. A. Garey, Dr. O. A. Conger, D. M. Berry, C. E. Thom and Milton Thomas. After a full discussion the Committee agreed to incorporate and did incorporate the Southern California Horticultural Society, with its principal place of business at Los Angeles. The articles of incorporation provide for a membership and no capital stock. The trustees for the first three months named in the articles, were the incorporators. The above-mentioned committee's objects are set forth in the articles of incorporation, "to promote and encourage by all lawful means the development and prosperity of the agricultural, horticultural and pomological interests of the counties of San Diego, San Bernardino, Los Angeles, Santa Barbara, Ventura and Kern, in the State of California; and with that view to purchase or otherwise acquire and hold real estate or other property, to hold exhibitions of agricultural, horticultural, and pomological products, and to award premiums." A meeting of the fruit growers of the above mentioned counties is called to meet in Good Templar hall on Saturday, June 16th, 1877, for the purpose of adopting by-laws for this society, and transacting such other business as shall come before the meeting.

## MARIN.

**CROPS ON THE COAST.**—*Journal*, May 24: We may now safely conclude that the crops along our coast will fall far below the average yield, while in most of the interior localities they have proved an entire failure. The hope entertained a few weeks ago by our farmers of an abundant harvest, are now dispelled by the action of the weather for some time past. It is the prevailing opinion that the prospects even for a hay crop are less than in the dry season of '62. Much of the grain crop is so badly rusted as to exclude the hope of its producing even an inferior and scanty crop of hay. Hence many of our farmers have concluded to turn their cattle upon it as a pasturage. The large acreage of oats which has been sown in many places on the coast this year, and with its almost total failure, will very seriously affect the interests of the farmer in these localities. Barley, on the other hand, promises fair, and will be a good crop. The amount of wheat sown is small, but looks well, promising a fair yield. Potatoes are in a very good condition, and do not appear to be affected by the blight, to any extent, so far. About the usual amount of potatoes has been planted.

## MENDOCINO.

**EDITORS PRESS:**—Perhaps it might be of interest to your readers to hear of the prospects of Mendocino county. It cannot be said of this county as of some of the counties in the State that our crops are a failure. Our hills are covered with green grass with thousands of sheep and cattle feeding thereon, and our fields are waving with grain. The grain crop will exceed the crop of last year. The wool clip is not only a better quality, but its yield in quantity is much greater than in former years. Sanel valley is the first place worthy of notice. It is 15 miles from Cloverdale. The valley is five or six miles long and two miles wide, with one town which bears the name of Hopland—so named from the quantity of hops grown in this valley. It can truly be said this is one of the most fertile valleys in Mendocino county, and surpassed by few in the State. Here we meet many warm friends of the PRESS. The valley is reached over a most excellent road from Cloverdale to Sanel, which is owned and operated by the Ukiah toll road company. Ukiah is about 15 miles north of Hopland, and is the county seat of Mendocino county, and the largest town in the county. There are two lively sheets published here, entitled the *Mendocino Dispatch* and the *Mendocino Democrat*; the former edited by Mrs. Belle Lynch and the latter by Alex. Montgomery. The town presents a most lively appearance, and in the valley we find some very fine farms and large stock ranches. One of the finest farms is owned by J. B. McClure. He has 400 acres of grain which is hard to beat in any county. This is the largest valley in the county, and the most wealthy. Business is good, and wool from the neighboring valleys is coming in quite lively, for which 26½ cents per pound is paid by the wool buyers for good quality. Most of the wool in this county is superior in quality, and most of the wool-growers are holding for higher prices. Hop-growing is quite an industry in this and adjoining valleys, there being some three or four hundred acres grown in all. Much of the last year's crop is still on hand. Ukiah also has an excellent mineral spring about three miles east of the city. The water is quite warm, and the spring presents the appearance of a boiling kettle of water. In taste it resembles the Bartlett springs. The owner has a good hotel, and a number of cottages for the accommodation of guests, which are quite well filled. All things taken in consideration, Ukiah valley is one of the most healthful places in the State.—*Jos. DIMMICK.*

## NAPA.

**FRUIT.**—*Register*: The fruit crop of this year

promises to be much lighter than last year. There are in market at present strawberries, cherries, currants, apricots; and in the San Francisco markets are raspberries, blackberries and gooseberries additional—all of which command high prices. The strawberry season has been short and the fruit not extra in quality. In no case were berries sold in local markets for less than 50 cents a drawer. Cherries command from 20 to 35 cents per pound as yet, without prospect of their being very much lower. Peach trees suffer somewhat from curled leaf and the crop will be light. Apples will also be light. In fact, the only fruit crop having a good prospect at present is the grape crop, which promises a good yield.

## SAN BERNARDINO.

**RIVERSIDE BEES.**—*News*, May 22: The bees in the canyons are jubilant over the rains. They felt a little uncertain during the early part of the season, but bee feed is now abundant and a good crop of honey is reasonably expected.

**CUTTING GOVERNMENT TIMBER.**—We learn that a Mr. Hall, well known to the San Jacinto people, has been taken up for cutting and selling timber on Government land on the farther side of the San Jacinto mountain. It appears that he had a contract with the railroad company to furnish them with a very large amount of cordwood, a million cords, some say. The story goes that the United States Marshal visited Mr. Hall and warned him to be careful how he interfered with the timber belonging to the Government. The valiant contractor said to the official, "You mind your business and I'll mind mine!" "Very well," replied the Marshal, "since you have told me to mind my business, I will remind you that my business is to look after this Government timber and I shall attend to it." So saying, he descended the mountain, procured the evidence implicating Mr. Hall, notified him to appear to answer the charge of violating the timber law, and brought him up before the court. Appearances being strongly against him, he took change of venue to San Francisco, but it is thought he will stand no chance of acquittal.

## SANTA BARBARA.

**GAVIOTA.**—Col. Otis, in the *Press*, May 19: Shearing is completed on the rancho San Julian. Nearly 40,000 head were shorn, yielding 302,000 pounds of wool, all good but about 25,000 pounds of tags, etc. The clip has proved unexpectedly heavy, many of the bands averaging between eight and nine pounds per head. It is hoped that this wool will sell for 20 cents a pound, bringing an aggregate of between \$55,000 and \$60,000. Besides the large stock of old sheep, there are some 20,000 lambs on the rancho. A contract has been made to sell 5,000 mutton weathers—price not stated. Mr. Dibblee declares his purpose to sacrifice no sheep this year, even if it is a dry one, and the probabilities are that he will get two or three times 25 or 50 cents per head—the price for which some bands of sheep have recently been sold in southern California. Every device will be resorted to to carry stocks of sheep and cattle through the dry season. The San Julian will be able to save most of its sheep, but many ranches will be cleaned out before the grass grows again.

## SANTA CLARA.

**CHERRY CULTURE.**—*Mercury*, May 26: There is no fruit produced in this valley that pays better than cherries; and wherever the conditions are reasonably favorable, none that can be grown more readily. The cherry tree requires a rich, light soil, thoroughly underdrained, and the best of cultivation. Most of the lands adjacent to our rivers are admirably adapted to the culture of this fruit, and yet even there, with such years as the present, irrigation is necessary for the safety of the trees. With young trees the trunks should be protected from the heat of the midday sun. This can be done best with two shakes inserted in the ground on the south side of the tree in the form of a V. Without this protection serious injury to the tree will follow in the drying up and blighting of the side exposed to the sun. The destruction of the ripe fruit from the birds, in this county, is very great; but with a more general cultivation the quantity taken by the birds would never be missed. We hope to see more attention paid to this branch of fruit-growing in this section.

## SANTA CRUZ.

**MOVING ANGORAS.**—*Pajaronian*, May 26: Wm. M. Landrum, of the firm of Landrum & Rodgers, importers and breeders of Angora goats, left on Tuesday last for the Sierra Nevada mountains—somewhere above Colfax—to find pasture land for their flock of pure breeds, numbering 300. While good feed for ordinary stock can be found in this section, it has been found that the grass and climate of the mountains is much better adapted for the goats, although they do well here. The above gentlemen have a beautiful band of pure breeds and their care of stock, square dealings and knowledge of the business has brought them a good trade.

## SOLANO.

**DIXON.**—*Tribune*, May 26: The grain is fast ripening, and in the large tracts of summer-fallow the great yellow sea of dense waving masses bears a literal resemblance to the hoards of golden treasure for which the happy possessor will barter it ere many months. The prevailing color is only broken by tracts of winter-sown and some more backward pieces of summer-fallow. A part of the sown grain is also yellowing, while the rest is as green and succulent

as when it first started from the ground. Not a few pieces have been mown for hay, while here and there was a field into which stock had been turned.

## SONOMA.

**GRAIN FIELDS.**—*Democrat*, May 26: The last three weeks have made a decided change for the better in the crop prospect of Sonoma county. We had continuous fogs for many days, and they were followed by copious showers of rain. The fogs and showers came just at that critical time when the head of early sown wheat was forming. The result is large, well-formed heads, filled with plump, full-sized kernels of grain. Up to this time there had been so many peculiarities of the season that there was in the minds of many, a vague fear that the grain would fail in heading out. The showers of this week tilted over that difficulty, and on all sides more than average crop is anticipated. The growth of the straw of both wheat, barley and oats exceeds anything known in this county for years before. The so-called thin lands have standing a much heavier than an average crop. This is true in all parts of the county. As far as we can learn, the indications are that our wheat crop will reach 750,000 cents. A very large area has been planted in corn, which is now up and looks promising. The corn crop will be double as large as ever before raised in Sonoma.

## SUTTER.

**FINE WHEAT.**—*Banner*, May 26: J. A. Simpson, who resides on the slough road, about three miles from Yuba city, exhibited some specimens of wheat to us on Thursday last, which we are sure cannot be beaten anywhere. The straw is nearly six feet in height, and topped out in every case with well filled heads of splendid grain. He has 550 acres of it on his ranch, which will go 30 bushels to the acre. The grain is of two kinds, Chile and Club. One head out of the lot left with us measured six and one-half inches, and contained 85 grains.

## YOLO.

**GOOD.**—*Mail*, May 26: Our crop prospects brighten every day. Hundreds of acres of winter-sown wheat, which three weeks ago was given up as lost, have come out wonderfully under the influences of north winds and a cool atmosphere, and will yield from eight to twelve bushels to the acre. There have been several farmers in our office who made their appearance for the express purpose of having us publish the good news to the world. Surely we will not neglect it, and only regret that we cannot say that many who are greatly in need will be so highly favored. Put Yolo down for something over half a crop.

## Nevada.

**OUTLOOK FOR CROPS.**—*Reno Journal*, May 26: Our State never made a better showing, and our crops will be better than ever. We have had sufficient rain to insure the best of success, though our irrigating facilities would have enabled us to produce the usual average. In our own county the outlook is especially encouraging. At low estimates 500 extra tons of alfalfa will be cut. This is of course the richest agricultural portion of the State, and our farmers are all jubilant. Carson valley, we learn, is also looking well, and the latest reports from other portions of the State represent the prospects for hay, grain and grazing, as excellent in every respect. The news from the Humboldt valley is cheerful. Grass in that vicinity is good. Stock men are jubilant over the prospects of an abundant supply of feed for the coming season. The latest advices from Palisado valley show that the crops are looking splendid, and hopes for an abundant harvest are entertained. At Beowawe it is conceded by all those interested that the outlook for crops and the cattle interest have never been more flattering than at the present. At Halleck all ranchers and cattle men agree that the prospect for large crops of grain and grass were never better. The rain which has fallen will insure large hay crops. Prospects of grain crops in Clover and Ruby valleys are very favorable so far, and the stock business is expected to be very good this fall. The rain which has fallen will certainly insure a good crop of grain and grass. The ranchers and stock men at Golconda are feeling much pleased with the present prospects in that section. The present condition and prospects of the grain crop and live stock business in Reese River, Antelope and Rock Creek valleys is better than it ever has been since their settlement. There is a greater number of acres of grain, and it looks more promising than ever it did at this time before. The cattle men claim that they will brand more calves than they ever did for the same number of cattle, as the season has been all they could wish for, and the outlook was never better from all quarters in Lander county.

**TREE-PLANTING IN NEBRASKA.**—The *Chyenne Leader* says: Tree-planting has become a mania with Nebraskans. One of the first acts of the settler, after he has turned over the sod and after providing a place for his family, is to plant trees about his farm. Many species, especially cottonwood, grow very rapidly, and in three years form a barrier to the wind. The law has set apart one day in spring, called "Arbor Day," when everybody devotes himself to the one object of seeing how many trees he can plant.





### "The Sunrise Never Failed Us Yet."

Upon the sadness of the sea  
The sunset broods regretfully;  
From the far, lonely spaces, slow  
Withdraws the wistful afterglow.

So out of life the splendor dies;  
So darken all the happy skies;  
So gather twilight, cold and stern;  
But overhead the planets burn.

And up the east another day  
Shall chase the bitter dark away;  
What though our eyes with tears be wet?  
The sunrise never failed us yet.

The blush of dawn may yet restore  
Our light and hope and joy once more.  
Sad soul, take comfort, nor forget  
That sunrise never failed us yet!

—Celia Thaxter, in Scribner for June.

### Poor Farming.

The fact is that our unsuccessful farmers are not farmers—most of them. They are men of all trades, who could not make a living at what they call their trade. They are not mechanics any more than they are farmers. They are not calculated to make much of a living at anything they undertake. We have noticed them everywhere in the State for many years past. They take no newspaper, as a general rule; or if they do it is a free paper of some kind, or a party political paper, the proprietor of which will credit them indefinitely for the use of their vote. They never take an agricultural paper—don't believe in them. Their lands are sometimes among the best in their district, but their crops never do well. Half a crop is the average thing with them, and it invariably goes to market as soon as it is threshed, for some one has a lien upon it. They don't believe in fancy farming—don't believe editors know how to cultivate land or when to put in seed. They don't see how their prosperous neighbors can spend money for two or three agricultural newspapers or follow their trashy advice. They don't see any difference between their own farming and that of their neighbors, whose families go dressed better and live better than they—whose children attend school two-thirds of the year, when it is hard to spare their girls and boys for even half that time. Their children are not smart, and they wonder why. They are strong and healthy, but, like their parents, when turned out into the world they do not succeed. Instead of getting on, they stand still or come back to the old folks to be braced up. They can read and write and cipher a little, and have got as much education as their father, and he evidently thinks he had all he could make any use of.

This is the kind of farmers who are not farmers, mechanics who are not mechanics. They try hard and fail, simply because they are uneducated. They are workers and not thinkers. Their politics are like their farming. They vote for bad men because they lack the intelligence to judge for themselves, and take others' advice. They curse the high taxes and the unequal taxation, but they vote steadily on for the class of politicians who oppress them. They never think of making any change in their politics, their farming or their religion. One generation follows another in an unbroken succession of stupidity and ignorance. To be posted on their own trades and learn as much as they can of others related to theirs, is the duty and interest of every man. It is his business to look on both sides of farming, politics, or whatever subject concerns his own welfare or that of those dependent on him. To work out this problem, books, newspapers and sociability with the better informed is necessary. Hence, those communities which are the most social and moral are always the most intellectual, healthy, happy and prosperous.—*Visalia Delta.*

### "Home Circle" Writers.

EDITORS PRESS:—I am many times obliged to the "Woodside Papers;" they are splendid, and although not exactly a Mrs. Towne, they have given me many useful hints. Those brass rings for holders; how simple, and yet not thought of before, but now used. And that rag bag; I must have one of them some day, but shall hardly use mine for a bank. There are so many good things in the RURAL, and it would take too much time to enumerate them all, so wishing the RURAL a long life (that will not fail to be useful) I will ask what has become of Mary Mountain, and

[Mary Mountain! A lady calls to see you.—  
EDS. PRESS.]

THERE is nothing like a pleasant surprise. A Windham county girl, who hung up her stocking Christmas, and thought she had taken everything out of it, accidentally found four oranges and a pound and a half of broken candy hidden away down in the toe.

### Hints about Dresses.

Mrs. G. is a widow with a limited income, and it is often a surprise to others how she can manage to dress so respectably without ever incurring a dollar of debt. She abhors this practice, though her well-known thrift and good management would command any amount of credit in the town where she has lived for 30 years. I happened to obtain an insight into her domestic management at the beginning of the season and found it suggestive.

She gets one new dress in the spring and one in the fall. These she makes up herself according to the prevailing style. She does not get it too early, that she may know about what that style will be. She makes it up at her leisure, and so can afford to do it handsomely. When it is finished it is settled for the season. There is no pulling out of puffs and substituting knife pleating instead, or any such nonsense. She settled all those small matters before she put the scissors into the cloth. The new dress is hung up in the wardrobe for fair Sundays and "very best" generally. Then the last season's new dress comes under consideration, altering it a little if necessary and putting it in thorough repair, from the bottom braid to the fringe in the neck. This is the stand-by for street wear and for afternoons generally. The third best is contrived out of perhaps two old dresses and trimmed with odds and ends of silk, or whatever is on hand, but it comes out of the works all right and no one would suspect the materials out of which it was compounded. This is for muddy weather and rough wear generally, and is a very serviceable dress.

Morning calicoes are few but neat, and simply made. A few white waists or sacks for summer help to give variety and comfort, but these articles are never made up in profusion. It is a poor plan to have a great stock of such things on hand, to grow obsolete and yellow with age. Better make few dresses and wear them out. But the "second best" is a great saving and comfort, and with management almost every woman can contrive to have one. There was never a time when old dresses could be turned to better account than in the present style of fashions. Two sorts of very dissimilar goods can be made up in one costume, and the wearer appear very handsomely dressed. Old silks may be dyed and used with woolen goods to very good advantage, even when only a few yards of good material is left.

It is worth while to study over the subject considerably, and to take an account of stock before commencing. It saves time and trouble. The next thing wanted is good, reliable patterns, and with these almost any sharp woman can make up a presentable outfit. The dress making bills are always the heaviest in making up common goods. Let your daughters learn early to bear a hand in this necessary business of life and they will thank you for it as long as they live. A woman who has to limp along through life always dependent on the good will and favor of her dress maker hasn't taken the first step towards asserting woman's rights.—*J. E. McC., in N. E. Farmer.*

### Rules for Home Education.

The following rules are worthy of being printed in letters of gold and being placed in a conspicuous place in every household:

1. From your children's earliest infancy inculcate the necessity of instant obedience.
2. Unite firmness with gentleness. Let your children always understand that you mean what you say.
3. Never promise them unless you are quite sure you can give them what you say.
4. If you tell a child to do something, show him how to do it, and see that it is done.
5. Always punish your children for willfully disobeying you, but never punish them in anger.
6. Never let them perceive that they vex you or make you lose your command.
7. If they give way to petulance or ill-temper wait till they are calm, and then gently reason with them on the impropriety of their conduct.
8. Remember a little present punishment when the occasion arises is more effectual than the threatening of a greater punishment should the fault be renewed.
9. Never give your children anything because they cry for it.
10. On no account allow them to do at any one time what you have forbidden, under the same circumstances, at another.
11. Teach them that the only way to appear good is to be good.
12. Accustom them to make their little recitals with perfect truth.
13. Never allow of tale-bearing.
14. Teach them self-denial, not self-indulgence, of an angry and resentful spirit.

CHEERFULNESS.—There is scarcely an evil in life which we cannot double by pondering upon it; a scratch will thus become a serious wound and a slight illness be made to end in death, by the brooding apprehension of the sick. On the other hand, a mind accustomed to look upon the bright side of all things, will repel the mildew and dampness of care by its genial sunshine. A cheerful heart paints the world as it sees it, like a sunny landscape; the morbid mind depicts it like a sterile wilderness, and thus life, like the chameleon, takes its hues of light or shade from the soul upon which it rests. Cheerfulness keeps up a daylight in the mind, filling it with a steady and perpetual serenity, and is in itself an offshot of goodness.

### Houses and Things.

In an article with the above title, in *Scribner* for June, Dr. Holland writes as follows: The mistake of this era in the history of "household art and home decoration," lies it seems to us, in the attempt to do too much with furniture. Ruskin, in one of his books, distinguishes between building and architecture. There are certain structures in which architecture should never be attempted. A grain elevator, a storehouse, a barn, these are buildings, and architecture is out of place in them. There is no more reason why they should be beautiful, than there is why a meal-sack should be beautiful, or a wheelbarrow, or a coal-cart. So it seems to us that there may be, and that there are, certain items of furniture which we may legitimately excuse for the duty of picturesqueness. If our carpets are less beautiful than rugs upon bare floors, if furnaces are less interesting than open fires, if the old-fashioned wash-bowl and pitcher are more picturesque than the plumbers' substitute, what of it? In which direction shall we make our sacrifices? Toward comfort and convenience, or toward the picturesque of ruder times and smaller means? We advocate comfort and convenience, and leave others to do as they choose. The modern advocacy of beauty, in connection with all articles of furniture and household convenience, reminds one of the child who insists on making play of everything, who cannot take a mouthful of food, or do an act of service, without making it in some way a source of amusement.

To come to the practical point, a home may be interesting without being more than moderately beautiful, and may be more than moderately beautiful without being interesting at all. If we rely entirely upon furniture for the interest of a house,—if we make furniture picturesque at the price of comfort and convenience, our homes may be made interesting in a moderate way, provided we follow out our individual ideas, and do not fall back upon the conventionalisms of the manufacturers. But the most interesting things in a house should never be its furniture. Given convenient furniture, that shall be picturesque when convenient, the question whether a home shall be greatly interesting relates mainly to other things—to books, pictures, objects of art, bric-a-brac, and treasures of various sorts, in fact or in association. We can point to homes whose furniture attracts no attention whatever, but which are absorbingly interesting through the artistic products of its members. The more the culture and taste of cultured and tasteful people are expressed in their homes, through various modes and forms of art, the more interesting those homes will be; and the more a guest is compelled to forget furniture, except as it answers to the higher harmonies of the house, the better. The best things of an interesting home are never bought of a furniture dealer, though the most beautiful may be.

HE WANTED PRAYERS TOO.—A bright-eyed three-year-old was seated in his high-chair at dinner-table. Mamma has arranged the little uneasy, while for a moment his sprightliness and fun had made him the observed of the family. She had placed him snugly up to the table, pinned on his bib and succeeded in getting the little mischievous hands quiet and making him "hush," when father proceeded to ask the blessing. While this was in progress, our little chubby made a discovery. It was that all the plates on the table, except his own little plate, were in one pile at "papa's place," and, as it seemed to him, were put there to get the benefit of the solemn ceremony. So, scarcely waiting for the "Amen," he held out his own plate in both hands, saying, "Please, papa, pray on my plate, too."—*Christian at Work.*

A WOMAN'S GENEROSITY.—The stream of Mrs. A. T. Stewart's benefactions, says the *Church Union*, instead of ceasing to flow, goes onward, and with increasing volume. She has made donations to fifty-two of our local charities, ranging from \$500 to \$2,500, and making an aggregate of \$74,500, and the intimation comes from Judge Hilton that other charitable institutions, if found deserving, will be made the recipients of her bounty. Since the death of her husband Mrs. Stewart's donations—those of which the public have been informed—have reached an aggregate of about \$400,000.

MELANCHOLY CONSOLATION.—First city man (contemplating sea gull): "There's happy creatures, Thomson. They've no acceptances to meet." Second city man: "Ah, my boy, it's all very well to talk so; but remember Providence has ordained that they also have their bills to provide for."—*Funny Folks.*

"WHAT'S the use of making such a fuss about a little water?" said a judge before whom motion after motion had come in a case where a small spring was the object of contention. "The parties are both milkmen," quietly said one of the lawyers. "Oh, I see," said the judge.

A LADY in Willimantic, Conn., dissected, the other day, and old-fashioned, strawberry-shaped needle cushion, which had been in use in the family for over 50 years, and took therefrom 213 needles, as good as new.

PRESIDENT ANGELLO, of Michigan University, says that the girls in that institution are in all respects able to compete in studies with the students of the other sex.

### Woman's Sphere.

Home is woman's true sphere. There is nothing in this wide world that will confer greater honor upon her, than for her to make that home a type of what society should be, and what heaven is in the graces of exalted character. All that is dear and holy, noble and divine in society or nation, centers back to home, where woman presides as the angel of love.

Her seat is not in the halls of rude debate and legislation, nor in scenes of weak display and vanity, with its show of pride and selfishness, but in the quiet precincts of her home, where the blessed affections meet, and strife and hatred are not allowed to enter. "Home is the throne of empires on which woman sits, the scepter with which she wields the destiny of nations." Home, the shrine of her earliest hopes, around which all her heart strings cling; there, loved and loving, lies woman's noblest sphere, as mother, daughter, sister, wife.

Sweet and holy are the ties that bind the loving mother's heart to her infant gens; her lessons are the first precepts ever given; she is first known, best loved in infancy, and her unchanging duty is to form for earth and fit for heaven. How pure and unselfish is her love, as she constantly seeks our interest—not her own; and thus through the many changing scenes of life a mother's love extends and only ends with death.

As daughter, 'tis laid upon her, ever as a duty, to be the aid of her aged mother, and repay her in a thousand gentle, affectionate ways the love that crowned her childhood, and to relieve age from many cares and smooth life's pathway to the grave. On such a daughter, heaven's benignant gifts are ever shed.

As sister, those who have not proved her kindness know nothing of its worth; she is always a gentle, sympathizing friend, and how oft she is instrumental in saving a brother from ruin—to lead his wandering steps to heaven.

But more than all, as wife, 'tis her duty to be a guardian angel to her husband. Let her not, for any social interest or cause, neglect the hallowed duties of home, but watch over them with jealous trust, with devotional constancy, with unflinching vigilance, to keep that home the nursery of all the virtues, the sanctuary of the heart's deepest loves, the "holy of holies," where the divine presence may shine forth in her looks, and be manifest in her actions.—*Nadine Norwood, in Journal of Agriculture.*

### A Mother's Love.

What is there on the face of the wide earth like a mother's love—so unselfish, so full of devotion, so forgiving and so true? We have no other loves but what are exacting. The love of a brother, sister, husband or friend expects more or less attention and reciprocation of affection; but a mother asks not for recompense, seeks no praise. All through our infancy she guards and guides us, and through our childhood up to maturer years, even after we have left her side and strayed from her blessed teaching and advice, her heart still goes out to us, and prays for us that we may be useful and honorable and that our footsteps may never go astray.

What is there that will touch one's heart like a mother's love, so tender and enduring? A man who forsakes virtue, who leads a reckless, unscrupulous life, is sometimes called back from the depths of degradation by the memory of a mother's love, a mother's prayer or some recollection of his innocent boyhood, when a mother's influence cast a halo over all. That mother may not dwell among the living, but in the "secret places of the Most High" her love and care may still extend to us, may still smooth our pathway and help to chasten our hearts with kindness towards one another.

I have often thought that when my work on earth is ended, when I lay down my burden and have been rewarded for the good I have done, however small it may have been, no joy could seem holier or purer than the consciousness that I had smoothed my mother's road through life, and striven to repay the debt I owed her. Oh! could I but impress it on the minds of children to be kind to their mothers and solicitous about their comfort, how many care-worn hearts and silver hairs would go down in happiness to the grave! Blind and deaf to all duties of conscience must they be who would carelessly wound a mother's loving heart.—*Eva Edgerton, in Rural New Yorker.*

He had come over to see her father, and they had been sitting together for some time alone, and at length she tenderly asked him why he didn't get married. And he replied, with some agitation, that he had always feared that if he did some time he might stroll into a saw-mill and be pushed against the saw and have one of his legs taken off, and have to wear a wooden one, and he thought it wouldn't be fair to his wife. And then he added, nervously, that he was in a hurry and thought he wouldn't wait any longer.

A BIASED OPINION.—"That baby," said a thoughtless spectator at a baby show, "may look pretty at home, but is hardly up to the standard of a baby show. Do you not think so?" addressing a lady who stood near.

"Excuse me from commenting, sir," said the lady. "as my opinion might be biased. I am its mother."

The man asked for his hat and took a recess.



## Quenching Thirst:

Nearly 100 years ago, says *Hall's Journal*, Dr. Lind suggested to Captain Kennedy, that thirst might be quenched at sea, by dipping the clothing in salt water, and putting it on without wringing. Subsequently the Captain, on being cast away, had an opportunity of making the experiment. With great difficulty, he succeeded in persuading a party of the men to follow his example, and they all survived; while the four who refused and drank salt water, became delirious, and died. In addition to putting on the clothes while wet, night and morning, they may be wetted while on, two or three times during the day. Captain Kennedy goes on to say, "after these operations, we uniformly found that the violent drought went off, and the parched tongue was cured in a few minutes after bathing and washing our clothes, while we found ourselves as much refreshed, as if we had received some actual nourishment."

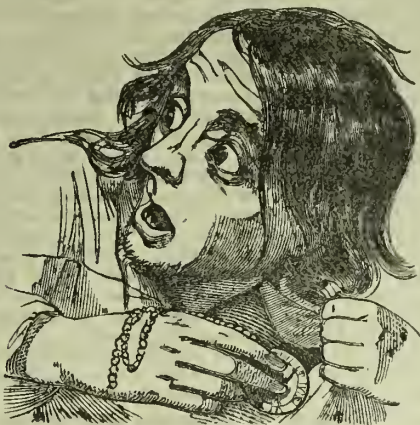
The bare possibility of the truth of the statement, makes it a humanity for any paper to give it a wide publicity, since there are few readers in any hundred, who may not go to sea and be shipwrecked.

We personally know that wading in water quenches thirst, and very few readers can remember being thirsty while bathing at the sea shore, or while swimming in our rivers. When the fearful horrors of dying with thirst are remembered, and the more fearful madness which is the certain result of drinking sea water to allay thirst, it is certainly well to encourage individual experiment in this direction, and solicit an authenticated report of the same.

**A MAN WHO KEPT HIS EYES OPEN.**—With the death of Sir Titus Salt, Baronet, which recently occurred in England, ends a career which may not inaptly be said to belong to the romance of commerce, for the story of how the owner of Saltaire made his fortune is indeed singular. Many years ago there were consigned to a firm of merchants in Liverpool several bales of some strange hairy wool from Australia. Nobody had ever seen the like of it before; nobody thought much of it; and thus it lay stowed away in a shed at the docks as though it were so much lumber. It happened one day that Mr. Titus Salt, a small manufacturer of Yorkshire, was in Liverpool, and wandering about the docks, he chanced to come across this neglected consignment of seeming rubbish. He examined it, however, and asked if he might be allowed to take some of it away with him. Of course he obtained permission to carry off as much as he pleased. What he did with the sample he thus procured need not be told. Suffice it to say that he came back again, offered to purchase the whole of the "rubbish," and became its possessor for a merely nominal sum. This hairy wool, this trash which no one would even look at as a marketable commodity, and of which Mr. Titus Salt secured the monopoly, was alpaca. Such was the way in which the fortunes of the great manufacturer and millionaire were founded. For years Mr. Salt and his family were the sole makers of that useful material, which has grown to be something like a rival to cotton; and on the strength of the valuable patent they thus acquired they built a factory, which, with extensions, has become one of the largest in England.

**THE BOY ON THE CARS.**—A boy on his travels, writes from Philadelphia to his mother, as follows: "Dear mother:—We got here. I like to live here. We went in a sleeping car, and a black man let down a little cupboard and made a bed in it. I slept in a top cupboard and Uncle Ben down below. It had sheets just like a bed, only you bumped your head pretty often. I climbed up. It was worse than a tree. There was a lady, and she had to sleep up high, too. She didn't climb; the man brought some stairs, and she went up to the top and worked herself in. There was a little baby, and it cried worse than Tooty, and some snored and my bed joggled, and I thought I'd sleep with Uncle Ben. His bed didn't joggle. He is never afraid. There is a horse car in New York, and we rode in it. A man comes in, everybody gives him some money. He has a silver thing that rings to make him honest. Uncle Ben says he would like to put one on some folks. Maybe he will give me one. The women come in, and stop and look at some other man, and he stands up and she sits down, except the one with the old bonnet on."

**TASTE IN RURAL FOUNTAINS.**—Col. Waring, in *Scribner's*, says: "A wide margin may be allowed for the exercise of taste in the arrangement of village fountains, and where private munificence enables the expenditure of a considerable sum, a good amount of exterior decoration may be admissible; but it should always be borne in mind that so much of the outlay as is needed for the purpose should go to secure a good artistic design. Especially should the use of cast-iron be avoided, as being from every point of view and under all circumstances, whether in the shape of cast-iron dogs, or deer, or attempts at the divine human form, absolutely and entirely inadmissible for artistic uses. Better a dug-out log horse-trough, overflowing through a notch at its side, as an ornament to the best kept village green, than the most elaborate pitcher-spilling nymph that was ever cast in an iron foundry."



A GUILTY CONSCIENCE.

## Young Folks' Column.

## A True Story.

One cold day in winter, a lad stood at the outer door of a cottage in Scotland. The snow had been falling very fast, and the poor boy looked very cold and hungry.

"Mayn't I stay, ma'am?" he said to the woman who had opened the door. "I'll work, cut wood, go for water, and do all your errands."

"You may come in at any rate, until my husband comes home," the woman said. "There, sit down by the fire; you look perishing with cold;" and she drew a chair up to the warmest corner; then, suspiciously glancing at the boy from the corners of her eyes, she continued setting the table for supper.

Presently came the tramp of heavy boots, and the door was swung open with a quick jerk, and the husband entered, wearied with his day's work.

A look of intelligence passed between his wife and himself. He had looked at the boy, but did not seem very well pleased; but nevertheless made him come to the table, and was glad to see how heartily he ate his supper.

Day after day passed, and yet the boy begged to be kept "until to-morrow;" so the good couple, after due consideration, concluded that, as long as he was such a good boy, and worked so willingly, they would keep him.

One day, in the middle of winter, a peddler, who often traded at the cottage, called, and, after disposing of some of his goods, was preparing to go, when he said to the woman:

"You have a boy out there splitting wood, I see," pointing to the yard.

"Yes; do you know him?"

"I have seen him," replied the peddler.

"Where? Who is he? What is he?"

"A jail bird;" and then the peddler swung his pack over his shoulder. "That boy, young as he looks, I saw in court myself, and heard him sentenced '10 months.' You'd do well to look carefully after him."

Oh! there was something so dreadful in the word "jail." The poor woman trembled as she laid away the things she had bought of the peddler; nor could she be easy till she called the boy in and assured him that she knew that dark part of his history.

Ashamed and distressed, the boy hung down his head. His cheeks seemed bursting with the hot blood, and his lip quivered.

"Well," he muttered, his frame shaking, "there's no use in my trying to do better; everybody hates and despises me; nobody cares about me."

"Tell me," said the woman, "how came you to go, so young, to that dreadful place? Where is your mother?"

"Oh!" exclaimed the boy with a burst of grief that was terrible to behold—"oh! I hadn't no mother ever since I was a baby! If I only had a mother," he continued, while tears gushed from his eyes, "I wouldn't have been bound out, and kicked and cuffed and horse-whipped. I wouldn't have been saucy and got knocked down, and run away, and then stole because I was hungry. Oh! If I'd only had a mother?"

The strength was all gone from the poor boy, and he sank on his knees, sobbing great choking sobs, and rubbing the hot tears away with the sleeve of his jacket.

The woman was a mother, and, though all her children slept under the cold sod in the church-yard, she was a mother still. She put her hand kindly on the head of the boy, and told him to look up, and said from that time he should find in her a mother. Yes, even put her arms around the neck of that forsaken, deserted child. She poured from her mother's heart sweet, kind words—words of counsel and of tenderness. Oh! how sweet was her sleep that night—how soft her pillow! She had plucked some thorns from the path of a little sinning but striving mortal.

That poor boy is now a promising young man. His foster-father is dead. His foster-mother is aged and sickly, but she knows no want. The poor outcast is her support. Nobly does he repay the trust reposed in him.

"When my father and mother forsake me, the Lord will take me up."—*The Standard-Bearer*.

## GOOD HEALTH.

## Exercise for the Teeth.

M. L. Holbrook, M. D., in the *Herald of Health*, says: "There is very little doubt but the human teeth have become through successive ages of civilization more fragile and liable to decay than is either pleasant or profitable. Just how much of this is due to lack of care and cleanliness, and just how much more to food, no one can tell; but it is evident these causes are among the chief, and it would seem reasonable that man in civilization should do something to prevent it. Now in barbarous tribes of men the teeth are generally sound, and yet a toothbrush and soap is never used, and this may be because their teeth are exercised more by hard food, and cleaned by the abundant flow of saliva which would naturally come from hard food. Man cannot, however, go back to a savage life, so he must contrive means for keeping his teeth so that they shall not decay. That one of these means is the toothbrush and tooth-soap is certain; but is this sufficient? We think not, and believe that exercise is an additional means of toughening the teeth and making them strong. But how are they to be exercised? Surely it cannot be done on soft bread and such food as is too often found on our tables. It may be that the eating of raw wheat would give the proper exercise, and we suggest that it be tried in this way: Each day let the teeth be exercised on a teaspoonful of clean, dry, uncooked wheat. Children become fond of it, and if chewed fine it is very sweet, and promotes the rapid flow of much saliva. Unless swallowed whole it can not do harm. It must not be supposed that any effect, however, to prevent entirely the decay of the teeth weakened by ages of bad dietetic habits, can in one generation be effected, and so the dentist must for the present be called in to our aid.

"Speaking of dentists, let me remark that a good New York dentist told me the other day that the teeth of boys brought up in New York were much worse than those of country boys. The jaws are smaller, the teeth softer, and not always covered over with enamel. If this is so, it is a great misfortune to be born in a city. But the dentist admitted that if the boys and girls were to chew a handful of raw wheat every day, it would cure the defect, so let us try it. We exercise our horses, why not our teeth?"

## Treatment for Cuts.

D. McAlpin writes to the *Builder* as follows: "Take a fine needle and a double thread, (No. 60 to 80), knot it, and sew up the wound immediately after it is cut; do not go deeper than the skin. If anyone can be induced to try this, they will never do anything else for a cut. It requires no wrapping up—just keep it clean. I saw it practiced in the workshop by one of the workmen 40 years ago, and was recommended to try it. I tried it a short time ago and it was quite satisfactory. By exposure to the air, the matter that oozes sets and hardens in a short time."

The editor of the *Builder* notes the above writer is partially correct, but not entirely, for the reason that he overlooks circumstances with which only surgical practitioners, by their large experience, can become familiar. When by a deep cut a small artery has been wounded, the closing up of the skin will not stop internal bleeding, and a swelling, inflammation and suppuration may result, which may necessitate the opening of the cut again; therefore, when there is much bleeding, it is better to introduce into the wound at first some lint or its equivalent, and when the bleeding has subsided, then it may be sewn up. We ourselves, during our practice in former years, have had more than one case where a druggist had sewn up a cut, when, after a week of much swelling and throbbing pain, the re-opening of the wound, which had been healed on the surface but not from the bottom, became necessary. Wounds must heal from the inside outward, and as long as the inside is not healed, it is not only useless but a positive harm to close the skin. When, on the contrary, the wound is shallow and only skin-deep, or slightly more, the remedy of our correspondent is correct, and it is much better to sew up the wound with a few stitches than to cover it with a plaster and shut off the access of air, which is decidedly injurious. It is a most hurtful idea that it is good to shut off the air; on the contrary, the access of air must not be shut off; the skin is made to be in contact with the air and it will heal much better without covering, if dirt and dust is only kept out of it.

**PRECAUTIONS IN SCARLET FEVER.**—The funerals of those who die of infectious diseases should be strictly private. Disinfect the clothes, bedding and room by sprinkling them with a solution of commercial carbolic acid, two parts to one hundred parts of water, or other disinfectants may be used in a similar way. Let the door be closed for several days. Sulphur may be burned in the room sufficiently to fill it with sulphur four times a day. Continue this for four or more days. Then strip off the paper, scrape the walls and ceiling, and whitewash them. Scrub the woodwork with strong suds and a solution of carbolic acid.

## DOMESTIC ECONOMY.

## Philosophies in Cooking.

A writer in the *American Cultivator* says: The various processes of cooking often determine both the taste for food and its ultimate beneficial effect on the system. In the case of animal food, whatever renders its fiber harder makes the meat less digestible; the flesh of young animals, or those that have never been overworked, is easily distinguished from that of older, tougher cattle. Keeping tends very much to improve the tenderness of meat. Few animals are fit to be eaten the day they are killed, and yet, for the lack of a supply of ice and other conveniences of trifling cost and trouble, immense quantities of tough and unfit meat are annually consumed in country places. By the action of salt on lean meat a considerable quantity of the natural juices and flavor is extracted and absorbed, rendering the fiber harder, drier and more indigestible. Occasionally salt meat is agreeable, but as a regular article of diet it is objectionable, since the introduction of so much salt into the system is prejudicial to health, lessens the relish for food, induces cravings for fluids, produces indigestion and skin disease. Fats form an exception; they have no water to lose, hence salt makes them no harder, and, in fact, fat pork is rendered more digestible by salting and will digest quicker than fresh pork, while beef, long salted, requires two hours longer for digestion than roast fresh beef.

In boiling beef loses 15% of its weight; roasted, 20%; boiled mutton shrinks 10%, while roasted 24%; fowl cooked by boiling 13%, and they show 25% loss by roasting. To boil meat properly it should be plunged at once into boiling water; if intended for soup, use cold water and gradually heat it. Boiled meat eaten without the soup formed in boiling loses part of its nutrition. Broiling meat seals up the pores through which the juices might escape. Roast meat is more digestible than boiled, because the coating on the outside, produced by sudden contact with great heat, retains the savory and soluble elements. Frying is most objectionable, and, unless handled with great skill, it not only renders the meat harder and more indigestible, but it imbues it with boiling fat and destroys the flavor. No meat diet is so economical as the preparation of soups and stews, since even shin-bones, broken up, have a nutritive value of one-third that of beef in carbon and one-sixth in nitrogen.

## Using Brooms.

Mr. and Mrs. Hefty, says the *Journal of Agriculture*, have learned to economize in many things, and this is the way they do. When half a dozen brooms are brought home they are laid immediately on the highest shelf in the closet and no one takes one down unless mother says so. When a broom becomes too much worn to sweep the sitting-room carpet, it is consigned to the back kitchen, where it serves to do the dirtiest work until it is fit for nothing but a scrub broom. The broom that has been used for a while to sweep the chamber is brought down to use in the sitting-room, and a new broom is hung up in the chamber, so there are three brooms in use at once, but each has its proper place, and each its allotted work. By the time the scrub broom is worn out the broom in general use is worn enough to take its place, and the chamber broom comes down, and a new one takes its place. In this way an ordinarily small family will make six brooms last two years, and always have clean brooms for clean work, and old worn brooms for dirty work. But they are always hung up. Each has its proper place, and each one of the family is required to replace it after using. It requires some care and watchfulness to form the habit of putting them in their proper places, but when the habit is formed it saves an endless amount of work and worry. The best attachment for hanging a broom consists of a strip of leather half an inch wide, or a little less, fastened with two carpet tacks on each side of the handle at the top, forming an open loop that any little child can slip over a nail, and one that will wear as long as the broom. Try it, and have done with lop-sided brooms.

**TO PRESERVE THE NATURAL COLORS OF DRIED PLANTS.**—The following method of doing this is given in a German pharmaceutical journal, and will interest botanists and others: Dissolve one part of salicylic acid in 600 parts of alcohol, heat the solution to boiling in an evaporating dish, and draw the whole plant slowly through it—prolonged exposure discolors violet flowers; shake off any excess of liquid, dry between blotting paper, and press in the usual manner. A frequent renewal of dry blotting pads, particularly at first, is desirable. Thus treated, plants are said to dry rapidly, furnishing beautiful specimens which retain their natural colors in greater perfection than by any other process.

**STEAMED BROWN BREAD.**—One quart of rye meal, one pint of Indian meal, one cup of molasses, one teaspoonful of sifted cream yeast stirred in the molasses, a little salt. Stir soft with cold water, steam three hours and dry off in the oven 15 minutes.

**A HINT.**—Old worn-out blankets covered with calico make very good comforters.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line ..... .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONK

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, June 2, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—The Fish-Crow; Farmers' Meeting at Stockton; The Advance of Agriculture, 337. War and Wheat; Oranges in California and Florida; Harvest Hands, 344. Hop Growing in California; The Heald & Sisco Centrifugal Pump; Irrigation in Merced County; Notes to the Editor; New Use for Honey, 345. Notices of Recent Patents, 348.  
**ILLUSTRATIONS.**—The Fish-Crow, 337. Heald & Sisco Centrifugal Pump, 345.  
**CORRESPONDENCE.**—Honorary Names in Scientific Nomenclature; Food Plants.—No. 2, 338.  
**POULTRY YARD.**—Care and Management of Ducks, 338. Fly Trap, Chicken "Mother" and Items, 338-39.  
**THE SWINE YARD.**—Foxtail and Pigs, 339.  
**SHEEP AND WOOL.**—Public Shearing in Colorado, 339.  
**HORTICULTURE.**—Olive Trees in Asia Minor, 339.  
**ARBORETCULTURE.**—Coffee Culture.—Experience in Ceylon, 339.  
**PATRONS OF HUSBANDRY.**—Our Industrial Condition.—No. 3; Women in the Grange; Assessment of Growing Crops and other Evils; Co-operation in the Sale of Wheat; Notice of Meetings, 340.  
**AGRICULTURAL NOTES** from the various counties in California and Nevada.  
**HOME CIRCLE.**—"The Sunrise Never Failed Us Yet" (Poetry); Poor Farming; "Home Circle" Writers; Hints about Dresses; Rules for Home Education; Cheerfulness; Houses and Things; He Wanted Prayers Too; A Woman's Generosity; Melancholy Consolation; Woman's Sphere; A Mother's Love; A Biased Opinion, 342. Quenching Thirst; A Man Who Kept His Eyes Open; The Boy on the Cars; Taste in Rural Fountains, 343.  
**YOUNG FOLKS' COLUMN.**—A True Story, 343.  
**GOOD HEALTH.**—Exercise for the Teeth; Treatment for Cuts; Precautions in Scarlet Fever, 343.  
**DOMESTIC ECONOMY.**—Philosophies in Cooking; Using Brooms; To Preserve the Natural Colors of Dried Plants; Steamed Brown Bread; A Hint, 343.  
**QUERIES AND REPLIES.**—Birds and Mutton Hams; Onion Growing and Irrigation; Analysis of Sumac; Candles from Mutton Tallow, 344.  
**GENERAL NEWS ITEMS** on page 348 and other pages.  
**MISCELLANEOUS.**—Horse Shoeing; Invisible Ink for Postal Cards, 339. Education, 346-47. "Flesh Worms," 347.

## NEW ADVERTISEMENTS.

Walter's Fruit Drier, S. F.; Fancy Cards, J. B. Husted, Nassau, N. Y.; University of California, Martin Kellogg, Dean of Faculty.

## The Week.

The State has had her face washed again, and it was a good thorough ablution in some parts. The telegraph has been busy reporting the grateful dispensation. At San Diego it was showers. At Los Angeles it was a quarter of an inch of straight-forward lavation, with more in the back country. In the interior, too, the refreshing was quite abundant. In Sacramento and Yolo counties more than a third of an inch was the measure of the blessing. Other parts of the State were embraced in the rain area. We have brief notes from many readers, who haste to tell us that their outlook is cleared and brightened. Much late sown grain, in the regions where it has not passed the bounds of possibilities, bids fair to put forth new growth with the new conditions. Other grain which was well under way toward maturity will stop a moment to fill out its heads, and pasture fields, gardens, orchards, vineyards and bee pastures will take vigor from the storms. Thus far we have not heard that the downpour was anything but gentle, and was unaccompanied by rude winds, which sometimes do much amateur and unprofitable threshing. The days which have thus far followed the rains have been cool, and thus the danger from fungi, which accompanies moisture, has not found its opportunity. The days are indeed propitious, and their influence is felt in the hearts of the people.

As we write it is decoration or memorial day. The business of the country pauses in its hurried rush to pay a tribute to the fallen heroes who lie north, south, east and west, resting from their glorious deeds. It is a happy thought that the whole country has a thought to honor its heroes. Flowers will fall alike to-day upon the blue and the gray; fragrant flowers redolent of blessings upon the memories of those who died to teach us that we all are brothers, and all have brothers' interest in the future of our glorious land.

## War and Wheat.

While the war in the East is proceeding with savage rapidity our wheat is growing with gentle speed. The splendid conditions which have prevailed during the last month have done the best possible service for growth. The people at the springs and watering places of our State have had to recreate by firelight instead of sunlight, and shudders instead of sudorifics have been the portion of villagers and cityites, but this matters little, for the crops have improved as if by magic, and the weather has been coining money and property for our State as a compensation for the discomforts of butterflies and bummers. Thus let it ever be.

Inasmuch as our selling capacity promises to be greatly increased we propose to make, in this column, some notes of the conditions abroad which will act upon market prices. There seems no doubt but that the price for wheat will rule at a very satisfactory figure. It may be that the high point which some have anticipated will not be attainable at the opening of the season, but of generally satisfactory averages there seems no doubt whatever. In the first place the amounts of wheat visible in nearly all of the European centers are very small and nowhere is any accumulation reported. Our latest mail advices from England say: "The quantity of English wheat in farmers' hands, as well as granary stocks in the principal ports, seem extremely small, and the position of trade would indeed be critical if by any adverse political complications there should be chance of any limitation of our supplies from the northern Russian ports or the risk of any interference with our Indian trade, which must be, for the next two months, our main reliance."

This question of supplies from Russia is now one of great importance. The outlet for Russian grain through the Mediterranean is of course closed for the present, and there is no speedy prospect of its opening. What Russian grain is exported must therefore be carried by rail from the grain regions in the central and southern portions to the northern seaboard for shipment. The chances of such movement are given by the *Scotsman*, published at Edinburgh, as follows: "It is not the interest of Russia to close her commercial relations with this or other countries, and therefore it may be considered pretty certain that the government of that country will do its utmost to keep the railways as clear as possible, and to facilitate the conveyance of all goods to St. Petersburg, Riga, Konigsberg, and other leading ports connected with the great railway lines from the interior and south of Russia. Should the war continue for some time it would be a great benefit to the people of Russia to have an outlet for their produce, and although the long line of railway route to the Baltic ports will add much to the price of grain, etc., still there will be as much inducement for the government of that country to carry on its commerce and to secure employment and money to its population, as well as to give evidence of its ability and desire to continue peaceful relations with all other governments, though it considers itself forced into a war with Turkey." This is doubtless true as far as disposition is concerned, but the waste of war and the increased amounts of food material required for the maintenance of an army when on the move will, we think, call for the use of a good part of the grain produced, and this, together with the friction from the movement of the grain in new directions, will restrict shipments of wheat even if productive operations should not be interfered with.

Another point mentioned as contingent in England's wheat supply, is the receipts from India. Of course there is still the chance that the Indian route may become involved in warlike movements. Supposing, however, that this does not come, there seems now the prospect, that the Indian exports of wheat will be better than the early reports of the famine led us to believe. A correspondent of the *English Agricultural Gazette* writes from Punjab, March 27th: "The harvest is just commencing, wheat is not yet ripe, but oats and barley are being reaped. We shall have splendid crops this year. Grain is cheaper this season than it has been for years. Grain (*Cicer arietum*) is selling at 56 lbs for 1s; last year, at this time, it was 29 lbs for 1s. Wheat is 27 lbs to 29 lbs for 1s., and other grain in proportion. The famine in Bombay and Madras presidencies does not affect us. The average rainfall in the affected districts varies from 22 to 54 inches, but during the present year only from six to 25 inches have fallen. The grain supply is said to be abundant, but water and fodder are scarce everywhere, and cattle are dying off in numbers, so that when rain does fall, land owners will have no cattle left to do their plowing with." The latest from the famine region is the following by cable from Calcutta, May 29th: "A heavy rain has fallen in Madras, but did not penetrate far inland. Its effects in the famine district will doubtless be good. The numbers on the relief works are still increasing. There is, as yet, but little change in the condition or prospects of the famine district."

Although these items of news concerning the prospects of crops abroad seem to indicate that there would be no famine rates for wheat, they do not argue against good profitable prices, more profitable than our producers have realized

for some time. It is of course impossible now to tell what the season will bring, but we think producers will do well to keep their own opinions concerning the value of their grain. There may be expected, from this time until the crop is well in hand, studied efforts to depress the price and to magnify supplies in the interest of those who have money ready to invest, and desire to double it in wheat. It is true that the price of wheat just now is on the decline, but the trade is little more than nominal, and the time has not come for healthy trade to begin. The proper thing to do now is to get the crop harvested in the best possible condition, so as to turn out as clean sample of wheat as can be done by careful threshers. It is proper also to watch studiously the course of the market and of political events in Europe, so that when the time comes for selling or refusing to sell, the producer may have an intelligent and satisfactory reason for one action or the other.

## Oranges in California and Florida.

This year's orange crop in this State is now nearly all in, and the figures of receipts in this city show a considerable increase in production over the amounts of former years. From Los Angeles county the receipts since last November, when the crop began to arrive, have been 6,995,620, according to the record kept by the commercial editor of the *Call*. Last year's receipts to this date were 2,771,170, and the year before 5,380,300. Thus it appears that the receipts from Los Angeles this year have been greater than ever before. The progress henceforward may be expected to increase in almost geometrical ratio from the numbers of young trees which will yearly come into bearing. The field for this increase, even in our own markets, may be seen in the fact that we have, during the last six weeks, received 2,879,000 oranges from Tahiti. These large importations have oversupplied the immediate demand, and overland shipment has begun. The *Call* says: Last Wednesday a car-load of Tahiti oranges was shipped to Chicago, and on Monday a car-load will start for Denver. The fruit is wrapped in paper and packed in light boxes holding 200 each. A car holds 200 boxes, or 40,000 oranges. A car-load of Los Angeles oranges was shipped a few days ago from that city to St. Louis. This is the first car-load of the California fruit ever sent to that market, and the result of the venture will be looked for with much interest. If these shipments result favorably, the question of relieving this market when overstocked is solved.

In this connection it will be of interest to read what our rivals on the gulf have done in this branch of production. Major G. H. Bostwick has furnished the *Florida New Yorker* with the following statement of the Florida fruit crop for 1876: "The amount of the orange crop of Sumter county last year was 1,000,000, and in 1875, 1,125,000. That of Liberty county was 225,000, and in 1875, 250,000. That of Franklin county was 200,000, and in 1875, 150,000. That of the counties of Calhoun and Jackson was 400,000, and in 1875, 350,000. That of Orange county last year nearly 1,000,000. The increase in the number of young orange trees planted in groves in the last-named county within the last three years is probably greater than that of any other county in the State, the number being nearly or quite 1,000,000, besides a goodly number of lemon trees. From the best attainable information received the total amount of the orange product of the State of Florida for the year 1876 may safely be set down at 17,000,000."

## Harvest Hands.

There will doubtless be more men looking for harvest work in the prosperous counties of the State than can be given it. Many are thrown out of employment by the drouth in some parts of the State. There will be many who will do wisely to stick to good employers even if they cannot get much more than their living, because the tide of fortune will turn and then will be their opportunity for surplus earnings again. The men who are by force turned aloof to seek employment and the floating multitude which works during harvest and tramps during the rest of the year will have but a poor show this year. In our runs about town we have come upon knots of these men who are busy canvassing the chance for work in the grain fields, and they seem to be as depressed as the loungers about the stock markets. The situation in some parts of the country is shown in the following from the *Napa Register*: "P. Gesford, who lives on the Sonoma road, about three-fourths of a mile from town, says that between now and Saturday night he could find 20 men who would be glad to work for their board. Living on the public road, he has sometimes a dozen applications a day for work, from men who are tramping with their blankets. Mr. Gesford now has six hired men, four of whom are glad to get work for their board, and the other two receive \$10 and \$13 per month respectively." We would advise those of the farm laboring class who read our paper, to cling to any honorable engagement which offers them a home and a subsistence, and do everything which can make them of value to their employers, because if they cut loose from the base of supplies the chances are few this year for employment.

## QUERIES AND REPLIES.

### Birds and Mutton Hams.

EDITORS PRESS:—Can you give me a recipe for preserving birds? I have thought of making a collection of as pretty birds as there are here, but have no knowledge of the subject.

Can you also tell us what is used for painting cheese cloths? We have been thinking that while mutton is so cheap, it would be a good time to dry some mutton hams. Have never seen any, but think they would be good, if not dried too much and kept from the air.—MRS. J. H. G., Santa Barbara, Cal.

The practice of taxidermy is easy to acquire if one have patience and a taste for the work, and a collection of birds may be made very instructive. The directions for preserving and mounting cannot, however, be compressed into the space which we can give the subject, and we would advise our querist to send for "Brown's Taxidermist's Manual." It will be sent by mail post-paid for \$1, by Orange Judd Company, 245 Broadway, New York City.

Cheese bandage is died with a preparation of "annatto," a harmless vegetable coloring matter derived from the coating of the seeds of the *Reza Orellana*. The coloring matter is put upon the market in several forms and can be bought at most drug stores. We believe that Eastern ham hags are dyed with "turmeric," another vegetable dye, although cases have been reported where analysis has shown chromate of lead in the covers. This is of course dangerous, and some firms have been prosecuted by the health authorities in Eastern cities. We see no reason why mutton hams should not meet a demand. We have often made them at the East. The meat is tender and of a most delicate flavor when carefully smoked.

### Onion Growing and Irrigation.

EDITORS PRESS:—I notice in your issue for May 12th, in the market reports, new onions quoted at \$3 per cental. Does this mean dried or green? If the former, can you give me any information of the culture required to bring them in at this season? Especially I would like to know the time of planting, and whether they are irrigated or not?

I would like to know the best method of irrigating onions, both those from sets and from seeds, also whether irrigation would not tend to produce scallions?

I wish to construct a water ditch, about 800 yards long, 10 or 12 inches wide and six or eight inches high, which will take out from one to six inches in depth of water at different seasons.

What is the greatest, least and best fall per rod of such a ditch through black adobe, sandy loam and loamy sand, and what is the best way to puddle such situations?—C. R. H., Santa Barbara.

The onions referred to were "dried," that is, without tops, mature. They were grown on moist land in the interior, near Stockton, if we remember correctly, the location being such that they came on and ripened thus early through favorable natural conditions. Most of the onions received in this market are thus grown. Union City onions, which are among the most famous, are produced on the lowlands of Alameda county and are not irrigated, as the natural moisture is ample. Thus also with the large quantities which are grown on the tule lands.

With the irrigation of onions we have had no experience and must refer our querist's questions to those of our readers who have. We shall be pleased to receive communications on the points mentioned. Will some reader also give our querist the points on the construction of his ditch?

### Analysis of Sumac.

EDITORS PRESS:—As a contribution to the sumac question, I remark that the species growing in the Southern States, which has of late been used in tanning and dyeing, is *Rhus copallina*, the copal sumac, which, unlike most of the other species, is satisfied with the poorest soils, and grows wild all over the Gulf States in old fields and open woods alongside of the "American" persimmon and dogwood. It seems to resemble in quality the *Rhus coriaria* more nearly than do the *R. glabra* and *typhina*; and on account of its habits it would doubtless be better adapted to the climate of California than the others mentioned. I would be glad to receive a quantity of the dried California sumac sufficient for a determination of its comparative value as a tanning and dyeing material.—E. W. HILGARD, University of California, Berkeley, May 25th.

### Candles from Mutton Tallow.

EDITORS PRESS:—I would be thankful to you for the information of the quickest method of manufacturing candles from sheep tallow, and what chemicals to use to harden it or give it more consistency?—SUBSCRIBER, Tres Pinos, San Benito county.

One of our earliest lessons in candle making was to put a certain amount of mutton suet with the beef tallow, to get a good firm, hard candle. It must be that our querist has sheep fat obtained from rendering the carcass, for if it were pure sheep tallow, or suet, he would find it hard enough. If we had the problem to solve practically, we should add to the sheep fat some spermaceti, paraffine or stearic acid, whichever was obtainable at the nearest drug store. All these substances are white and hard; too brittle to make good candles without the addition of more soft and tenacious matter. We should experiment with adding a small amount of the purchased material to fat enough for an experimental candle, and then make up a formula which would meet the needs of the sheep fat which we wished to utilize. It would be impossible for us to prescribe quantities for the mixture without experiment to show the condition of the sheep fat, and these experiments our querist can make for himself.



## Hop Growing in California.

One of our enterprising hop growers corraled a premium at the Centennial, and thus did good service, not only in bringing his product but the whole hop resources of the State into the notice of the hop users of the world. There will be an opportunity this fall for Mr. Clock or for any other California growers to make another display before a European audience. We read in the London *Farmer* that an International hop show and exhibition of utensils and apparatus employed in hop culture will be held at Nuernberg, from October 7th to October 17th of the present year. Pending the issue of an official programme, it is preliminarily announced that application for space on the part of intending exhibitors will be received up to June 1st. Such applications must be addressed to the office of the *Allgemeine Hopfenzeitung*, at Nuernberg, where also further information on the subject may be obtained.

This notice comes late for our producers to comply with the provisions of applying for space by June 1st, but we doubt not in applications from this distance the rules would not be rigidly enforced. We would suggest that it would be a good thing to have some of our peerless California and Oregon hops shown in the great hop-using center of the world.

Some of our hop-growing regions will doubtless be affected somewhat by this year's lack of water, while in others there has been ample for all requirements. From Sacramento county we have a very interesting report of the condition of the crop, prepared by a grower for the columns of the *Valley Agriculturist*. If we mistake not his initials, he is the gentleman who wrote a good article on this subject to the *RURAL PRESS* last fall, and we should be glad to hear from him again. We quote, concerning the season in Sacramento county, as follows:

"The light rain that we have had this winter has not been, I will venture to say, sufficient to start one-half of the hop hills on the bank of the river. Most of the hops in this county are grown on or near the banks of the Sacramento and American rivers; neither river being bank full, this winter it has caused the river land to be very dry. Back from the river, what we call tule or low ground, the land is quite moist and nearly every hill has made its appearance and there is a prospect in that ground of a fair yield. In 1876 there were 374 acres of hops in Sacramento county, and I think there were enough planted this spring to make out 400 acres. From this 400 acres I am sure that there cannot be picked out one-quarter or 100 acres that will yield an average crop this year. The average crop for last year in this county was a trifle over 1,700 pounds per acre. Hops are very generous in their yield, and very seldom come short and most always run over the estimate, and with my experience in the business for about 18 years, with the present outlook, I cannot see how the other three-fourths, or 300 acres, can produce over an average of 800 pounds to the acre. Taking these figures as a basis of calculation with the increased average, we will have only, in round numbers, this year, 400,000 pounds, against 637,000 last year. If I should change these figures at all, I would sooner reduce them than to increase. I hear of one large yard that is already abandoned, and another, that the proprietors are discussing the matter seriously whether to put any more work on it or not. In examining my hills the last few days, I find some of the roots that were planted this spring have thrown out vines from six to eight inches long, and then suddenly stopped growing and withered up on account of the ground being so dry that the roots would not throw out fibers for the support of the vine. On a close inspection, I find both ends of the cutting or root rotten. Some of the old hills have started from one to three and four inches, and then become lifeless and dry.

"I think there is a good deal to be learned in regard to pruning of our hops. If a person is sure that there will be a wet season they can prune at most any time and very close; but if the prospect is dry I think it better to put it off late and then prune, but a very little—say cut off just the vines that the plow brings to the surface. It appears to be on the theory that the buds on new wood will start out much earlier, more vigorous than they will on old wood. Close pruning means that nearly all of the new wood is cut away, and the bud has to start from the old stump or stool. The object of close pruning is to cut away all but a few buds, and direct the sap through these few, only four vines being necessary to each hill, and thereby doing away with the vast quantity that will appear from each hill in a natural or unpruned state. I have thousands of poles that I shall pull up in a few days, some having no vines at all, and some supporting a vine so weak and unpromising that it will not justify the poles standing all summer and rotting, for so small a product. The price at the present time is not very encouraging, but on account of short crops something may turn up in favor of the hop grower so that he will realize full as much for his season's work as though he had a full yield."

We shall be pleased to hear from our hop growing readers in Santa Clara, Napa, Sonoma, Mendocino and other counties concerning the prospects and observations in their yards.

THE *Mariposa Gazette* states that the rush of tourists to Yosemite this season is in excess of any previous year.

## The Heald &amp; Sisco Centrifugal Pump.

The engravings on this page represent different styles of the Heald & Sisco centrifugal pump, lately introduced on this coast by Parke & Lacy, 417 Market street. The principle of the centrifugal pump is so well known as to need no particular explanation. These steam pumps are used for a great variety of purposes, and especially in places where there is a great amount of water to be raised in a short time, and with slight expenditure of power.

Fig. 1 of the engravings shows the vertical Heald & Sisco pump, which is intended to stand on the bottom of the tub, well or reservoir, as the case may be, or it can be fastened at any required distance from the bottom; the only essential point being that the pump should be constantly immersed in the fluid to be raised.

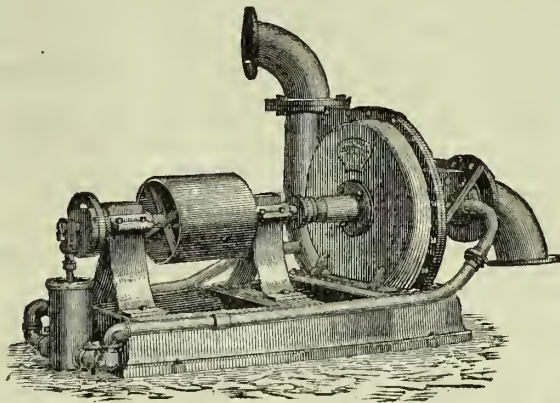


FIG. 2. HORIZONTAL PUMPS AND SELF PRIMER.

The scroll or shell, A, is of brass or cast iron, as circumstances require, made in halves, and bolted together in the usual manner. The piston is attached to the shaft, D, and works in the scroll, running lightly in nicely fitted bearings. The fluid enters the pump at the bottom and is discharged at F. This style of pump is especially useful for draining lock pits, coffer dams, tan vats, etc., in short for any situation in which large quantities of very foul water, containing mud, sand, gravel, bark, etc.,

pressure system is the best when a moderate quantity of water is to be raised a great height. But when a large quantity of water is to be raised a short distance the centrifugal plan is preferred, as it accomplishes its results with small power. We now speak of centrifugal pumps run with a belt; when the question is narrowed down to a direct connection of engine with pump, it is obvious a limit is quickly reached. An oscillating engine of short stroke is the ideal machine for running a centrifugal pump by direct connection. There is less steam and less wear in general, and the engines are compact and simple. But oscillators have hitherto labored under serious objections, and have not, therefore, held their own against machines which were not open to these objections. The company manufacturing these pumps took hold of the oscillating engine to remedy the defects, and have succeeded perfectly. This engine saves steam, is strong, light and compact, and very cheap in view of its capacity.

Fig. 3 exhibits the main features of the machine as now made; D is the steam induction pipe; E the eduction pipe; A the valve chamber on the cylinder, the rolling valve within it being worked by an eccentric from the engine shaft. The guides for relieving the strain on the piston-rod project from the head of the cylinder, and are partially concealed by the counterbalance wheels J J; but the end piece, G, is seen between the wheels. F is the force pump, used for priming the main pump B, through the pipes

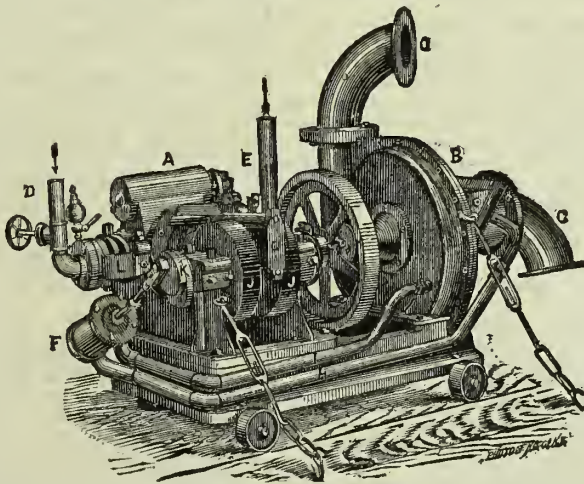


FIG. 3. HEALD &amp; SISCO STEAM PUMP FOR IRRIGATING, ETC.

are to be raised expeditiously and cheaply. It is not liable to get out of order or clog.

Fig. 2 is the horizontal pump with "self-primer," a machine for the use of wreckers, contractors, and all who want an efficient and reliable pump, to be run by the belt from their own engine. This is the same as though the vertical pump (Fig. 1) were turned on its side,

I H. It is operated by a rod working from the eccentric A, and the end of the rod, on the eccentric, is placed on the center when the priming is finished, so that the force-pump may be at rest. C C are "swiveled" elbows for suction and discharge, turning in any direction, and detachable. The chains are merely to represent a mode of securing the machine to the deck of a wrecking vessel. In the cross-head of the guides is one of the patented devices, designed to take up the slack occasioned by the wear of the parts. Still another peculiarity (not easily described here) consists in the use of the bale L with the tubular trunnions seen in conjunction therewith, the device having for its object the securing a better connection of steam-pipes with the engine.

For many purposes, such as irrigating, draining, etc., this style of pump is of great value on this coast, as it is compact, durable and lifts a large amount of water rapidly and cheaply.

FAST.—The *Butte Record* of May 21st says: "Saturday was the last day of the first meeting of the Chico Stock Association, and as a very fitting termination to what has probably been the most successful first meeting ever attempted by any association, Goldsmith Maid trotted a mile heat in 2:14, which is the fastest time ever made in a match race."

We have received a very fine box of cherries from Dr. Strentzel, Alhambra ranch, Contra Costa county. The doctor is famous for his fruit, and also for his courtesy in remembering his friends in the city.

ON FILE.—"Webber Lake and Its Attractions," J. G. L.; "Note on Wool Clip, Etc.," J. M. T.; "Taxation," S. P. S.; "Education," C. M. A.; "Seeds," C. H. S.

## Irrigation in Merced County.

We had a brief conversation the other day with C. V. Cressey, Esq., of the Grangers' Bank concerning the proposed irrigation scheme in Merced county, in which he and other land owners are interested. It will be remembered that the owners employed Prof. Davidson to go over the ground and report upon the practicability of turning the waters of the Merced river upon the lands. His report was favorable and but approves the judgment of the dwellers on the land who have interested themselves in the project. Mr. Cressey says there is no doubt about the adaptation of the lands for irrigation and that irrigation is necessary to bring the land to profitable production. There are, however, several questions to be settled before the necessary funds can be raised. One is the doubt which arises because the banks hold a lien upon much of the land. To issue bonds to raise the money for the execution of the irrigation works, it will be necessary to secure them by a first mortgage, and the banks must consent to make their claim a second mortgage. This they may be willing to do if the cost of the works does not exceed \$2 or \$3 per acre, but if it should amount to twice or more than this sum it would be very doubtful if the banks would allow such a mortgage to take priority of their claim. Mr. Cressey and others have unincumbered lands but much of the land is not thus free. For several years the indebtedness has been increasing and though irrigation seems the only resource, there is a doubt if the farmer, can avail themselves of it.

Mr. Cressey thinks the scheme, if it passes this obstruction and is thereafter managed uprightly, will be of immeasurable advantage to all owners of these lands. The matter is, however, to go forward to ascertain definitely what will be the cost of the ditches, etc., because this information lies at the basis of any proposition to the banks. The following is the agreement under which the project is now moving:

That each land owner subscribe as many shares as he has acres of land, said shares to be assessed at not more than two and a half cents per share at one time, and not more than ten cents per share in all. No assessments to be levied until 40,000 shares are subscribed, a board of eleven trustees to be named in the agreement, to have charge of the matter, collect funds, employ engineers, and other means necessary to make the survey; the trustees to have no compensation for their services. The survey is estimated to cost not more than \$3,000. The report was adopted, and the committee will go to work to raise the funds for making the survey.

## Notes to the Editor.

The editor of the *RURAL PRESS* is continually encouraged by the kind words which correspondents tack to the ends of their communications or queries. They are the rifts of sunlight which break through the journalistic clouds and the editor is as prone to show them some, times as a boy is to wear short pants with new boots. The following are clipped from to-day's manuscripts:

Santa Barbara: "I wish to thank you for the good paper you are giving us. I never look into one but I find something I want to know."

Monterey: "I shall be happy to make your acquaintance, in the flesh, if you ever come near my abode. I have a good opinion of you for the great improvement you have worked in the *RURAL PRESS*."

Napa: "I notice in your last paper you say same complain about your market reports. I have never heard one complaint yet; but every one that speaks of it says they are the most reliable that they can get."

The accuracy of our market reports is one of the editor's special efforts, and we are always glad to receive suggestions for their improvement, as well as testimonials of their value. The complaint to which our friend alludes was the result of comparing quotations for different dates with each other.

NEW USE FOR HONEY.—Recent experiments that have been made in the manufacture of brandy out of honey, says the *Los Angeles Herald*, have proven an entire success, making a most excellent quality of brandy. The preservation of fruits with honey is also a success, as has been proven by samples exhibited at the bee meeting by J. W. Wilson on last Saturday. Also, the medicines that have recently been prepared principally from honey, known as the California Honey Lozenge and California Honey Balsam, which have proven saviors of life and are rendering the most ample satisfaction to all who have tested their healing qualities in pulmonary diseases. These new uses will have a tendency to increase the demand for honey, so that it will ere long command a more remunerative price. We understand that parties leave Los Angeles next week for the East for the purpose of manufacturing the above named medicines, shipping the material from this coast, a part of which cannot be obtained elsewhere.

SOLANO AND SONOMA.—Mr. A. U. Strong is agent for the *PRESS* in the first named county, and Mr. A. C. Champion in the latter county.

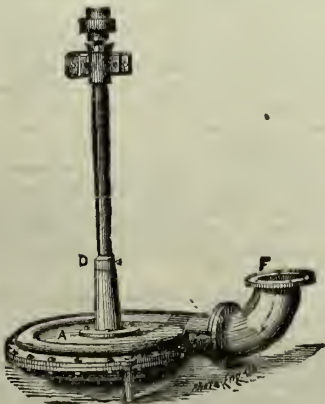


FIG. 1. VERTICAL PUMP.

the shaft then being horizontal—the circumstance which gives the pump its distinguishing name. In point of execution there is no important difference; but the horizontal has the advantage of being more readily examined in case of accident.

Fig. 3 is the Heald & Sisco steam pump for irrigating, draining, wrecking, and for work in mines, quarries, etc. With all the numerous pumps in use it is well known that the direct



## Education.

Report of a Special Committee Appointed by the Educational Convention held under the Auspices of Golden Gate Grange.

(Continued from Last Week.)

## Text Books.

The great number of text books now in use certainly entails a considerable expense, some portion of which appears to be in excess of absolute necessity. The large number of studies taught in the lower grades of the common schools has led to the belief that it might be deemed an evil that so much is attempted as to make doubtful any success, and render imminent the danger of overtaxing the children's minds.

A serious evil exists, not so much in the system of education as in the judgment of parents and others having children in charge, in that the term of study in California generally allowed to young people is so short that it is impossible for them to get a good education. Your committee regard as a mistake the popular belief that before children are fairly in their "teens" they are old enough to leave school. Exceptional cases are so rare as to merit, in a general consideration of the subject, but little attention, and your Committee is of the belief that quite as much harm is done by taking children out of school too soon, as good is accomplished by putting them into school at all.

"What is worth doing is worth doing well," and we are of the opinion that nothing can be done well to the accomplishment of which sufficient time is not devoted.

## Minor Evils.

Perhaps the more mild term "defects" in the system, have become apparent to your Committee, but we deem it unwise at this time to ask attention to them, because in so doing we may weaken the consideration which we think ought to be given to the major evils of which we have spoken, and regard it best now to leave the pointing out of evils to say what we can in relation to remedies.

## III.—The Remedies for the Evils in our Educational System.

It is far more easy to find faults than to suggest corrections, and it is with distrust of their own powers that the members of your Committee enter upon this part of their work. It is, we think, quite as well that we should confine ourselves to a fair advocacy of the course we think proper hereafter to be pursued in general terms, rather than to attempt to prescribe detailed plans, precise formulas or elucidated schemes. It has appeared to us that we may thus invite discussion such as may lead to working out a plan of improvement for the use of the Legislature at its next session, and so far prepare this field of labor for it as that beneficial changes in the law may be obtained.

We deem it necessary to premise any suggestions for improvements in our educational methods, by drawing attention to the fact that the best foundations for all education must be laid by parents at home. There is an indispensable part of a child's education which should never be left to teachers alone. In the hearts and minds of their children, fathers and mothers, or guardians, should instill from early infancy, correct views of moral principles, a proper regard for the necessity, dignity and worth of labor, and obedience to rightful authority, thus providing in home life for the growth and habits of industry, proper deportment and respect to the laws of God and the country to which they belong.

The work of parents and teachers in successful education must be mutual. They should heartily co-operate in securing the truest and fullest development of the child's powers of body and mind, and so best conduce to its welfare.

The teacher's work is difficult at best. It can be most successfully done only when the ground work of a true education has been properly laid by parents in the home circle, and it should be borne in mind that in the school-room of to-day the parents of the future are being trained, so that the work now being done may be in effect perpetuated.

The public appreciation in which education is held is manifested by the figures which we have given, showing the liberal provisions already made in California, for the support at public expense, of the educational system of the State. Appropriations similar to those hitherto made may reasonably be expected hereafter, and it is in keeping with the characteristic fairness of the people of California, that the best return may be by them provided for in the expenditure of the moneys placed at their command.

Sensible persons, with funds in hand for the accomplishment of a stated purpose, generally get as clear a determination as they can in advance of action, of what is to be the object of their endeavors, and how it is to be attained.

It is from no motive of vague, general philanthropy that the State gives these funds, but, in the best of ways, to provide for safety by educating all children so that they may be useful citizens rather than evil-doers or paupers, and so a source of danger and expense. The clearest view we can get of this object, for the accomplishment of which these funds are provided, is to look at the kind of citizens the State would naturally desire to have made. Judging of the future by the past and present, and assuming that the ordinary rule "that demand regulates supply," it may be assumed

that the present condition of society is a fair basis on which we may found our calculations for the requirements of the State hereafter as to the employments of its citizens.

Percentage has come to be the usual, as it is perhaps the most expressive way of stating such a proposition and it is from convenience, not levity, that it is here adopted.

## Industrial Distribution of California.

In California, taking the whole population, your Committee learns from the best census returns at hand, that of each hundred men, 20 are in agricultural pursuits, 34 in mechanical and mining industries, 14 in trade and transportation, 29 in personal service, one a teacher, one-half of a man a doctor, less than half a man a lawyer, less than a quarter of a man a minister, and less than a tenth of a man a journalist. It would therefore seem that the object of the State would not be accomplished to a considerable extent, if the public training led to no result other than to prepare for labor, in their peculiar way, those whose work is mental. Upon the statement of so plain a truth it appears to be manifest that no inconsiderable portion of these funds should be used in providing for industrial education, by which is meant a system of "education by work," "education by uses," an education of the hand and eye as well as the brain, a system which, seeking to judiciously unite practice with theory, looks more than in the present system, to fitting boys and girls for success in life by instructing them in the work in which it is hoped they may hereafter be occupied. While the State at large is greatly interested in this matter of the judicious expenditure of the public moneys devoted to education, naturally the large class of industrialists have been prominent in the efforts made to improve the present system by such changes as would insure teachings for practice as well as theory, and make the education given by the State of such a character as to be of value to their children. For years they have been respectfully but firmly insisting that the public instruction, in which they have so much at stake, should conform more nearly to what appears to be the just and correct standard. They are not, however, iconoclasts; they do not desire to tear down and destroy, but rather to remodel and build up, and your Committee respectfully give as its opinion that these views and wishes are correct and reasonable. Practical education, such as is desired, is that which will dignify and ennoble labor, bring intelligence and the experience of the past directly to bear upon the leading industries, agriculture and the mechanic arts.

Webster draws the line between the liberal and the mechanic or industrial arts in these words: "The liberal arts are such as depend more on the exertion of the mind than on the labor of the hands; and regard amusement, curiosity or intellectual improvement rather than the necessity of subsistence or manual skill." If there is so marked a distinction to be observed between these results, the arts to attain a knowledge of which is the purpose of education, should there not be observed a corresponding difference in the education to be given?

"Words, like trees, are the product of various elements, and often of many centuries. *Liberal* is a case in point. In ancient Rome a man who was no slave was called *liber*. Manual labor was the chief service of the slave. Hence, the condition of the *liber* was, in a general sense, a condition of freedom from labor. During succeeding centuries the French *liberal* and English *liberal* retained the leading signification of general freedom from physical toil." "The growth of constitutional governments necessitated the careful education of men skilled in the precedents and principles of law. Increased knowledge compelled a corresponding education of scientists and teachers. These vocations compose what are yet commonly known as the professions. It is emphatically true of each of them, that the labor required in their practice is mental. As compared with the farmer, the preacher, lawyer or doctor is relatively exempt from physical toil. Hence, an education designed for these professions would naturally be called *liberal*; and, until quite recently, no other pursuits have been deemed worthy of the educator's notice."—*Hand Book of the Kansas State Agricultural College, 1874.*

Manifestly, such a *liberal* education is not the only object had in view by Congress and the State in making provisions for education. The professions are over-crowded already, and yet not one in fifty of the youths in our colleges is looking towards any industrial business as a life pursuit.

Servile labor, a type of which we have in the Chinamen, becomes necessary when a large portion of our youths grow up without training for any kind of manual labor; the evils of a one-sided, or purely intellectual system of education are already manifesting themselves.

The common school is the last stage of educational evolution. Historically considered, the "higher education," planned without regard to the interests of working men and women, has set the pattern for the lower schools. The object of collegiate foundations was to train men for professions, and for high positions in social life. The common schools pattern after the higher, reflect their spirit, follow their fashions. Hence results the necessity of insisting upon practical training in all such educational institutions as are maintained by public funds, and your Committee, therefore, urgently recommend the speedy development of the industrial departments of our State University to that de-

gree of efficiency which the industrial interests of the State demand, by an adequate increase of the staff of instruction, as well as of the means for practical demonstration in those departments, and that appropriate changes in the curriculum of the common schools be made for the preparation of students to enter those departments.

On general principles we hold that a system of education which does not from the start better fit the child to be useful in the home, on the farm and in the shop, or on any other field of labor to which he may be called, is radically defective.

**Changes in Present Educational Methods**  
Having said thus much regarding industrial education, it is hardly requisite for us to state that we advocate such changes in the present educational methods as may be needed to carry into effect our suggestions. If it be said that so radical a change would necessarily disturb existing harmony and necessitate somewhat of a new departure, we must reply that if our views are correct, such a new departure ought to be taken. There is a moral laziness which shrinks from any change and tends to submission to evils rather than their correction. Your Committee was directed to suggest remedies, rather than make apparent difficulties in carrying them into effect, and we cannot conceive it to be possible that people of good sense will continue to employ vast sums of money upon a faulty system, because it is difficult and disagreeable to change it.

As heretofore intimated in the opinion of this Committee, the cause of many of the difficulties and defects in our educational system is to be found in the insufficiency of the time devoted by our youths to the preparation for active life. Teachers are compelled to omit the essential topics, to confine themselves to the rudimentary treatment of others, or to handle their subjects superficially, thus working especial detriment to the practical illustration and exercise in the actual application of the principle underlying industrial pursuits.

## Leaving School too Early in Life.

We therefore urge upon parents the propriety of disabusing their minds of the belief that boys and girls can successfully close their educational career and enter upon life at the early ages at which they are now doing in the United States, and upon youths we also press with earnestness our views, that it is a mistake, the bitter fruits of which they will have to suffer throughout their lives, to believe that they can become well educated and fit for leaving school at such an early age as is now the custom in California. In the matter of studies and the relative amount of attention to be devoted to each, we find such considerable differences of opinion among educators as to induce the belief that an expression of opinion from us is not now justified by the amount of time and consideration we have been able to give this important matter. Enough has, however, become apparent to your Committee to lead to the conviction that in the schools where young children are taught too much is being attempted. We therefore recommend that, due circumspection being used, as great reduction as may prove to be possible, be made in the number of studies taught in such schools.

In the matter of text books, your Committee is of the opinion that considerable reductions can and ought to be made in the number and cost of them. To each person the amount paid out for their children's books may be small, while, in the aggregate, the amount is quite large, and without attempting to go into details, your Committee recommend that in any changes hereafter to be made in the educational system of California close attention be given to making the utmost reduction possible in the number and cost of school books which may be consistent with prudence.

## Pruning Common School Studies.

In the common schools your Committee recommend the strictest possible economy of time by devoting it to such studies as are of known and established value, to the exclusion of those as to the worth of which there are serious doubts. The time thus gained should be spent in such studies as tend to give some practical knowledge of nature and its laws; of moral truths and the business affairs of life. We would also recommend that fuller instruction than at present be given in the metric system and elements of industrial drawing. Each school should be more fully furnished with modern appliances for object teaching, and the "Kindergarten" methods should be engrafted, as much as possible, upon the entire educational system. The improvement of school grounds and gardens cannot be too strongly urged.

## The Kind of Teachers Wanted.

We should have teachers especially prepared with reference to the objects had in view, imbued with respect for industrial callings and with interest in rural affairs. Teachers for the city schools should, by the corresponding preparation, be fitted to instruct their pupils in such manner as to prepare them for usefulness in the kinds of labor there in operation, and should be capable of understanding the work in which parents are there engaged and of interesting their children in it. We would recommend no changes in the Normal School further than such increase of facilities as may be feasible for the obtaining by the students of practical knowledge of horticulture and the introduction of such industrial studies as will prepare them to give the improved instruction demanded when

they shall have become teachers of the public schools.

In order to forestall any possible misapprehension of the intent and purport of the present report, and while impressed with the belief that the most pressing need of reform in our educational system lies in the directions indicated, your committee desires to put on record their conviction and appreciation of the commanding importance of high literary and scientific culture, and of its utility not only to the comparatively few who may be fortunate or energetic enough to attain to it, but to every member of the community. We must have statesmen as well as voters, civil and mining engineers as well as miners and machinists, journalists as well as printers, and teachers, physicians, lawyers and a host of other men with acquirements more extended and special than the common schools can give. Without such persons as leaders of progress the body politic would be like an army without officers, and would soon become incapable of civilized existence, and the proud maxim that "The pen is mightier than the sword" would be a fable. We all need more knowledge than we can get at best, and our children should, to the utmost extent possible, enjoy their inalienable right to the highest development and use of such faculties as they may possess. Culture and knowledge have not always a definite money value for the time being, but they constitute the power that has evolved the splendid achievements in science and industry to which our century points with pride; and upon them and their wider diffusion rest our hopes for future progress. Education must fit for society and citizenship as well as for science and industry, and it should not be emasculated by any narrow utilitarianism.

## Normal Teaching.

Normal teaching should be so directed as to fit the teacher to throw light upon the philosophy of common things, and a greater flexibility than now exists should appear in the standard to which students are expected to attain.

We recommend that, as soon as practicable, a Kindergarten school be established in connection with the Normal School, in which teachers may be thoroughly instructed in the methods of Froebel, and their application to the wants of children in the common schools. These methods should also be taught by competent lecturers from the Normal School or elsewhere, as may prove to be desirable, in our Teachers' Institutes, and on all other suitable occasions.

## The State University.

We urge that these institutes should be carefully fostered as a valuable adjunct of our course of public instruction. As regards the State University, we recommend, in general, as we cannot take enough space to go into detail, that its Colleges of Agriculture and the Mechanic Arts be more fully developed, according to the clear requirements of the law of Congress and the original enactments of the State Code; the improvement of its grounds to illustrate by practical instruction the truths taught in the lecture room, and the necessary collection of farming implements, stock, etc.

An increase in the force of instructors in these departments is very essential to their future usefulness, and, beyond question, should be made to render complete the improved instruction which we recommend in the Normal and common schools.

In conclusion, your Committee have to remark that, while we deprecate any such changes in the present educational system as will lose the advance already gained and advantages secured, we are impressed with the necessity of remedying the existing evils to which we have drawn attention. As to whether the convention will coincide with our conclusions or act further in the premises remains to be seen, but it may not be here improper for this Committee to assume that they will be permitted to go a step beyond the limit of its organic resolution and give expression to a conclusion, to which its members have arrived, as to what action should next be had in the premises. Nothing, by way of improvement of the educational system of the State, can be done without changing the laws which control it. "Legislation" is, therefore, what is meant by "reform." Nothing by way of legislation upon so important a topic can, or ought ever to be done without full, open discussion, great care and earnest thought, and bringing to the aid of the right the great power for the good of, and the well-trained minds which direct, the public press.

Back of these forces, not so much directing as doing the hard work for them, should be a permanent committee, from this or some similar body, whose province it might be to collect, have at hand and ready for use, all the facts, history or results, views of persons skilled in educational business and opinions of educational writers of established reputation, in order that the utmost possible caution may be exercised to avoid needless disturbance of existing conditions, following after "false lights" and creation of animosities among those whose desires are alike to advance the true interests of the public, but who differ in opinion as to the best manner of doing so in educational matters.

It should also be the duty of that committee to do the clerical work of preparing such acts, to be recommended to the Legislature for passage as, after full discussion and "press" comments, may be found desirable; and we respectfully suggest, as being proper and judicious, that, in order to foster investigation into and promote discussion upon this important subject of public education, this Convention preserve



its life and hold public meetings as frequently as circumstances may permit.

Of itself, your Committee has to remark as a peculiar circumstance, composed, as it is, of material which might appear incongruous, that at all the deliberations and in this report entire unanimity has prevailed. \*One of our number, we regret to state, has, however, been prevented by circumstances beyond her control from being present at any of our meetings and from taking part in our deliberations, and this report has been completed only so few hours before the time by you designated as that at which it should be submitted as to render it impossible for us to send the draft to her for consideration, for which reason her signature to it does not appear.

A. W. THOMPSON,  
O. P. FITZGERALD,  
A. M. WINN,  
J. C. STEELE,  
EUG. W. HILGARD,  
J. W. A. WRIGHT,  
MRS. J. C. CARR.

\* Mrs Carr has since signified her full approval of the above report and asked that her name be added to it.

"FLESH WORMS."—The *Demodex folliculorum* is a worm-shaped minute mite, which lives in the sebaceous and hair follicles of the skin in man and some mammals. M. Megnin has lately published a full account of it. It is said to be viviparous, the female producing small footless contractile larvæ, without any mouth organs, which shortly after their birth acquire three pairs of short wart-like feet. After a change of skin a fourth pair of legs appear, as well as traces of a beak. After a second change the perfect *demodex* is produced, but still without the sexual organs, which appear later. Megnin distinguishes three if not four forms of these parasites, which, however, he prefers to regard for the present as varieties of a single species—*Demodex folliculorum*. The commonest of these appears to be that of the dog (*var. caninus*), which inhabits the hair follicles of all parts of the body of that animal; a smaller variety (*D. cati*) is found almost solely in the sebaceous glands of the ear of the cat; and a larger one (*var. hominis*) in the follicles of the human face. M. Simon also met with similar parasites in the glands of the margin of the eyelids in sheep (*var. ovis*); but no other writer has ever seen them there. In the dog the presence of these parasites, which occur in great numbers together in the hair follicles, produces a regular skin-disease or mange; but this does not appear to be transmissible to the human subject.

#### EXCHANGE.

An eight acre farm near Redwood City, fenced, common house, two wells water, pipes laid through ground, fruit trees, etc. Cost \$3,500, will sell for \$2,500, or would take improved land near San Francisco in exchange. Address J. L. Tharp, this office.

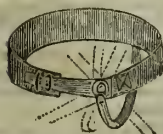
#### CALIFORNIA



#### MILITARY ACADEMY.

For circulars, address

Rev. DAVID McCLURE, Principal,  
OAKLAND, CAL.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

#### MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco.

E. GROTKASS,

COLIMA, MEXICO.

DEALER IN REAL ESTATE.

Information given free of charge. Lands procured for sale or for rents on easy terms.

TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit.  
Address J. A. POPPE, Sonoma, Cal.

Dewey & Co. { 224 } Patent Ag'ts.  
Sonoma St.

## GREAT IMPROVEMENTS

ARE NOW

## BEING INTRODUCED IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

## Good Engraving

Will be done at

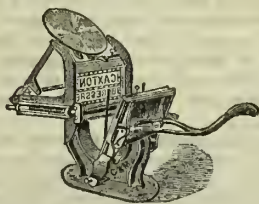
REDUCED RATES.

E. SCHULTZ, Manager.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.



H. F. ROCKEY,

Dealer in  
AMATEUR PRINTING  
Presses,

Small Fonts of Type,  
Printing Materials,  
Plain & Fancy Cards, &c  
22 Kearny St.  
Bet. Market & Post, S. F.  
(Up Stairs.)  
Send for Illustrated Circular.

#### MOUSTACHE PROTECTOR.

Will fit any Cup.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.



#### HEADQUARTERS

FOR THE  
PACIFIC COAST  
OF THE  
U. S. Camp Lounge  
COMPANY.

C. H. MOSELEY, Agt., 415 Sansome Street, S. F.



OUR FIELD AND HOUSEHOLD PEST POISON is a safe, sure and cheap destroyer of all insects that infest houses, fields and gardens—Bugs, Rats, Mice, House Flies and all vermin. Unlike Paris Green or Arsenic, it dissolves in water, and is applied by sprinkling or with syringe. Not injurious to plants. Safe to use. Put up in one-quarter pound boxes, free by mail for 30 cents. Circulars sent with testimonials. Kearney Chemical Works, 66 Courtlandt Street, New York. P. O. Box 3139.

#### LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,  
SANTA BARBARA, CAL.

Correspondence solicited.

## Superior Pianos for the People at Popular Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

## The Brilliant and Durable GOLDEN PIANO

Which we now offer the readers of this paper

## At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

## Prices of the Golden Piano:

	The Installment Plan Prices.	Our Reduced Cash Price.
The Golden Piano, \$500	\$500	\$350
(UPRIGHT—C.)		
The Golden Piano, \$375	\$375	\$300
(SQUARE—No. 1.)		
The Golden Piano, \$500	\$500	\$350
(SQUARE—No. 2.)		
The Golden Piano, \$600	\$600	\$400
(SQUARE—No. 3.)		
The Golden Piano, \$800	\$800	\$450
(SQUARE—No. 4.)		

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be supplied with further descriptions and recommendations by sending to this office.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

### SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

### POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Breed Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Breed Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berkshires, all ages. Perfect pedigree. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

## Poultry.

I. P. LORD,

RENO, NEVADA.

BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.



Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. State where you saw this.

### Plymouth Rocks a Specialty.

I have just come from Massachusetts, and have brought with me sixteen thoroughbred, first premium Plymouth Rock Fowls, of my own raising, the very best selected from a large stock. The Plymouth Rock combines more of the excellent qualities than any other fowl, being among the very best of layers, fine table fowl, large size, and very hardy. Shall have a few sittings of eggs for sale. Eggs always fresh and well packed. For full information, address

J. L. SKINNER,  
Placerville, El Dorado Co., Cal.



### LOOK!

ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.



### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

**SEWING MACHINES.**—Wm. A. Dawson, S. F. This improvement relates to that particular class of sewing machines in which two or more needles, operated by the same needle arm, are used for sewing two or more parallel seams. The needles used in this class of machines have heretofore been made stationary, so that the space between the seams could not be varied, whereas it is often necessary or desirable to run the seams closer together or farther apart according to the character of the work being done. This invention provides an arrangement for adjusting these needles so that the operator can set them to suit any character or class of work. The invention can be applied to any of the double-thread sewing machines now in use. In a shuttle machine the shuttle-races can also be made adjustable, corresponding to the adjustment of the needles; but the inventor has discovered that this is not necessary, as he can obtain a sufficient width of space for ordinary work by a simple adjustment of the needles, and the employment of a looper which will insure the passage of the shuttles through the loops, even when the needles are set at a distance from them. This invention provides an important improvement in this class of sewing machines by adapting each machine to sew parallel seams at varying distances apart as desired. Double seam stitching is now being generally adopted in sewing heavy materials, and this improvement is intended to adapt the machines for this work.

**WINDOW SASH.**—Reed, Hoagland & Newsom, Brooklyn, Alameda county. The nature of this invention is to provide an improved screen attachment for the upper and lower sashes of windows, so that when the windows are opened the screens will automatically and simultaneously be drawn across the opening and thus prevent the entrance of insects. The improved window screens are arranged to slide like drawers into vertical boxes or recesses in the casing or wall, one of which is arranged above and one below the window opening, so that the screens can be attached to and operated by the window sashes. For upper windows this screen is provided with a suitable frame on its two ends and upper edge, while its lower edge is attached to the upper rail of the upper sash, so that when the sash is lowered the screen will be drawn out of its recess so as to cover the opening between the upper rail of the sash and the top of the window opening. The lower sash is arranged a little differently but on the same principle, except that the screen is not attached to the window permanently, so that the window can be raised if desirable without raising the screen in the upper sash. However, it is a permanent fixture, and there are no detachable fastenings to give burglars a chance to get in at night in case the window is open.

**WINDOW SASH.**—Lazare Landecker, San Luis Obispo. The object of this invention is to provide such a construction of window sashes that the panes of glass can be secured in place and removed and replaced whenever desired by any ordinary person, thus avoiding the necessity of employing a glazier to do the work. The improvement also allows the inventor to construct window sashes so that they can be taken apart and compactly packed for shipping after the manner known in commerce as "knock down" articles. The wood work can thus be packed in one package and the glass in another, saving expense not only in the cost of shipping, but also reducing the liability of breaking the glass. The invention consists therefore in constructing the mullions of the sash with simple grooves in which the edges of the panes of glass fit, and in providing slots in the edges of the outside rails of the sash opposite said grooves, through which the panes of glass can be slid into place in the manner of a drawer. A filling is thus secured in the slot in the sash rail so as to prevent the glass from coming out. In order to render the removal and replacing of the panes more convenient and to permit the sash to be "knocked down" for shipping, the mullions are made in sections so that they can be taken to pieces.

**TRACE FASTENER.**—Chas. S. Crittenden, S. F. This improved trace fastening is intended more particularly for coaches or hacks, although it can be used on all classes of vehicles. Around each end of the whiffletree is made a groove as wide as the trace to be fastened on it. The end of the trace is formed into a loop to fit in the groove. Upon the trace is a metal or other loop which can be slipped up against the whiffletree after the trace loop has been placed in the groove, and thus by reducing the size of the trace loop it is made to clasp the reduced portion of the whiffletree so that it cannot get out of the groove. A strap keeps the sliding loop in place and holds the sliding loop up against the whiffletree, preventing the trace loop from sliding off the groove. This trace fastener allows the pull upon the trace to come straight from the whiffletree without cramping or straining any particular part of the trace, so that it will last as long as any other part of the har-

ness, whereas, with the ordinary fastening now in use, the trace is cramped by the fastenings so that it soon becomes broken at that point, requiring to be frequently repaired.

**DEVICE FOR ELEVATING EARTH.**—Geo. Milliken, Los Angeles. This invention relates to that class of machines which are intended to elevate earth, sand or any other material, and which consists of an endless belt or band passing over pulleys and provided with suitable elevating buckets. The improvement consists in a novel combination of an elevator with suitable operating gearing and shafts and a movable or adjustable crane, whereby the elevator can be shifted so as to work at any desired point within its reach without removing or altering the stand or support. The operation of the device is very simple, as it is only necessary to set it so that the lower end of the elevator belt will rest upon some part of the bank to be excavated, and set it in motion to raise the earth which may either be deposited into carts or upon an endless carrying belt by which it will be removed to any distant parts. The elevator belt may be moved from time to time to new points, and by swinging the arm of the crane around, work may be done in a large circle without changing the locality of the machine.

**VALVE MOTION AND CUT-OFF FOR STEAM ENGINES.**—Eugene O'Neill, S. F. This is a combination of mechanism for opening and closing steam and exhaust valves in a steam engine; the opening being effected gradually, until the valve has started from its seat, and completed rapidly, while the closing of the valve is controlled by the closing of a cam or cams, which are made to release the valve and allow it to drop, at any desired point in the stroke of the engine; the whole mechanism forming what is known as a variable cut-off. It consists in combination with the vertically acting valve stem, of a horizontally moving bar having a peculiarly shaped curve formed upon its upper side, whereby the lifting of the valve is effected; also in the employment of a cam or cams in combination with the stem so actuated that at any desired point in the piston stroke it will release the valve from the action of the elevating devices and allow it to fall and cut off any further accession of steam to the cylinder.

**THE STRONG BROTHERS TO RETURN.**—We had an item last summer to the effect that the Strong brothers, who are well known to the people of this State because of their experiments with cotton production in Merced county, did not propose to consider their early failure conclusive against the profitable production of cotton in this State, but would return and follow their experiments farther. From what is now printed in the *Baltimore Sun* we infer that these gentlemen cling to their intention and may be seen on this coast again ere long. One reason of their failure to put the production of cotton on a profitable basis was the expense of labor in the cultivation and preparing the crop for market. They now propose to use what is creating a great excitement in the Southern States under the name of the "Clement process," which does away with the gin and spins the cotton directly into thread from the bolls. The introduction of this process will doubtless also be of interest to many of our citizens who are now experimenting with the production of cotton.

**CALIFORNIA WILD OATS.**—As we write we are sitting beneath the shade of a small shock of wild oats, which Mr. R. J. Trumbull has brought to us from Mr. Barber's place in Ross valley, Marin county. The grain stands seven and three-quarter feet high and uses up the upper foot and a half in laying out its heads. This seems a good year for wild oats. We read in the *Stockton Independent* as follows: "A specimen of native California wild oats seven feet three inches high was brought into our office yesterday. It grew on irrigated land, on the ranch of R. W. Hopkins, on the Calaveras. It was the hugest specimen of the cereal we ever saw. The heads were 16 inches long." And in the *Sonoma Democrat* is the following: "Mr. F. D. Mize, of this city, brought to the *Democrat* office Tuesday morning, a large sample of the finest wild oats we have seen, grown on the place of Mrs. Mize, near Mark West station. They measure over eight feet in height and have well filled heads. Mr. Mize informs us that four acres were sown in common oats and barley for hay, but that the wild oats got the upper hand of the tame, and the result is a splendid crop of them and barley."

**A WISE LAW.**—In the province of Biscaya a land owner must plant two saplings for every timber tree he cuts down. In Java the birth of every child is celebrated by planting a fruit tree, which is carefully tended as the record of the age of the child whose birth it registers. This wise regard for the future deserves imitation.

**A PLEASANT OCCURRENCE.**—All hands connected with this office were recently invited to lunch with the publishers at J. V. Webster's new Palace restaurant, No. 218 Sansome street. The lunch was greatly enjoyed and highly complimented.

**GEN. GRANT** has arrived in England, and was received with great enthusiasm and ceremony.

### General News Items.

MEMORIAL day was observed in a becoming manner in this city.

The *Tribune* says \$106,000,000 worth of liquor is consumed in New York every year.

The Northern Pacific will build 100 miles of road toward the Black hills this summer.

The *Tribune* says: It is said that the English colonies have gained increased trade by the displays they made at the Centennial Exhibition.

THROUGH official channels a rumor has reached the State Department that Mexico is about to declare an additional 10 per cent. tariff on all imports into that country.

The annual reunion of residents of Nevada county will be held at Badger's park on June 9th. The exercises will consist of addresses, poems, an oration by John Garber, music and dancing.

The steamship *City of San Francisco*, belonging to the Pacific Mail Steamship Co., ran on a sunken rock on the Mexican coast this week and sunk. No lives were lost, but the steamer is a total loss.

The Sheriff of Mecca has placed the treasures of the Holy Shrine, the accumulated money gifts from pilgrims, at the Sultan's disposal. The treasures aggregate 200,000,000 piasters, \$4,000,000.

The Secretary of the Treasury gives notice that the principal and interest on the 4,000,000 registered 5-20 bonds of March 3d, 1865, dated July 1st, 1865, and 6,000,000 coupons, will be paid at the United States Treasury, August 28th.

PREPARATIONS are being made by the Ordnance Bureau of the War Department to close the national armories and workshops after the 1st of July, there being no appropriations to continue the work. Six hundred mechanics will be thrown out of employment.

The coming Fourth of July promises to be generally celebrated throughout the State. In several towns the programme of proceedings has already been made out, and committees appointed to arrange for conducting the ceremonies. It will soon be time for San Francisco to move in the matter of preparing for a celebration of the day.

It is no longer considered expedient to retain army officers on duty at the White House, and Colonel H. C. Scobin, 25th Infantry, who was detailed at the President's request as one of his Secretaries, will be relieved at the end of this month, and by direction of the President assigned to important duty in the War Department.

### The First Watch.

At first the watch was about the size of a dessert plate. It had weights and was used as a "pocket clock." The earliest known use of the modern name occurs in the record of 1552, which mentions that Edward VI had "one laum or watch of iron, the case being likewise of iron gilt, with two plummetts of lead." The first watches may readily be supposed to have been of rude execution. The first great improvement, the substitution of springs for weights, was in 1650. The earliest springs were not coiled, but only straight pieces of steel. Early watches had only one hand, and being wound up twice a day, they could not be expected to keep time nearer than 15 or 20 minutes in the 12 hours. The dials were of silver or brass; the cases had no crystals, but opened at the back and front, and were four or five inches in diameter. A plain watch cost the equivalent of \$1,600 in our currency, and after one was ordered it took a year to make it.

To appreciate the mechanical progress which has been made in watch making since the time of "the first watch," one has but to look upon the perfect and compact mechanism displayed in the manufactures of the New York Watch Company, Springfield, Mass., represented by Dewey & Jordan, 432 Montgomery Street, S. F.

[From our issue of May 26th.]

**CREDITABLE ENTERPRISE.**—We are pleased to notice the opening of a new restaurant in this city, which, from the knowledge we have of the owner and his qualifications for good and generous providing, we doubt not will quickly take the lead among the city institutions of its kind. The location is 218 Sansome street, between California and Pine, and is central and accessible. The proprietor is Mr. J. V. Webster, one of the leading farmers of Alameda county; a man who knows how to produce good things, and will place them without stint upon his tables. We had the pleasure of looking through the establishment before the opening, and we never saw anything more conveniently arranged and perfect in all its points than Mr. Webster's enterprise has produced. Everything is new from floor to ceiling. The kitchen is so light and so planned that it must always be fresh and cleanly. We are glad to pronounce the restaurant first-class in every particular, and recommend it to all whom business or pleasure bring to the city. The opening spread was made on Wednesday night of last week. About one hundred gentlemen set at the tables. Hon. Frank M. Pixley presided. An elegant and artistic supper was served, and the guests were all pleased with the institution and its proprietor. Comments were abundant upon the fine large space which is occupied, and the charming way in which it is furnished with tasteful and useful articles and supplies.

### A Superior Advertising Medium.

San Francisco is in every sense the city of the Pacific coast. Here is concentrated the wealth and very largely the enterprise of the coast. The railroad and telegraph lines center here. The earliest news on all matters of importance is known in San Francisco as promptly as in New York. Libraries for consultation and reference are here of the first order. In a word, San Francisco offers unusual opportunities for the publication of a great weekly journal such as for nearly seven years its publishers have made the *PACIFIC RURAL PRESS*, comparatively making an indispensable journal to all who till the soil or live in the country—one whose columns are especially full in everything that relates to agricultural interests of the Pacific coast.

The effectiveness of an advertising medium depends much on the character of the issue. A first-class paper handsomely printed, carefully and ably edited, with its business conducted in an enterprising and strictly honorable manner, is bound to have a great influence with its readers; it is bound to have a large list of readers; its readers are bound to be of a class who hold more than ordinary influence in the community.

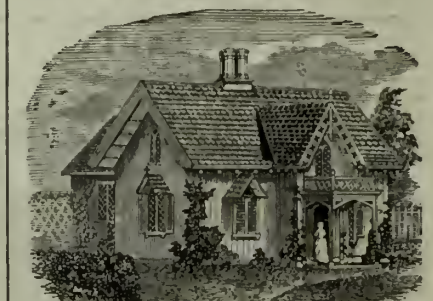
The *RURAL PRESS* for seven years has, as far as possible, excluded all doubtful advertising as well as all questionable reading matter. It will continue to do so. It has thus gained thousands of subscribers who rightly consider both the old and new style of insinuating humbug ads circulating common in many journals as exceedingly baneful in the family circle.

**PERSONAL.**—Wm. J. Lawrie (or his alias). Description—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

**WOODWARD'S GARDENS** embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

### CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

#### THE BEST ALFALFA LAND IN CALIFORNIA.

Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

#### The Most Successful Colony in California.

Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

#### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

WE carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.

SUBSCRIPTIONS to the *RURAL* taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 30th, 1877.

The rains, with their refreshing influence, increase confidence and give a firmer feeling to men in nearly all lines of trade. Although the effect is good, the dullness will continue until the new crop year begins. The week has been marked by a continuance of the decline in Wheat prices. The shipping demand is at a standstill and Wheat sales are only for local consumption. Barley has sympathized with Wheat, and transactions have been at a slight decline. Other commodities have retained prices, with the exception of the usual fluctuation in Fruit and Vegetables.

To-day being a national holiday, Memorial day, dedicated to the memory of the fallen braves of our armies, there has been nothing done in trade—banks and exchanges being closed.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	12s 6d@13s —	13s 2d@13s 6d
Friday.....	12s 4d@12s 10d	13s —@13s 4d
Saturday.....	12s 4d@12s 10d	13s —@13s 4d
Monday.....	12s 4d@12s 10d	13s —@13s 4d
Tuesday.....	12s 5d@12s 8d	12s 10d@13s 2d
Wednesday.....	Holiday.	Holiday.

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	8s 11d@9s 1d	9s 1d@9s 5d
1876.....	9s 10d@10s —	10s —@10s 6d
1877.....	12s 5d@12s 8d	12s 10d@13s 2d

## The Foreign Review.

LONDON, May 29th.—The *Mark Lane Express*, in its review of the Grain trade, says: The weather during the week has been unsatisfactory as far as vegetation is concerned. An unusually low temperature has prevailed, accompanied by cold winds, which have prevented the growing crops from making progress. Reports are generally, though not entirely, satisfactory as to the aspect of winter sown Wheat, but the growth is everywhere checked by the harsh weather. Business at country markets was a good deal interrupted by the holidays, but an unmistakably weaker tone was apparent in the provincial trade during the week. Holders of Wheat show more desire to realize, and sooner than run the risk of overvaluing their market, farmers have accepted two shillings less. The tendency in the value of Feeding Stuffs is also downward. Imports into London last week were over 50,000 quarters. At the commencement of the week sellers showed considerable firmness, and to all appearances owners were content to warehouse their Wheat and abide the future course of prices rather than depress a market already weakened by forcing sales at a concession sufficiently tempting to attract buyers. This state of things continued until Friday, when the return of more spring like weather operated against sellers and prices suffered a further decline. The holiday character of the week's trade has caused business to be somewhat desultory, but transactions show a decline of three shillings per quarter on the week. Arrivals of floating cargoes at ports of call have been more numerous, but inquiry has been extremely inactive, both for Wheat and Maize, and prices have been against sellers for both articles. Sales of English Wheat last week were 37,197 quarters, at 68s 9d, against 41,968 quarters, at 44s 11d, the previous year. Imports into the United Kingdom for the week ending May 19th were 978,561 cwt of Wheat and 198,632 cwt of Flour.

## Freights and Charters.

For the first time in months, says the *Commercial News*, we have had some activity in grain freights, and though the number of engagements was small the demand came unexpectedly and has resulted in a better feeling among shipowners. With one exception the ships taken over were American, which would indicate that exporters do not desire to take any chances of further European complications. We shall receive new Wheat unusually early this year, and as the lately engaged ships have long lay days, most of them will carry partial or perhaps full cargoes of new Wheat, and more or less salmon and other merchandise. The war risk on English ships is still a nominal amount, but a large amount of insurance has been effected during the week on English Wheat ships still on the way to England. At the close the market is quiet. There is inquiry for vessels, but owners' views are now not lower than £2 5s direct, which is above the views of those wishing to take ships. We have now 9,514 tons in port under engagement to load Wheat, 8,750 tons miscellaneous, and 28,061 tons disengaged. The latest charters reported are: American ship Alexander McCullum, 1,951 tons, Wheat to Liverpool, £2 2s 6d; ship Alameda, 1,474 tons, Wheat to Liverpool, £2, Cork U K, £2 2s 6d, Continent, £2 7s 6d; ship Adam M. Simpson, 1,525 tons, Wheat to Liverpool, £2 2s, Cork U K, £2 4s 6d, Continent, £2 9s 6d; ship Indiana, 1,500 tons, Wheat to Liverpool, £2, Cork U K, £2 2s 6d, Continent, £2 7s 6d.

## Eastern Grain Markets.

New York, May 27th.—Cable advices are unfavorable, English quotations coming lower, while deliveries in leading United Kingdom markets have increased, chiefly from Germany, which show how effective high prices are in bringing out supplies from sources least expected. No. 2 spring Wheat has sold in our market at \$1.60@1.75, and prime amber State via canal, at \$1.35, which shows a decline of 25c per bushel in the week on this kind. The quantity on the way from the West has materially increased, and the tendency of prices are toward a lower range. Corn has declined under increased supplies by canal, closing at 60¢@63¢, for good shipping. Considerable Barley has been sold for England at 90¢ to \$1, with freight at 5s 6d per 450 pounds. There has been a sharp decline in Flour, and the prices of Breadstuffs are gradually settling down to where they started from at the outbreak of the difficulties in Europe.

CHICAGO, May 26th.—The Grain business on 'Change the past week has been active and at times excited, but prices have gone uniformly downward, with few reactions. The reports from the country west, northwest and south of Chicago, are highly encouraging for another great crop year. In Minnesota, the largest yield of Wheat that ever came from that State is confidently predicted. In Iowa, both Wheat and Corn have a good outlook, and grain dealers anticipate a heavy crop there of both cereals. The cold weather and frosts which have visited a part of Illinois have injured the prospects of Corn somewhat, but not enough to affect the general healthy and forward growth. Sales of June Wheat have been from \$1.40@1.60, the highest price being paid on Monday and the lowest to-day. Corn has been less variable, but sufficiently so to keep up the speculative interest. Sales have been from 46¢ to 48¢. Oats have weakened decidedly, and close

dull. Rye and Barley have declined, but have been so dull as hardly to be quotable. Closing prices are: Cash Wheat, 1.43¢; Corn, 44¢; Oats, 37¢; Rye, 70¢; Barley, 65¢@70¢. Pork has been weak and lower, closing at \$13.50, cash. Lard closes at the prices which prevailed the entire week, \$9.22@9.25. General business is dull. Loans are easier than for a long time. Currency is plenty, and no excitement or activity exists in any commercial line.

## A New Grain Shipping Project.

St. Louis, May 29th.—A project is on foot here to open direct Grain trade with Liverpool. The plan is for the railroads centering here, the Elevator Companies, the Mississippi Valley Barge Company and ocean steamers, to pool the risks by a combination, and to send cargoes of Grain, especially Corn, from New Orleans, through the jetty, to Liverpool and other European ports. The prospects are that the plan will soon be carried into effect. An ocean steamship company has already named several large grain-carrying steamers, which can be put on the berth as fast as cargoes are ready.

## Eastern Wool Markets.

New York, May 27th.—The Wool market opened with increased activity, due to the fact that many manufacturers have permitted their stocks to run low, and have therefore been compelled to enter and replenish. The increased demand, however, did not continue to the close, for their wants proved small and easy to satisfy. Californian spring has been quiet, although holders are not inclined to shade current rates, owing to the high prevailing rates at San Francisco. Fall California is neglected and nominal. Further advices from London sales are: Good qualities animated, Superior Port Philip, 14¢; do with burrs, 12¢; average, 10¢; cross bred superior, 14¢; average, 11¢; New Zealand superior, 14¢; average, 12¢. Sales for the week are: 20,000 lbs Australia at 46¢; 150 lbs Domestic, 27¢@31¢; 60,000 lbs new spring California, 21¢; 34 lbs fall do, 18¢@20¢; 14,000 lbs Oregon, 30¢@33¢; 25 bags fall Colorado, 18¢; 90,000 lbs Western Texas, 17¢@19¢; 46,000 lbs Eastern do, 23¢@25¢; 53,000 lbs do XX Ohio fleece, 38¢@42¢; 22,000 lbs do X do, 36¢; 30,000 lbs do unwashed Indiana coming and delaine, 35¢; and 31 lbs Porto Cabello, 25¢, 000 lbs scoured California, 30¢, 000 do pulled do, 10¢, 000 do domestic nolls, 15¢, 000 do Eastern Texas, 25¢, 000 do Western do, 55¢, 000 lbs super pulled, 40¢ do No. 1, 8 do short X 6 do coming, 5 do lambs, and 5,000 lbs washed Ohio delaine, on private terms.

PHILADELPHIA, May 29th.—The Wool market is bare; prices firm. Colorado washed, 18¢@20¢; unwashed, 16¢@17¢; extra and Merino pulled, 33¢@35¢; No. 1 and superior pulled, 33¢@35¢; Texas fine and medium, 16¢@20¢; coarse, 16¢@18¢; California fine and medium, 18¢@30¢; coarse, 18¢@22¢.

## Cal. Wheat Exports for the Year.

The Call notes that the Wheat trade for the harvest year 1876-77 has about closed. Not a single cargo has been cleared this month, and it is not likely that more than one or two more will be dispatched before the new crop comes in. Since the 1st of July, 1876, the exports have been as follows:

have been as follows:		Quantity.	Value.
Wheat, centals.....		10,376,900	\$18,069,700
Flour, bbls.....		464,200	2,489,500
In Wheat, centals.....		11,769,500	\$20,559,200
Of the feet cleared during the harvest year			only 50 are
still en route, as follows:			
	Cargoes.	Centals.	Value.
December, 1876.....	1	36,100	\$67,500
January, 1877.....	4	139,000	274,400
February.....	21	760,900	1,584,200
March.....	15	552,200	1,145,500
April.....	9	237,400	537,000
Totals.....	50	1,725,600	\$3,608,600

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. May 9.	WEEK. May 16.	WEEK. May 23.	WEEK. May 29.
Flour, quarter sacks.....	36,163	29,136	19,652	47,536
Wheat, centals.....	38,493	28,099	46,890	41,334
Barley, centals.....	10,156	14,353	12,580	5,014
Beans, sacks.....	1,018	1,712	2,340	1,164
Corn, centals.....	2,757	3,574	4,082	4,164
Oats, centals.....	5,091	6,164	2,611	3,129
Potatoes, sacks.....	12,745	12,957	13,750	9,238
Onions, sacks.....	353	563	253	636
Wool, bales.....	8,610	6,786	5,328	3,321
Hops, bales.....	5	20	22	—
Hay, bales.....	1,150	1,295	991	727

**Bags**—Prices for Bags are unchanged from last week's rates. Dealers report considerable inquiry and some sales. The combination are said to hold Grain Bags at 9¢, wholesale, and the jobbing rate is as we quote, 9¢. Other descriptions of Bags and Bagging materials are stationary.

**Barley**—A decline of 5c per cwt in outside rates is noted in our quotations. We note sales: 400 sks Feed, \$1.55; 600 sks choice Coast Feed, \$1.60; 200 do good do, \$1.57; 300 sks good Feed, \$1.55; 420 sks choice Bay, to a Brewer, \$1.75; 250 sks good Coast Feed, \$1.63, silver; 800 do Chevalier Feed, \$1.55, gold.

## Beans—Prices are unchanged.

**Buckwheat**—\$1.60 per cwt is the price now quotable.

**Corn**—Prices remain as last quoted for best lots. We note sales: 500 sks White and Yellow, mixed, \$1.87; 300 do large Yellow, \$1.90; 1,000 do do, private; 200 sks fair Yellow at \$1.85 per cwt.

**Dairy Produce**—Butter prices are unchanged. Old Pickle Roll is now reported practically out of the market, as but few lots are known of. The New Pickle Roll is being firmly held at 30¢@32¢ for the fancy brands. There is nothing new in Cheese.

**Eggs**—A slight improvement is noted for choice fresh California Eggs. A dealer requests us to state that the custom makes all sales of Eggs and Poultry for silver.

**Fruit**—The week brings several fluctuations in whole sale rates for Fruit. Apples are now of the new crop and are sold by the basket. Apricots have been received in much less supply and the price has greatly advanced. Royal Apricots have sold by weight, at 8¢@12¢ per lb. Cherries and Currants have improved slightly and Strawberries have returned to fancy rates. The novelties of the week are Cherry Plums and Peaches; the latter, being the first of the season, were received from J. G. Briggs, of Marysville. The variety is Briggs Early May. The first Cherry Plums were from J. Strain, of Marysville. Full lists of prices may be found below.

**Hops**—No Hops have been received in this market during the week. No sales are reported, but holders are firm. There has been an exportation of 19,903 lbs to New Zealand, the supply being taken the week before at 15¢@17¢. Emmet Wells reports the New York market, for the week ending May 18th, as follows:

Receipts light. The warm weather has somewhat improved the demand for home trade. Exporters have taken 600 bales this week. We renew our quotations without change, though 17¢ is an extreme rarely met. Most of the sales have been within the range of 12¢ to 15¢ for choice. Farmers are holding back their Hops for an

advance. While we hope their expectations may be fully realized, we can see nothing at present to give the least hope for better prices on the '76 crop. The bulk of the stock back is of inferior quality, too poor for export. Most of the large brewers are stocked for the season. The new crop is coming on finely and gives promise of the heaviest yield since 1868. California and the Territories alone are expected to grow between 40,000 and 50,000 bales. With all these facts taken into account, we think the sooner holders unload the better. Quotations—New York, choice to fancy, 15¢ to 17¢; New York, common to prime, 10¢ to 13¢; Eastern, 10¢ to 13¢; Wisconsin, 8¢ to 12¢; Yearlings, 6¢ to 10¢; Olds, all growths, 4¢ to 6¢; Californians (nominal), 12¢ to 17¢; Oregon (nominal), 12¢ to 17¢.

Mr. Wells is entitled to his opinion, but we think it is rather early to anticipate a glutted market from this year's production.

**Honey**—An agent informs us that Honey is very slow of sale, and fine lots can be bought below quotations.

**Oats**—Oats hold their prices. The trade is reported dull and sales slow. The amounts now in the city are considered large.

**Onions**—Prices are unchanged. Sales of new Onions are reported at \$1.37@1.50.

**Potatoes**—Old Potatoes have fallen again, nothing going to-day over 62¢, and the low rate is 40¢. Early Rose new have been in better demand and the price to-day is a point above last week.

**Poultry and Game**—Ducks and Turkeys are cheaper. A few other small changes are made in our price list.

**Provisions**—The Meat market is quiet. We note a little cheapening of the lowest grade of Beef. Mutton is in large supply. Spring Lamb, dressed Pork, Veal and milk Calves are all lower. Cured Meats are unchanged. Tallow is in fair demand for export.

**Rye**—We are told of a sale of 90 sks good Rye at \$1.95, silver.

**Vegetables**—Our Vegetable price list has undergone many changes. Asparagus, Green Peas and String Beans are notably higher. Cucumbers, Garlic and Summer Squash are lower. Tomatoes are now sold in 30-lb boxes. Los Angeles Tomatoes, grown on old vines, are now somewhat neglected, the trade running on new stock. Green Corn is now quite cheap. A lot of Marrowfat Squash sold at \$35 per ton.

**Wheat**—The market is dull and at a decline, as noted above. We note sales of 600 sks good Australia Milling, \$2.65; 1,200 do good, \$2.60; 400 do Oregon Club, \$2.60; 800 sks choice Milling, \$2.50; 1,500 do choice Santa Clara do, \$2.50; 900 do choice Oregon Club, \$2.50. A lot of 5,000 sks choice Australia Milling was offered at \$2.50 per cwt without finding a purchaser; 250 sks fair Oregon, \$2.35. Two lots of Salt Lake Wheat, comprising about 8,000 cwt, have been received.

**Wool**—There is no improvement in prices, and fine lots are reported slow at extreme prices, while medium grades find fair sale. The last sale of Falkner, Bell & Co. is reported a failure, only 130 bales being sold out of 1,139 offered. Other sales are reported to us as follows: 100,000 lbs, 14¢@27¢; 23,000 lbs, 23¢; 8,000 lbs, 13¢; 5,000 lbs, 20¢.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.	
<b>FRUIT MARKET.</b>	
Apples, basket.....	50 @ 60
Apricots, bx.....	1 50 @ —
do, Royal, lb.....	8 @ 12
Bananas, bunch.....	2 00 @ 3 50
Blackberries.....	15 @ 30
Cherries, blk, lb.....	15 @ 30
do, Red, lb.....	7 @ 15
Cherry Plums, lb.....	12 @ 18
Cocoanuts, 100.....	5 00 @ —
Currants, Chest.....	5 00 @ 6 00
Gooseberries.....	7 @ 10
Limes, Mex.....	8 00 @ 12 50
Pears, bx.....	10 00 @ 15 00
Sicily, bx.....	10 00 @ 12 00
Oranges, Mex.....	— @ —
Tabiti.....	15 00 @ 20 00
peaches, lb.....	15 00 @ 35 00
Pears, bx.....	1 00 @ 2 40
Pineapples, doz.....	6 00 @ 8 00
Raspberries.....	18 @ 20
Strawberries, chst.....	15 00 @ 20 00
<b>DRIED FRUIT.</b>	
Apples, lb.....	5 @ 6
Apricots.....	10 @ 12
Citron.....	28 @ 30
Figs, Black.....	5 @ 7
White.....	6 @ 8
<b>VEGETABLES.</b>	
Asparagus, bx.....	1 50 @ 2 00
Beets, chl.....	60 @ —
Cabbage, 100 lbs.....	50 @ —
Carrots.....	75 @ 100
Cauliflowers, doz.....	50 @ 60
Corn, doz.....	12 @ 20
Cucumbers, doz.....	40 @ 62
Garlic, New, lb.....	3 @ 3
Lettuce, doz.....	10 @ —
New Potatoes.....	1 @ 1
Raspberries, lb.....	1 @ —
Rhubarb.....	4 @ —
Squash, Marrow.....	fat, th..... 35 00 @ —
Summer, doz.....	3 @ 4
String Beans.....	6 @ 9
Tomato's, bx 30 lb.....	1 00 @ 1 12
Turnips, chl.....	50 @ —
White.....	7 @ —

## LEATHER.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.	
Sole Leather, heavy, lb.....	25 @ 29
Light.....	22 @ 24
Jodot, 8 Kil, doz.....	48 00 @ 50 00
11 to 13 Kil.....	68 00 @ 70 00
14 to 19 Kil.....	82 00 @ 94 00
Second Choice, 11 to 15 Kil.....	57 00 @ 74 00
Cornellian, 12 to 16 Kil.....	57 00 @ 67 00
Females, 12 to 13 Kil.....	60 00 @ 70 00
14 to 15 Kil.....	71 00 @ 76 50
Simon Ulmo, Females, 12 to 13 Kil.....	58 00 @ 62 00
14 to 15 Kil.....	66 00 @ 70 00
16 to 17 Kil.....	72 00 @ 74 00
Simon, 18 Kil.....	61 00 @ 63 00
20 Kil.....	65 00 @ 67 00
24 Kil.....	72 00 @ 74 00
Robert Calf, and 8 Kil.....	35 00 @ 40 00
Kips, French, lb.....	1 00 @ 1 35
Cal. doz.....	40 00 @ 60 00
French Sheep, all colors.....	8 00 @ 15 00
Eastern Calf for Backs, lb.....	1 00 @ 1 25
Sheep Roans for Topping, all colors, doz.....	9 00 @ 13 00
For Linings.....	1 50 @ 1 75
Cal. Sheep Linings.....	1 75 @ 4 50
Boot Legs, French Calf, pair.....	4 00 @ —
Good French Calf.....	4 00 @ 4 75
Best Jodot Calf.....	5 00 @ 5 25
Leather, Harness, lb.....	35 00 @ 38 00
Fair Bridle, doz.....	48 00 @ 72 00
Sidring, lb.....	30 00 @ 37 00
Well, doz.....	30 00 @ 50 00
Buff, ft.....	13 @ 20
Wax Side.....	17 @ 18

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; Co.]

SAN FRANCISCO, May 30, 3 P. M.	
GOLD TENDERS IN S. F., 11 A. M., 94½@94½. SILVER, 5½@61.	
Gold in New York, 106½.	
GOLD BARS, 88½@89. SILVER BARS, 10@15½ cont. discount.	
EXCHANGE ON LONDON, \$100, 50¢@55¢ 100 cent. premium for gold; London Bankers, 49; Commercial, 49; Paris, five francs @ 50¢; Mexican dollars, 94@95.	
LONDON CONSOLS, 93½; Bonds, 106½.	
QUICKSILVER IN S. F., by the flask, 9¢; lb, 41¢@42¢.	

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat. 9½@—		Pacific Glue Co's	
Neville & Co's		Nestfood, No 1	00 @ 90
Hand Sewed, 22x36, 9½@—		Csstor, No 1.....	1 05 @ —
24x36.....	9½@10	do, No A.....	1 05 @ —
23x40.....	10 @ —	Baker's A.....	1 25 @ 30
Machine Sewd, 22x36, 9 @ —		Olive, Pigmout, ..	25 @ 75
Flour Sacks, halves, 9½@11		Possel.....	4 75 @ 25
Quarters.....	6 @ 7	Palm, lb.....	9 @ —
Eighths.....	4½ @ 5	Linseed, Raw, bbl.	85 @ —
Hessian, 60 incb.....	12½@—	Boiled.....	90 @ —
45 inch.....	8 @ 9	Coconut.....	68 @ 70
40 inch.....	8 @ —	China nut, .....	68 @ 70
Wool Sacks.....		Sperm.....	1 60 @ 165
Hand Sewed, 3 lb.....	50 @ —	Coast Whalces.....	60 @ 65
Machine Sewed.....	45 @ —	Polar, refined.....	60 @ —
4 lb.....	55 @ —	Lard.....	1 10 @ 115
Standard Gunnies.....	13½@14	Oleophine.....	35 @ —
Bean Bags.....	7 @ 8	China Bril's.....	33 @ 35
<b>CANDLES.</b>		Photolite.....	33 @ —
Crystal Wax.....	19 @ 20	Nonpariel.....	50 @ —
Eagle.....	12½@—	Eureka.....	22½@ 25
Patent Sperm.....	23 @ 30	Barrel kerosene.....	30 @ —
<b>CANNED GOODS.</b>		Downer Kcr.....	47½@ 50
Assorted Pie Fruits.....		Elaine.....	50 @ —
2½ lb cans.....	2 75 @ 3 00	<b>PAINTS.</b>	
Table do.....	3 75 @ 4 25	Pure White Lead, 9½@ 10½	
Jams and Jellies, 4 @ —		Whiting.....	12 @ —
Pickles, hf gal.....	3 50 @ —	Putty.....	4 @ 5
Sardines, qr box, 1 65 @ 1 90		Chalk.....	14 @ —
Hf Boxes.....	3 00 @ —	Paris White.....	2½ @ —
<b>COAL—Jobbing.</b>		Ochre.....	3½ @ —
Australian, ton, 9 00 @ 9 25		Venetian Red.....	3½ @ —
Coos Bay.....	8 00 @ —	Averill Mixed	
Bellingham Bay, 8 00 @ —		Paint, gal.	
Scranton.....	8 00 @ 9 00	White & tints.....	2 00 @ 2 40
Cumberland.....	14 00 @ 17 00	Green, Blue &.....	
Mt Diablo.....	5 75 @ 7 75	Ch Yellow.....	3 00 @ 3 50
Lehigh.....	22 00 @ —	Light Red.....	3 00 @ 3 50
Liverpool.....	8 50 @ 9 00	Metallic Red.....	3 00 @ 3 50
West Hartley.....	14 00 @ —	<b>RICE.</b>	
Scotch.....	7 50 @ 8 00	China No. 1, lb.....	5½ @ 6½
Scranton.....	13 00 @ 14 00	Hawaiian.....	4½ @ 5
Vancouver Id.....	10 50 @ 12 00	<b>SALT.</b>	
Charcoal, sack.....	75 @ —	Cal. Bay, ton.....	13 00 @ 14 00
Coke, bbl.....	60 @ —	Common.....	6 00 @ 8 00
<b>COFFEE.</b>		Carmen Id.....	13 00 @ 14 00
Sandwich Id, lb, 21½ @ —		Liverpool fine.....	20 00 @ —
Costa Rica.....	18 @ 20½	<b>SOAP.</b>	
Guatemala.....	18 @ 20½	Castile, lb.....	10 @ 10½
Java.....	24 @ —	Common brands.....	4½ @ 6
Manila.....	19 @ —	Fancy brands.....	7 @ 8
Ground, in.....	25 @ —	<b>SPICES.</b>	
<b>FISH.</b>		Gloves, lb.....	45 @ 50
Sa'cto Dry Cod.....	5 @ 6	Cassia.....	22½@ 25
Bonellus.....	8½ @ —	Nutmegs.....	85 @ 90
Eastern Cod.....	7 @ 8	Pepper Grain.....	15 @ 17
Salmon, bbls.....	8 50 @ 9 50	Pimento.....	15 @ 16
Hf bbls.....	4 50 @ 5 00	Mustard, Cal.,	
2 lb cans.....	3 00 @ —	½ lb glass.....	1 50 @ —
Pkld Cod, bbls.....	22 00 @ —	<b>SUGAR, ETC.</b>	
Hf bbls.....	11 00 @ —	Cal. Cube, lb.....	13 @ —
Morocco No. 1.....	14 @ —	Citrol A crush'd.....	14 @ —
Hf Bbls.....	14 00 @ 14 50	Powdered.....	14 @ —
In Kits.....	3 00 @ 3 25	Fine crush'd.....	14 @ —
Ex Mess.....	3 50 @ 4 00	Granulated.....	13½@ —
Pkld Herring, bx	3 00 @ 3 50	Golden C.....	11½ @ 12
Boston Smkg Hf gal	40 @ 50	Hawaiian.....	10 @ 11
<b>LINE, ETC.</b>		Cal. Syrup, kgs.....	75 @ —
Lime, Sta Cruz,		Hawaiian Macs.....	25 @ 30
bbl.....	2 00 @ 2 25	<b>TEA.</b>	
Cement, Rosen-		Young Hyson,	
dale.....	2 75 @ 3 50	Moyne, etc.....	35 @ 50
Portland.....	4 75 @ 5 00	Country pkd Gun-	
Plaster, Golden		powder & Im-	
Gate Mills.....	3 00 @ 3 25	perial.....	50 @ 60
Land Plaster, tn 10	40 @ 50	Hyson.....	35 @ 35
<b>WALN.</b>		China.....	35 @ 35
Ass'd sizes, keg 3 25 @ 4 00		Japan, 1st quality	40 @ 50
		2d quality.....	25 @ 35



### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

**SEWING MACHINES.**—Wm. A. Dawson, S. F. This improvement relates to that particular class of sewing machines in which two or more needles, operated by the same needle arm, are used for sewing two or more parallel seams. The needles used in this class of machines have heretofore been made stationary, so that the space between the seams could not be varied, whereas it is often necessary or desirable to run the seams closer together or farther apart according to the character of the work being done. This invention provides an arrangement for adjusting these needles so that the operator can set them to suit any character or class of work. The invention can be applied to any of the double-thread sewing machines now in use. In a shuttle machine the shuttle-races can also be made adjustable, corresponding to the adjustment of the needles; but the inventor has discovered that this is not necessary, as he can obtain a sufficient width of space for ordinary work by a simple adjustment of the needles, and the employment of a looper which will insure the passage of the shuttles through the loops, even when the needles are set at a distance from them. This invention provides an important improvement in this class of sewing machines by adapting each machine to sew parallel seams at varying distances apart as desired. Double seam stitching is now being generally adopted in sewing heavy materials, and this improvement is intended to adapt the machines for this work.

**WINDOW SASH.**—Reed, Hoagland & Newsom, Brooklyn, Alameda county. The nature of this invention is to provide an improved screen attachment for the upper and lower sashes of windows, so that when the windows are opened the screens will automatically and simultaneously be drawn across the opening and thus prevent the entrance of insects. The improved window screens are arranged to slide like drawers into vertical boxes or recesses in the casing or wall, one of which is arranged above and one below the window opening, so that the screens can be attached to and operated by the window sashes. For upper windows this screen is provided with a suitable frame on its two ends and upper edge, while its lower edge is attached to the upper rail of the upper sash, so that when the sash is lowered the screen will be drawn out of its recess so as to cover the opening between the upper rail of the sash and the top of the window opening. The lower sash is arranged a little differently but on the same principle, except that the screen is not attached to the window permanently, so that the window can be raised if desirable without raising the screen in the upper sash. However, it is a permanent fixture, and there are no detachable fastenings to give burglars a chance to get in at night in case the window is open.

**WINDOW SASH.**—Lazare Landecker, San Luis Obispo. The object of this invention is to provide such a construction of window sashes that the panes of glass can be secured in place and removed and replaced whenever desired by any ordinary person, thus avoiding the necessity of employing a glazier to do the work. The improvement also allows the inventor to construct window sashes so that they can be taken apart and compactly packed for shipping after the manner known in commerce as "knock down" articles. The wood work can thus be packed in one package and the glass in another, saving expense not only in the cost of shipping, but also reducing the liability of breaking the glass. The invention consists therefore in constructing the mullions of the sash with simple grooves in which the edges of the panes of glass fit, and in providing slots in the edges of the outside rails of the sash opposite said grooves, through which the panes of glass can be slid into place in the manner of a drawer. A filling is thus secured in the slot in the sash rail so as to prevent the glass from coming out. In order to render the removal and replacing of the panes more convenient and to permit the sash to be "knocked down" for shipping, the mullions are made in sections so that they can be taken to pieces.

**TRACE FASTENER.**—Chas. S. Crittenden, S. F. This improved trace fastening is intended more particularly for coaches or hacks, although it can be used on all classes of vehicles. Around each end of the whiffletree is made a groove as wide as the trace to be fastened on it. The end of the trace is formed into a loop to fit in the groove. Upon the trace is a metal or other loop which can be slipped up against the whiffletree after the trace loop has been placed in the groove, and thus by reducing the size of the trace loop it is made to clasp the reduced portion of the whiffletree so that it cannot get out of the groove. A strap keeps the sliding loop in place and holds the sliding loop up against the whiffletree, preventing the trace loop from sliding off the groove. This trace fastener allows the pull upon the trace to come straight from the whiffletree without cramping or straining any particular part of the trace, so that it will last as long as any other part of the har-

ness, whereas, with the ordinary fastening now in use, the trace is cramped by the fastenings so that it soon becomes broken at that point, requiring to be frequently repaired.

**DEVICE FOR ELEVATING EARTH.**—Geo. Milliken, Los Angeles. This invention relates to that class of machines which are intended to elevate earth, sand or any other material, and which consists of an endless belt or band passing over pulleys and provided with suitable elevating buckets. The improvement consists in a novel combination of an elevator with suitable operating gearing and shafts and a movable or adjustable crane, whereby the elevator can be shifted so as to work at any desired point within its reach without removing or altering the stand or support. The operation of the device is very simple, as it is only necessary to set it so that the lower end of the elevator belt will rest upon some part of the bank to be excavated, and set it in motion to raise the earth which may either be deposited into carts or upon an endless carrying belt by which it will be removed to any distant parts. The elevator belt may be moved from time to time to new points, and by swinging the arm of the crane around, work may be done in a large circle without changing the locality of the machine.

**VALVE MOTION AND CUT-OFF FOR STEAM ENGINES.**—Eugene O'Neill, S. F. This is a combination of mechanism for opening and closing steam and exhaust valves in a steam engine; the opening being effected gradually, until the valve has started from its seat, and completed rapidly, while the closing of the valve is controlled by the closing of a cam or cams, which are made to release the valve and allow it to drop, at any desired point in the stroke of the engine; the whole mechanism forming what is known as a variable cut-off. It consists in combination with the vertically acting valve stem, of a horizontally moving bar having a peculiarly shaped curve formed upon its upper side, whereby the lifting of the valve is effected; also in the employment of a cam or cams in combination with the stem so actuated that at any desired point in the piston stroke it will release the valve from the action of the elevating devices and allow it to fall and cut off any further accession of steam to the cylinder.

**THE STRONG BROTHERS TO RETURN.**—We had an item last summer to the effect that the Strong brothers, who are well known to the people of this State because of their experiments with cotton production in Merced county, did not propose to consider their early failure conclusive against the profitable production of cotton in this State, but would return and follow their experiments farther. From what is now printed in the Baltimore *Sun* we infer that these gentlemen cling to their intention and may be seen on this coast again ere long. One reason of their failure to put the production of cotton on a profitable basis was the expense of labor in the cultivation and preparing the crop for market. They now propose to use what is creating a great excitement in the Southern States under the name of the "Clement process," which does away with the gin and spins the cotton directly into thread from the bolls. The introduction of this process will doubtless also be of interest to many of our citizens who are now experimenting with the production of cotton.

**CALIFORNIA WILD OATS.**—As we write we are sitting beneath the shade of a small shock of wild oats, which Mr. R. J. Trumbull has brought to us from Mr. Barber's place in Ross valley, Marin county. The grain stands seven and three-quarter feet high and uses up the upper foot and a half in laying out its heads. This seems a good year for wild oats. We read in the Stockton *Independent* as follows: "A specimen of native California wild oats seven feet three inches high was brought into our office yesterday. It grew on irrigated land, on the ranch of R. W. Hopkins, on the Calaveras. It was the hugest specimen of the cereal we ever saw. The heads were 16 inches long." And in the Sonoma *Democrat* is the following: "Mr. F. D. Mize, of this city, brought to the Democrat office Tuesday morning, a large sample of the finest wild oats we have seen, grown on the place of Mrs. Mize, near Mark West station. They measure over eight feet in height and have well filled heads. Mr. Mize informs us that four acres were sown in common oats and barley for hay, but that the wild oats got the upper hand of the tame, and the result is a splendid crop of them and barley."

**A WISE LAW.**—In the province of Biscay a land owner must plant two saplings for every timber tree he cuts down. In Java the birth of every child is celebrated by planting a fruit tree, which is carefully tended as the record of the age of the child whose birth it registers. This wise regard for the future deserves imitation.

**A PLEASANT OCCURRENCE.**—All hands connected with this office were recently invited to lunch with the publishers at J. V. Webster's new Palace restaurant, No. 218 Sansome street. The lunch was greatly enjoyed and highly complimented.

**GEN. GRANT** has arrived in England, and was received with great enthusiasm and ceremony.

### General News Items.

MEMORIAL day was observed in a becoming manner in this city.

THE *Tribune* says \$106,000,000 worth of liquor is consumed in New York every year.

THE Northern Pacific will build 100 miles of road toward the Black hills this summer.

THE *Tribune* says: It is said that the English colonies have gained increased trade by the displays they made at the Centennial Exhibition.

THROUGH official channels a rumor has reached the State Department that Mexico is about to declare an additional 10 per cent. tariff on all imports into that country.

THE annual reunion of residents of Nevada county will be held at Badger's park on June 9th. The exercises will consist of addresses, poems, an oration by John Garber, music and dancing.

THE steamship *City of San Francisco*, belonging to the Pacific Mail Steamship Co., ran on a sunken rock on the Mexican coast this week and sunk. No lives were lost, but the steamer is a total loss.

THE Sheriff of Mecca has placed the treasures of the Holy Shrine, the accumulated money gifts from pilgrims, at the Sultan's disposal. The treasures aggregate 200,000,000 piasters, \$4,000,000.

THE Secretary of the Treasury gives notice that the principal and interest on the 4,000,000 registered 5-20 bonds of March 3d, 1865, dated July 1st, 1865, and 6,000,000 coupons, will be paid at the United States Treasury, August 28th.

PREPARATIONS are being made by the Ordnance Bureau of the War Department to close the national armories and workshops after the 1st of July, there being no appropriations to continue the work. Six hundred mechanics will be thrown out of employment.

THE coming Fourth of July promises to be generally celebrated throughout the State. In several towns the programme of proceedings has already been made out, and committees appointed to arrange for conducting the ceremonies. It will soon be time for San Francisco to move in the matter of preparing for a celebration of the day.

IT is no longer considered expedient to retain army officers on duty at the White House, and Colonel H. C. Scobin, 25th Infantry, who was detailed at the President's request as one of his Secretaries, will be relieved at the end of this month, and by direction of the President assigned to important duty in the War Department.

### The First Watch.

At first the watch was about the size of a desert plate. It had weights and was used as a "pocket clock." The earliest known use of the modern name occurs in the record of 1552, which mentions that Edward VI had "one larum or watch of iron, the case being likewise of iron gilt, with two plummetts of lead." The first watches may readily be supposed to have been of rude execution. The first great improvement, the substitution of springs for weights, was in 1650. The earliest springs were not coiled, but only straight pieces of steel. Early watches had only one hand, and being wound up twice a day, they could not be expected to keep time nearer than 15 or 20 minutes in the 12 hours. The dials were of silver or brass; the cases had no crystals, but opened at the back and front, and were four or five inches in diameter. A plain watch cost the equivalent of \$1,600 in our currency, and after one was ordered it took a year to make it.

To appreciate the mechanical progress which has been made in watch making since the time of "the first watch," one has but to look upon the perfect and compact mechanism displayed in the manufactures of the New York Watch Company, Springfield, Mass., represented by Dewey & Jordan, 432 Montgomery Street, S. F.

[From our issue of May 26th.]

**CREDITABLE ENTERPRISE.**—We are pleased to notice the opening of a new restaurant in this city, which, from the knowledge we have of the owner and his qualifications for good and generous providing, we doubt not will quickly take the lead among the city institutions of its kind. The location is 218 Sansome street, between California and Pine, and is central and accessible. The proprietor is Mr. J. V. Webster, one of the leading farmers of Alameda county; a man who knows how to produce good things, and will place them without stint upon his tables. We had the pleasure of looking through the establishment before the opening, and we never saw anything more conveniently arranged and perfect in all its points than Mr. Webster's enterprise has produced. Everything is new from floor to ceiling. The kitchen is so light and so planned that it must always be fresh and cleanly. We are glad to pronounce the restaurant first-class in every particular, and recommend it to all whom business or pleasure bring to the city. The opening spread was made on Wednesday night of last week. About one hundred gentlemen sat at the tables. Hon. Frank M. Pixley presided. An elegant and artistic supper was served, and the guests were all pleased with the institution and its proprietor. Comments were abundant upon the fine large space which is occupied, and the charming way in which it is furnished with tasteful and useful articles and supplies.

### A Superior Advertising Medium.

San Francisco is in every sense the city of the Pacific coast. Here is concentrated the wealth and very largely the enterprise of the coast. The railroad and telegraph lines center here. The earliest news on all matters of importance is known in San Francisco as promptly as in New York. Libraries for consultation and reference are here of the first order. In a word, San Francisco offers unusual opportunities for the publication of a great weekly journal such as for nearly seven years its publishers have made the PACIFIC RURAL PRESS, comparatively making an indispensable journal to all who till the soil or live in the country—one whose columns are especially full in everything that relates to agricultural interests of the Pacific coast.

The effectiveness of an advertising medium depends much on the character of the issue. A first-class paper handsomely printed, carefully and ably edited, with its business conducted in an enterprising and strictly honorable manner, is bound to have a great influence with its readers; it is bound to have a large list of readers; its readers are bound to be of a class who hold more than ordinary influence in the community.

The RURAL PRESS for seven years has, as far as possible, excluded all doubtful advertising as well as all questionable reading matter. It will continue to do so. It has thus gained thousands of subscribers who rightly consider both the old and new style of insinuating humbug ads circulating common in many journals as exceedingly baneful in the family circle.

**PERSONAL.**—Wm. J. Lawrie (or his alias). Description—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

### CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

**WANTED.**  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to  
M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.

We carry the N. Y. watch, and you can refer to the publishers of this paper as to the superiority of the N. Y. Watch Company's movements, manufactured at Springfield, Mass. Also to any one else who owns one.

SUBSCRIPTIONS to the RURAL taken in Clubs will be continued after the first year at regular single subscription rates only, unless the club is renewed.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, May 30th, 1877.

The rains, with their refreshing influence, increase confidence and give a firmer feeling to men in nearly all lines of trade. Although the effect is good, the dullness will continue until the new crop year begins. The week has been marked by a continuance of the decline in Wheat prices. The shipping demand is at a standstill and Wheat sales are only for local consumption. Barley has sympathized with Wheat, and transactions have been at a slight decline. Other commodities have retained prices, with the exception of the usual fluctuation in Fruit and Vegetables.

Today being a national holiday, Memorial day, dedicated to the memory of the fallen heroes of our armies, there has been nothing done in trade—banks and exchanges being closed.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	12s 6d@13s —	13s 21@13s 6d
Friday.....	12s 4d@12s 10d	13s —@13s 4d
Saturday.....	12s 4d@12s 10d	13s —@13s 4d
Monday.....	12s 4d@12s 10d	13s —@13s 4d
Tuesday.....	12s 5d@12s 8d	12s 10d@13s 2d
Wednesday.....	Holiday.	Holiday.

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	8s 11d@9s 1d	9s 1d@9s 5d
1876.....	9s 10d@10s —	10s —@10s 6d
1877.....	12s 5d@12s 8d	12s 10d@13s 2d

## The Foreign Review.

LONDON, May 29th.—The *Mark Lane Express*, in its review of the Grain trade, says: The weather during the week has been unsatisfactory as far as vegetation is concerned. An unusually low temperature has prevailed, accompanied by cold winds, which have prevented the growing crops from making progress. Reports are generally, though not entirely, satisfactory as to the aspect of winter wheat, but the growth is everywhere checked by the harsh weather. Business at country markets was a good deal interrupted by the holidays, but an unmistakably weaker tone was apparent in the provincial trade during the week. Holders of Wheat show more desire to realize, and sooner than the risk of overvaluing their market, farmers have accepted two shillings less. The tendency in the value of Feeding Stuffs is also downward. Imports into London last week were over 50,000 quarters. At the commencement of the week sellers showed considerable firmness, and to all appearances owners were content to warehouse their Wheat and abide the future course of prices rather than depress a market already weakened by forcing sales at a concession sufficiently tempting to attract buyers. This state of things continued until Friday, when the return of more spring like weather operated against sellers and prices suffered a further decline. The holiday character of the week's trade has caused business to be somewhat desultory, but transactions show a decline of three shillings per quarter on the week. Arrivals of floating cargoes at ports of call have been more numerous, but inquiry has been extremely inactive, both for Wheat and Maize, and prices have been again sellers for both articles. Sales of English Wheat last week were 37,197 quarters, at 68s 9d, against 41,963 quarters, at 44s 11d, the previous year. Imports into the United Kingdom for the week ending May 19th were 978,561 cwt of Wheat and 193,632 cwt of Flour.

## Freights and Charters.

For the first time in months, says the *Commercial News*, we have had some activity in grain freights, and though the number of engagements was small the demand came unexpectedly and has resulted in a better feeling among shipowners. With one exception the ships taken up were American, which would indicate that exporters do not desire to take any chances of further European complications. We shall receive new Wheat unusually early this year, and as the lately engaged ships have long lay days, most of them will carry partial or perhaps full cargoes of new Wheat, and more or less salmon and other merchandise. The war risk on English ships is still a nominal amount, but a large amount of insurance has been effected during the week on English Wheat ships still on the way to England. At the close the market is quiet. There is inquiry for vessels, but owners' views are now not lower than £2 5s direct, which is above the views of those wishing to take ships. We have now 9,514 tons in port under engagement to land Wheat, 8,750 tons miscellaneous, and 28,061 tons disengaged. The latest charters reported are: American ship Alexander McCallum, 1,951 tons, Wheat to Liverpool, £2 2s 6d; ship Alameda, 1,474 tons, Wheat to Liverpool, £2, Cork U K, £2 2s 6d, Continent, £2 7s 6d; ship Adam M. Simpson, 1,525 tons, Wheat to Liverpool, £2 2s, Cork U K, £2 4s 6d, Continent, £2 9s 6d; ship Indiana, 1,500 tons, Wheat to Liverpool, £2, Cork U K, £2 2s 6d, Continent, £2 7s 6d.

## Eastern Grain Markets.

NEW YORK, May 27th.—Cable advices are unfavorable, English quotations coming lower, while deliveries in leading United Kingdom markets have increased, chiefly from Germany, which show how effective high prices are in bringing out supplies from sources least expected. No. 2 spring Wheat has sold in our market at \$1.60@1.75, and prime amber State, via canal, at \$1.95, which shows a decline of 25¢ per bushel in the week on this kind. The quantity on the way from the West has materially increased, and the tendency of prices are toward a lower range. Corn has declined under increased supplies by canal, closing at 60¢@65¢, for good shipping. Considerable barley has been sold for England at 90¢ to \$1, with freight at 5¢ per 480 pounds. There has been a sharp decline in Flour, and the prices of Breadstuffs are gradually settling down to where they started from at the outbreak of the difficulties in Europe.

CHICAGO, May 26th.—The Grain business on "Change" the past week has been active and at times excited, but prices have gone uniformly downward, with few reactions. The reports from the country west, northwest and south of Chicago, are highly encouraging for another great crop year. In Minnesota, the largest yield of Wheat that ever came from that State is confidently predicted. In Iowa, both Wheat and Corn have a good outlook, and grain dealers anticipate a heavy crop there of both cereals. The cold weather and frosts which have visited a part of Illinois have injured the prospects of Corn somewhat, but not enough to affect the general healthy and forward growth. Sales of June Wheat have been from \$1.40@1.60, the highest price being paid on Monday and the lowest today. Corn has been less variable, but sufficiently so to keep up the speculative interest. Sales have been from 46¢ to 43¢. Oats have weakened decidedly, and close

dull. Rye and Barley have declined, but have been so dull as hardly to be quotable. Closing prices are: Cash Wheat, 1.43¢; Corn, 44¢; Oats, 37¢; Rye, 70¢; Barley, 65¢@70¢. Pork has been weak and lower, closing at \$13.50, cash. Lard closes at the prices which prevailed the entire week, \$9.22@9.25. General business is dull. Loans are easier than for a long time. Currency is plenty, and no excitement or activity exists in any commercial line.

## A New Grain Shipping Project.

St. Louis, May 29th.—A project is on foot here to open direct Grain trade with Liverpool. The plan is for the railroads centering here, the Elevator Companies, the Mississippi Valley Barge Company and ocean steamers, to pool the risks by a combination, and to send cargoes of Grain, especially Corn, from New Orleans, through the jetties, to Liverpool and other European ports. The prospects are that the plan will soon be carried into effect. An ocean steamship company has already named several large grain-carrying steamers, which can be put on the berth as fast as cargoes are ready.

## Eastern Wool Markets.

NEW YORK, May 27th.—The Wool market opened with increased activity, due to the fact that many manufacturers have permitted their stocks to run low, and have therefore been compelled to enter and replenish. The increased demand, however, did not continue to the close, for their wants proved small and easy to satisfy. Californian spring has been quiet, although holders are not inclined to shade current rates, owing to the high prevailing rates at San Francisco. Fall California is neglected and nominal. Further advices from London sales are: Good qualities animated, Superior Port Phillip, 14¢; do with burrs, 12¢; average, 10¢; cross bred superior, 14¢; average, 11¢; New Zealand superior, 14¢; average, 12¢. Sales for the week are: 20,000 lbs Australia at 46¢; 150 lbs Domestic, 27¢@31¢; 60,000 lbs new spring California, 21¢; 34 lbs fall do, 18¢@20¢; 14,000 lbs Oregon, 30¢@33¢; 25 bags fall Colorado, 18¢; 90,000 lbs Western Texas, 17¢@19¢; 40,000 lbs Eastern do, 25¢@25½¢; 53,000 lbs do XX Ohio fleece, 38¢@42¢; 22,000 lbs do X do, 36¢; 30,000 lbs do unwashed Indian combing and delaine, 35¢; and 31 lbs Porto Cabello, 25,000 lbs secured California, 30,000 do pulled do, 10,000 do domestic noils, 1,500 do Eastern Texas, 25,000 do Western do, 55 bags super pulled, 40 do No. 1, 8 do short X 6 do combing, 5 do lambs, and 5,000 lbs washed Ohio delaine, on private terms.

PHILADELPHIA, May 29th.—The Wool market is bare; prices firm. Colorado washed, 18¢@20¢; unwashed, 16¢@17¢; extra and Merino pulled, 33¢@35¢; No. 1 and superior pulled, 33¢@35¢; Texas fine and medium, 16¢@20¢; coarse, 16¢@18¢; California fine and medium, 18¢@30¢; coarse, 18¢@22¢.

## Cal. Wheat Exports for the Year.

The *Call* notes that the Wheat trade for the harvest year 1876-77 has about closed. Not a single cargo has been cleared this month, and it is not likely that more than one or two more will be dispatched before the new crop comes in. Since the 1st of July, 1876, the exports have been as follows:

	Quantity.	Value.
Wheat, centals.....	10,376,900	\$18,069,700
Flour, bbls.....	464,200	2,489,500
In Wheat, centals.....	11,769,500	\$20,559,200
Of the fleet cleared during the harvest year only 59 are still en route, as follows:		
December, 1876.....	1	\$6,100
January, 1877.....	4	159,000
February.....	21	760,900
March.....	15	552,200
April.....	9	237,400
Totals.....	50	1,725,600

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. May 9.	WEEK. May 16.	WEEK. May 23.	WEEK. May 29.
Flour, quarter sacks.....	36,163	29,136	19,652	47,536
Wheat, centals.....	38,493	28,099	46,890	41,334
Barley, centals.....	10,156	14,353	12,580	5,014
Beans, sacks.....	1,018	1,712	2,940	1,164
Corn, centals.....	2,757	3,574	4,082	4,164
Oats, centals.....	5,091	6,164	2,611	3,129
Potatoes, sacks.....	12,745	12,957	13,750	9,238
Onions, sacks.....	353	563	253	636
Wool, bales.....	8,610	6,786	5,328	3,321
Hops, bales.....	5	20	22	.....
Hay, bales.....	1,150	1,295	991	727

**Bags**—Prices for Bags are unchanged from last week's rates. Dealers report considerable inquiry and some sales. The combination are said to hold Grain Bags at 9¢, wholesale, and the jobbing rate is as we quote, 9¢. Other descriptions of Bags and Bagging materials are stationary.

**Barley**—A decline of 5¢ per cwt in outside rates is noted in our quotations. We note sales: 400 sacks Feed, \$1.55; 600 sacks choice Coast Feed, \$1.60; 200 do good do, \$1.57½; 300 sacks good Feed, \$1.55; 420 sacks choice Bay, to a Brewer, \$1.75; 250 sacks good Coast Feed, \$1.68½, silver; 800 do Chevalier Feed, \$1.55, gold.

**Beans**—Prices are unchanged.

**Buckwheat**—\$1.60 per cwt is the price now quotable.

**Corn**—Prices remain as last quoted for best lots. We note sales: 500 sacks White and Yellow, mixed, \$1.87½; 300 do large Yellow, \$1.90; 1,000 do do, private; 200 sacks fair Yellow at \$1.85 per cwt.

**Dairy Produce**—Butter prices are unchanged. Old Pickle Roll is now reported practically out of the market, as but few lots are known of. The New Pickle Roll is being firmly held at 30¢@32¢ for the fancy brands. There is nothing new in Cheese.

**Eggs**—A slight improvement is noted for choice fresh California Eggs. A dealer requests us to state that the custom makes all sales of Eggs and Poultry for silver.

**Fruit**—The week brings several fluctuations in whole, sale rates for Fruit. Apples are now of the new crop and are sold by the basket. Apricots have been received in much less supply and the price has greatly advanced. Royal Apricots have sold by weight, at 8¢@12¢ per lb. Cherries and Currants have improved slightly and Strawberries have returned to fancy rates. The novelties of the week are Cherry Plums and Peaches; the latter, being the first of the season, were received from J. G. Briggs, of Marysville. The variety is Briggs Early May. The first Cherry Plums were from J. Strain, of Marysville. Full lists of prices may be found below.

**Hops**—No Hops have been received in this market during the week. No sales are reported, but holders are firm. There has been an exportation of 19,903 lbs to New Zealand, the supply being taken the week before at 15¢@17¢. Emmet Wells reports the New York market, for the week ending May 18th, as follows:

Receipts light. The warm weather has somewhat improved the demand for home trade. Exporters have taken 600 bales this week. We renew our quotations without change, though 17¢ is an extreme rarely met. Most of the sales have been within the range of 12 to 15¢ for choice. Farmers are holding back their Hops for an

advance. While we hope their expectations may be fully realized, we can see nothing at present to give the least hope for better prices on the '76 crop. The bulk of the stock back is of inferior quality, too poor for export. Most of the large brewers are stocked for the season. The new crop is coming on finely and gives promise of the heaviest yield since 1868. California and the Territories alone are expected to grow between 40,000 and 50,000 bales. With all these facts taken into account, we think the sooner holders unload the better. Quotations—New York, choice to fancy, 15 to 17¢; New Yorks, common to prime, 10 to 13¢; Eastern, 10 to 13¢; Wisconsin, 8 to 12¢; Yearlings, 6 to 10¢; Olds, all growths, 4 to 6¢; Californians (nominal), 12 to 17¢; Oregon (nominal), 12 to 17¢.

Mr. Wells is entitled to his opinion, but we think it is rather early to anticipate a glutted market from this year's production.

**Honey**—An agent informs us that Honey is very slow of sale, and fine lots can be bought below quotations.

**Oats**—Oats hold their prices. The trade is reported dull and sales slow. The amounts now in the city are considered large.

**Onions**—Prices are unchanged. Sales of new Onions are reported at \$1.37½@1.50.

**Potatoes**—Old Potatoes have fallen again, nothing good to-day over 62¢, and the low rate is 40¢. Early Rose new have been in better demand and the price to-day is a point above last week.

**Poultry and Game**—Ducks and Turkeys are cheaper. A few other small changes are made in our price list.

**Provisions**—The Meat market is quiet. We note a little cheapening of the lowest grade of Beef. Mutton is in large supply. Spring Lamb, dressed Pork, Veal and milk Calves are all lower. Cured Meats are unchanged. Tallow is in fair demand for export.

**Rye**—We are told of a sale of 90 sks good Rye at \$1.95, silver.

**Vegetables**—Our Vegetable price list has undergone many changes. Asparagus, Green Peas and String Beans are notably higher. Cucumbers, Garlic and Summer Squash are lower. Tomatoes are now sold in 30-lb boxes. Los Angeles Tomatoes, grown on old vines, are now somewhat neglected, the trade running on new stock. Green Corn is now quite cheap. A lot of Marrowfat Squash sold at \$35 per ton.

**Wheat**—The market is dull and at a decline, as noted above. We note sales of 600 sks good Australia Milling, \$2.65; 1,200 do good, \$2.60; 400 do Oregon Club, \$2.60; 800 sks choice Milling, \$2.50; 1,500 do choice Santa Clara do, \$2.50; 900 do choice Oregon Club, \$2.50. A lot of 5,000 sks choice Australia Milling was offered at \$2.50 per cwt without finding a purchaser; 250 sks fair Oregon, \$2.35. Two lots of Salt Lake Wheat, comprising about 8,000 cwt, have been received.

**Wool**—There is no improvement in prices, and fine lots are reported slow at extreme prices, while medium grades find fair sale. The last sale of Falkner, Bell & Co. is reported a failure, only 130 bales being sold out of 1,139 offered. Other sales are reported to us as follows: 100,000 lbs, 14¢@27½¢; 23,000 lbs, 23½¢; 8,000 lbs, 13½¢; 5,000 lbs, 20¢.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.	
<b>FRUIT MARKET.</b>	
Apples, basket.....	50 @ 60
Apricots, bx.....	1 50 @ 1 50
do, Royal, lb.....	8 @ 12
Bananas, bunch.....	2 00 @ 3 50
Blackberries.....	15 @ 30
Cherries, bx, lb.....	15 @ 30
do, Red, lb.....	7 @ 15
Cherry Plums, lb.....	12 @ 18
Cocoanuts, 100.....	5 00 @ 6 00
Currants, Chest.....	5 00 @ 6 00
Gourberries.....	7 @ 10
Limes, Mex.....	10 @ 12
do, Cal.....	10 @ 15
Lemons, Cal M 15.....	12 @ 20
Sicily, hx.....	10 @ 12
Oranges, Mex.....	— @ —
do, Tahiti.....	15 @ 20
do, Hawaii.....	15 @ 20
Peaches, lb.....	10 @ 12
Pears, hx.....	1 00 @ 2 00
Pineapples, doz.....	6 00 @ 8 00
Raspberries.....	18 @ 20
Strawberries, ch.....	15 @ 20
<b>DRIED FRUIT.</b>	
Apples, lb.....	5 @ 8
Apricots.....	10 @ 12
Citrus, Black.....	28 @ 30
White.....	6 @ 8
<b>VEGETABLES.</b>	
Asparagus, hx.....	1 50 @ 2 00
Beets, ct.....	60 @ —
Cabbage, 100 lbs.....	50 @ —
Carrots.....	75 @ 1 00
Cauliflower, doz.....	1 50 @ 2 00
Corn, doz.....	12 @ 20
Cucumbers, doz.....	40 @ 60
Garlic, New, lb.....	3 @ —
Peas, Sweet.....	3 @ 3½
Lettuce, doz.....	10 @ —
New Potatoes.....	1 @ 1½
Carnips, lb.....	1 @ —
Rhubarb.....	4 @ 4½
Horseradish.....	5 @ —
Squash, Marrowfat, 35 @ —	— @ —
Summer, do.....	3½ @ 4
String Beans.....	6 @ 9
Tomat's, hx 30 lb.....	1 00 @ 1 12½
Tumips, ct.....	5 @ —
White.....	75 @ —

## LEATHER.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.	
Sole Leather, heavy, lb.....	26 @ 27
Light.....	22 @ 24
Jodot, 8 Kil, doz.....	48 @ 50
11 to 13 Kil.....	68 @ 70
14 to 19 Kil.....	82 @ 94
Second Choice, 11 to 16 Kil.....	57 @ 60
Cornellian, 12 to 16 Kil.....	57 @ 60
Females, 12 to 13 Kil.....	63 @ 60
14 to 16 Kil.....	71 @ 76
Simon Ulmo, Females, 12 to 13 Kil.....	50 @ 62
14 to 15 Kil.....	60 @ 70
16 to 17 Kil.....	72 @ 74
Simon, 18 Kil.....	61 @ 63
20 Kil.....	65 @ 67
24 Kil.....	72 @ 74
Robert, Cal, 7 and 9 Kil.....	35 @ 40
Kips, French, lb.....	1 00 @ 1 35
Cal, doz.....	40 @ 60
French Sheep, all colors.....	8 00 @ 15 00
Eastern Calf for Backs, lb.....	1 00 @ 1 25
Sheep Roams for Topping, all colors, doz.....	9 00 @ 10 00
For Linings.....	1 75 @ 4 50
Boot Legs, French Calf, pair.....	4 00 @ —
Good French Calf.....	4 00 @ 4 75
Best Jodot Calf.....	5 00 @ 5 25
Leather, Harness, lb.....	35 @ 38
Fair Bridle, doz.....	48 @ 72
Skirting, lb, doz.....	35 @ 37
Wet, doz.....	30 @ 50
Buff, ft.....	18 @ 20
Wax Side.....	17 @ 18

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; Co.]

SAN FRANCISCO, May 30, 3 P. M.	
LEGAL TENDERS IN S. F., 11 A. M., 94½@94½. SILVER, 5½@6½.	
GOLD IN NEW YORK 106½.	
GOLD BARS, 880¢@890. SILVER BARS, 10¢@15¢ per cent. discount.	
EXCHANGE ON NEW YORK, 50¢@55¢-100¢ cent. premium for gold on London bankers, 49¢; Continental, 49¢; Paris, five francs \$1 dollar; Mexican dollars, 94¢@95.	
LONDON Consols, 93½; Bonds, 106½.	
QUICKSILVER IN S. F., by the flask, 9¢ lb, 41¢@42¢.	

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., May 30, 1877.

WEDNESDAY M., May 30, 1877.	
<b>BAGS—Jobbing.</b>	<b>OILS.</b>
Eng Standard Wheat, 9½@—	Pacific Glue Co's.....
Neville & Co's.....	Neatsfoot, No 1.....
Hand Sewed, 22x36.....	Castor, No 1.....
24x36.....	do, No 2.....
23x40.....	Baker's A.....
Machine Swd, 22x36.....	Olive, Plagniol.....
Flour Sacks, halves.....	Possel.....
Quarters.....	Palm, lb.....
Eighties.....	Linsed, Raw, bbl.....
Hessian, 60 inch.....	Boiled.....
45 inch.....	Cocoanut.....
40 inch.....	China nut, cs.....
Wool Sacks.....	Sperm.....
Hand Sewed, 3 lb.....	Coast Whales.....
Machine Sewed.....	Polar, refined.....
4 lb.....	Oleophene.....
Standard Gunnies.....	Lard.....
Bean Bags.....	Devos's Brit's.....
	Photolite.....
	Nonpariel.....
	Eureka.....
	Barrel kerosene.....
	Downer Ker.....
	Elaine.....
<b>CANDLES.</b>	
Crystal Wax.....	
Eagle.....	
Patent Sperm.....	
<b>CANNED GOODS.</b>	
Assorted Pie Fruits.....	
2½ cans.....	
Table do.....	
Jams and Jellies.....	
Pickles, hf gal.....	
Sardines, gr box.....	
Hf Boxes.....	
<b>COAL—Jobbing.</b>	
Australian, ton.....	
Coos Bay.....	
Bellingham Bay.....	
Seattle.....	
Cumherland.....	
Mt Diahlo.....	
Lehigh.....	
Liverpool.....	
West Haysy.....	
Scotch.....	
Seranton.....	
Vancouver Id.....	
Charcoal, sack.....	
Coke, bbl.....	
<b>COFFEE.</b>	
Sandwich Id, lb.....	
Costa Rica.....	
Guatemala.....	
Java.....	
Manila.....	
Ground, in cs.....	
<b>FISH.</b>	
Sac'to Dry Cod.....	
Boucles.....	
Eastern Cod.....	
Salmon, bbls.....	
Ex Mess.....	
2 lb cans.....	
Pk'd Cod, bbls.....	
Hf bbls.....	
Mackerel, No. 1.....	
Hf Bbls.....	
In Kits.....	
Ex Mess.....	
Pk'd Herring, bx.....	
Boston Smk'd H'g.....	
<b>LIME, Etc.</b>	
Lime, Sta Cruz.....	
bbl.....	
Cement, Rosen.....	
cal.....	
Portland.....	
Plaster, Golden.....	
Gate Mills.....	
Land Plaster, in 100.....	
<b>NAILS.</b>	
Ass'ted sizes, keg 3 25 @ 4 00	
<b>DOMESTIC PRODUCE.</b>	
[WHOLESALE.]	
WEDNESDAY M., May 30.	
<b>BEANS.</b>	<b>HOPS.</b>
Bayo, ctl.....	California.....
Butter.....	Cal. Walnuts.....
Pea.....	Almonds, hd sh l.....
Red.....	Soft sh l.....
Pink.....	Brazil.....
Sm'l White.....	Pecaus.....
Lima.....	Peanuts.....
	Filberts.....
<b>BROOM CORN.</b>	<b>ONIONS.</b>
Common, lb.....	Unioi Cty, ctl.....
Choice.....	Stockton.....
<b>CHICORY.</b>	Sacramento, New l.....
California.....	<b>POTATOES.</b>
German.....	Petaluma, ctl.....
	Humboldt.....
<b>COTTON.</b>	Cuffy Corn.....
Cotton, lb.....	Early Rose, new.....
<b>DAIRY PRODUCE, ETC.</b>	Sweet.....
<b>BUTTER.</b>	<b>POULTRY &amp; GAME.</b>
Cal. Fresh H'g.....	Hens, doz.....
Point Reyes.....	Roosters.....
Pickle Roll.....	Ducks, tame.....
Firkin.....	Ducks, pair.....
Western Reserve.....	Geese, pair.....
New York.....	Wild Gray.....
<b>CHEESE.</b>	White.....
Cheese, Cal, lb.....	Turkeys, Live, lb.....
Old.....	Dressed.....
Eastern.....	Supr.....
N. Y. State.....	do Common.....
<b>EGGS.</b>	Rabbits.....
Cal. fresh, doz.....	Hare.....
Ducks.....	<b>PROVISIONS.</b>
Onions.....	Cal. Bacon, Lt, lb.....
Eastern.....	Medium.....
<b>FEED.</b>	Heavy.....
Bran, ton.....	Lard.....
Corn Meal.....	Cal. Smoked Beef.....
Hay.....	Eastern.....
Middlings.....	Eastern Shoulders.....
Oil Cal.....	Hams, Cal.....
Straw, hale.....	Armour.....
<b>FLOUR.</b>	Davis's.....
Extra, hhl.....	Magnolia.....
Superfine.....	<b>SEEDS.</b>
Graham.....	Alfalfa, Cal.....
<b>FRESH MEAT.</b>	Clover.....
Beef, 1st qual'y, lb.....	Clover, Red.....
Second.....	White.....
Third.....	Cotton.....
Fourth.....	Flaxseed.....
Spring Lamb.....	Hemp.....
Pork, undressed.....	Italian Rye Grass.....
Dressed.....	Perennial.....
Veal.....	Millet.....
Milk Calves.....	Milk, White.....
<b>GRAIN, ETC.</b>	Brown.....
Barley, cwt, 1st.....	Rape.....
Bringing.....	Ky. Blue Grass.....
Chevalier.....	2d quality.....
Buckwheat.....	Sweet V Grass.....
Corn, White.....	Red Top.....
Yellow.....	Hungarian.....
Small Round.....	Lawn.....
Oats.....	Mezquite.....
Milling.....	Timothy.....
Rye.....	<b>TALLOW.</b>
Wheat, shipping.....	Crude, lb.....
Milling.....	Refined.....
<b>HIDES.</b>	<b>WOOL, ETC.</b>
Hides, dry.....	<b>SPRING.</b>
Wet salted.....	Short Free, dusty.....
<b>IRON, ETC.</b>	Good Southern.....
Beeswax.....	Choice Northern.....
Houey in comh.....	Burry.....
do, No 2.....	do, Northern.....
Dark.....	
Strained.....	
<b>Newspaper Fileholders.</b>	
Dewey's new elastic fileholders (black walnut), size of the PRESS, Harper's Weekly and Scientific American, for 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, DEWEY & Co., Publishers, San Francisco.	



## Seedsmen.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

## SPANISH CHUFA

SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants, Spring Lists free. F. K. PHOENIX, Bloomington Nursery, Illinois.

## Nurserymen.

**SANTA BARBARA NURSERY,**  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor

CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

**HENRY SHAW,**  
VENTURA, VENTURA COUNTY, CAL.,  
Wholesale Grower of  
ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsmen, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

## RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote March 7th, 1877, that RENNIE'S PRIZE SWEDT TURNIP yielded more than three times as much as the common seed. Price, per pound, (in American currency, pre-paid,) thirty cents. WM. RENNIE, Seedsmen, TORONTO, CANADA.

**SQUILLS.** Camellias, Pond Lilies, Begonias, Ferns, Dahlias and Iosces, sent safely by mail at any time of the year. Send for new price list. Address, W. A. T. STRATTON, Potluma, Cal.

## Agricultural Articles.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,965, 157,124, 157,508, 164,181, 165,061, 172,760, 173,491, 173,667, 180,351, 181,433, 186,389, 187,126, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

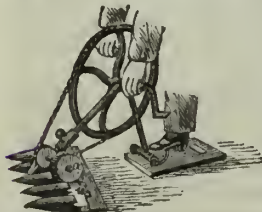
Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

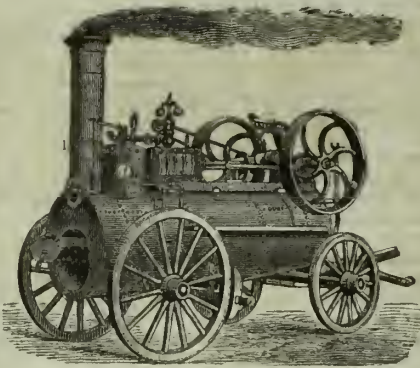
## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required. The knives can be sharpened without taking them out or unhitching the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, *a*, is regulated by a set screw so that in grinding, the exact level can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, shears, etc.

Address, WHESTER & CO.,  
17 New Montgomery St., San Francisco.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

MARCUS C. HAWLEY & CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

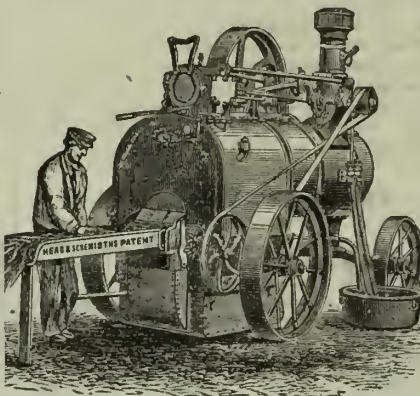
301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## HEAD &amp; SCHEMOITH'S STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

Best & Cheapest. Jenks' Portable Lawn Sprinkler, attached to water-head, is used to irrigate lawns, gardens, flower or Strawberry Beds, etc. A patent non-clogging distributing nozzle is used on tube, & held firmly upright, or at any angle, by PATENT ANVIL.

Order Circulars. Styles and Prices: "A" (No. 1 spray), \$3.50; "B" (all styles spray), \$5; "C" (large "B"), \$6. Weight, 5 lbs. Prepaid by mail to any part of U.S. for 50 cents extra. Express C.O.D. Order of WALTHAM MFG. CO., BOSTON, MASS. of Dealers, or GEO. E. JENKS, Patentee, Concord, N.H.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating. Farm Pumping, Railroad and Power

## WINDMILLS,

Pumps & Fixtures.

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,

HORTON & KENNEDY,  
Managers for California and Pacific Coast.  
ALSO BEST FEED MILLS FOR SALE.

General Office and Supplies,

LIVERMORE, ALAMEDA COUNTY, CAL.

## TO FRUIT MEN.

## LILLIES' FRUIT PITTEER,

Patented March 7th, 1876.



This machine pits all the different kinds of stoned fruits, (clinging-stones included,) both rapidly and well, and without waste, and with entire satisfaction to all who have used it.

It does the work without waste and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully.

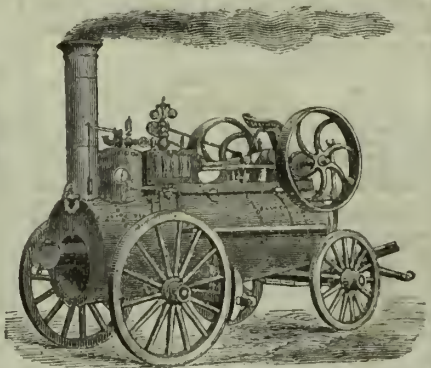
For further particulars and terms, address

H. JONES, Sole Agent for California,

419 and 421 Sansome Street, S. F.

H. W. RICE,

MANUFACTURER OF THE RICE PATENT STRAW-BURNING ENGINES.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood-Burning Engines changed to Straw-Burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

## Fraud! Fraud!!

COLLINS & CO'S

## CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO. HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,

212 Water Street, New York.

## HILL'S PAT. HOG RINGER, RINGS AND TONGS OR HOLDER.



A full line of these salable goods at manufacturers' prices. Address,

JAMES E. GORDON,  
WHOLESALE HARDWARE,  
254 & 256 Market, and 8 & 10 Front Sts. S. F.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries

THE HIGH SCHOOL CHOIR, (\$1. or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PARKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents), SHINING RIVER, (35 cents), GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street

SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## London Assurance Corporation, OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - \$14,993,466

## Western Assurance Company, OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

## Ground Fresh Bones for Poultry.

Owing to increased demand, I have reduced the price of bone meal as follows: 100 pound sack, \$4.00; 50 pound sack, \$2.50; 25 pound sack, \$1.50.

Carbolic powder 25 cents per pound or ten pounds for \$2.00. The carbolic powder can be packed in the mouths of the bone meal sacks, thus saving freight expenses.

Fresh bones ground up raw will stimulate hens to lay, hasten the laying of young pullets, and feathering out of young chicks; the natural result of the animal food and jelly they contain; while burnt bones pounded up being reduced to phosphate of lime or animal charcoal, will not produce the same result.

One ounce of carbolic powder will destroy more vermin common to poultry than a pound of sulphur, and not liable to injure the eyes of chicks; it will also drive ants and other insects from dwelling houses. Correspondents can remit coin, currency or postal orders at par. Address

C. P. STONE, Healdsburg, Cal.

Refer to Postmaster, Bank of Healdsburg or Wells Fargo & Co.'s Agent.

## ROWELL &amp; CHESMAN

Advertising Agents,

THIRD & CHESTNUT STS., ST. LOUIS, MO.

Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulation, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.

## ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM HARKINS, Collinsville.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.



H. H. H.  
HORSE MEDICINE,  
D. D. T.—1868,

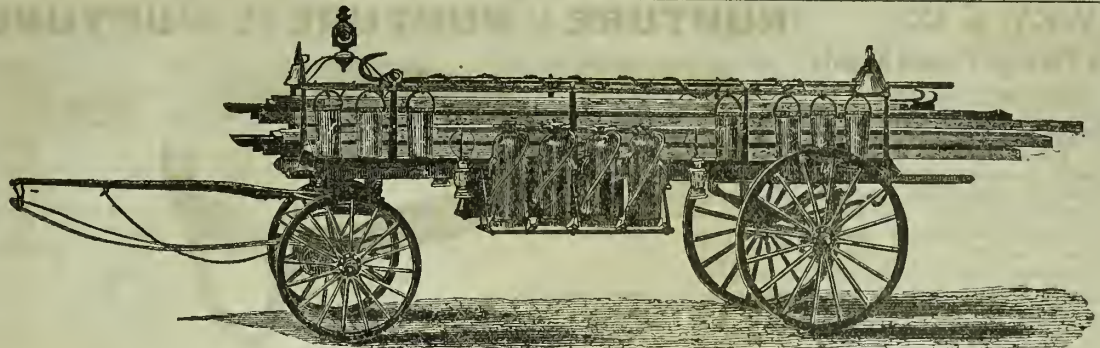
Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Cuts, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the pain finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.



CALVERT'S CARBOLIC  
SHEEP WASH,  
\$2 Per Gallon.  
After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

The BABCOCK.



The BABCOCK.

Village Hook and Ladder Truck.  
We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,  
Address PARKE & LACY, 417 Market Street.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). JOHN LEWELLING, (TREASURER). W. L. OVERHISER.  
A. D. LOGAN, (VICE PRESIDENT). G. W. COLBY. A. T. HATCH.  
AMOS ADAMS, (SECRETARY). I. C. STEELE. O. HUBBELL.

W. W. GRAY.

THOS. FLINT

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

STATISTICIAN.

MONTHLY.

Each issue of the Monthly contains matter revised to the day of publication, regarding Distances, Modes of Travel, Rates of Fare, and Telegraphic Tariff of the Pacific Coast; Postal Regulations, Rates of Domestic and Foreign Postage; List of Post Offices; Prices, Assessments and Dividends on Mining Stocks, and new matter pertaining to general information, and the questions of the times.

RATES OF SUBSCRIPTION.

One Copy, one year.....\$2 50  
One Copy, six months.....1 50  
Three Copies, one year.....6 00  
Single Copy.....25 cents.  
Annual for 1877 will be issued June 1st.

P. O. Box 2272. L. P. McCARTY, Publisher, 423 Washington St., S. F.

ANNUAL.

Each issue of the Annual contains all matter previously included in the Monthly, and presents information of a general and statistical nature in a convenient form for reference and revised to the day of publication. Accuracy in compiling, care in revising, system in arrangement, and freedom from prejudice in selecting, are faithfully observed in the compilation of this periodical, which is offered to the public as a reliable epitome of general information.

RATES OF SUBSCRIPTION.

One Copy.....\$4 00  
One Copy Annual, and Monthly one year.....6 00

Grangers' Bank of California,  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
VICE-PRESIDENT.....JOHN LEWELLING.  
TREASURER.....J. V. WEBSTER.  
CASHIER.....ALBERT MONTPELLIER.  
SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of New York, we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,900 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE, Napa Co., Cal. P. O. Napa City, Box 51

Don't waste your time in reading cheap trash.

LEVI STRAUSS & CO.,



Patent Riveted  
Clothing,  
14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

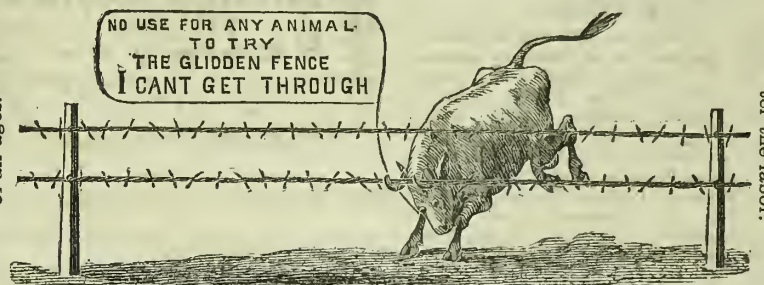
Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

THE ALDEN FRUIT PRESERVING CO.,  
OF CALIFORNIA,  
No. 426 Montgomery Street.

WAR MAPS, largest variety, published by E. STEIGER, 22 & 24 Frankfort Street, NEW YORK. Send for list. Liberal terms to canvassers.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNANIMOUSLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

"TAKE CARE OF YOUR HEALTH."

THE HYGIENIC INSTITUTE, San Francisco.

Hygienic boarding is the most healthy diet possible:

Price only \$4.50 per week.

A proper dietary will keep a well person from getting sick.

It is an essential aid to sick people who wish to get well.

Furnished rooms from \$1.50 to \$5.00 per week.

C. HEIMSOTH,

Nos. 635 and 637 California Street, - - Near Kearny.

SAN FRANCISCO.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,  
which are calculated to deceive the Public, Lea and Perrins' have adopted A NEW LABEL, bearing their Signature, thus,

Lea & Perrins

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

\$55 & \$77 a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine.

Farmers, write for your paper.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

Get the best. Take the RURAL.



## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

## RUPTURE! RUPTURE!! RUPTURE!!!

Use no more Metal Trusses! No more suffering from iron hoops, or steel springs! The patent

## Magnetic Elastic Truss

is now superseding all others, being adopted everywhere by the leading physicians and surgeons all over the land. All cases of reducible Hernia are permanently relieved by it, without regard to the age of the patient, or the duration of the injury.

Experience shows that all tempered spring Trusses necessarily press upon and often disease parts of the body that before were in a perfectly healthy condition. Lumbago and other equally distressing ailments are not unfrequently the outgrowth of such pressure, and in view of this fact it becomes a matter of decided consequence to avoid like calamities, if possible.

Beware of worthless imitations! Our trusses are not left with Agents, or Druggists for sale, and notice is hereby given that all persons who infringe on this patent will be dealt with as the law provides. For the genuine article send direct to the

## MAGNETIC ELASTIC TRUSS COMPANY,

Illustrated Book and Price List Free.

609 Sacramento Street, San Francisco.



## Some Reasons for Subscribing for it.

Because it is a permanent, first-class, conscientious able, and well conducted journal.

Because it is the largest and best agricultural weekly west of the Rocky Mountains.

That more farmers' wives and children in their isolated homes may be cheered by its weekly visits, laden with its pleasing yet moral reading, and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in its columns.

That all the honest industries of our State may be advanced in connection with that of agriculture, its columns being ever open to the discussion of the merits of all progressive improvements.

That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

Send for sample copies.

DEWEY & CO., Publishers,  
224 Sansome St., S. F.

## Questions of the Times.

Which are the most reliable watches?

American watches, they are driving those of foreign make out of the market.

Which is the best American watch?

The New York watch, made at Springfield, Mass.

Why is it the best watch?

Because it is substantial in all its parts, constructed on the best principles and embodies those improvements which experience has shown to be the most desirable.

Why is the New York Watch so popular?

Because in buying one you are sure of getting a good time-keeper. While purchasing a watch of most other makes is like investing in a lottery—a great many blanks to one prize.

Which is the cheapest watch?

The most economical is the New York watch. For you can get one of these excellent time-keepers for less than it costs in a short time to patch up a poor watch, which benefits no one but the repairer.

Where can I get a New York Watch?

By addressing the long established, practical Watch-makers and Jewelers, DEWEY & JORDAN, 433 Montgomery St., San Francisco, who will send you a descriptive price list, including the following styles of movements: "John Hancock," "Geo. San. Rice," "Chas. E. Hayward," "Aaron Baug," "Theo. E. Studley," "Chester Woolworth," "Frederick Billings," "Railway," "John L. King," "E. W. Bond."

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College; Scrip; Pre-emptions; Extended; the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

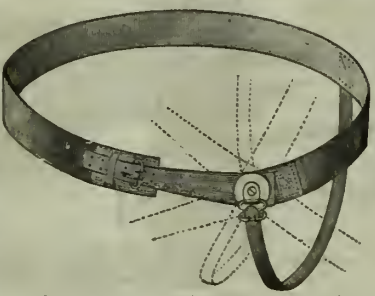
Abstract From the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amending Act Concerning Timber; Miscellaneous Provisions; Additional Surveys of Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY &amp; CO., S. F.

"More than Pleased."

OSCEOLA MINE, NEVADA CO., CAL., April 19th, 1877.

Messrs. DEWEY & Co.—Gentlemen:—We are more than pleased with your professional ability in the management of our application, and will always recommend your competency as Patent Attorneys, and your honorable and gentlemanly dealings with clients. Truly and respectfully yours,  
LOUIS R. TELLOCH.  
THOMAS D. TELLOCH.



There are no springs in the

## Magnetic Elastic Truss

To press upon and injure the back. It can be worn with perfect ease while riding horseback, as the pressure is the same while in any position. It will perform radical cures when all others fail, and is worn with ease and comfort.

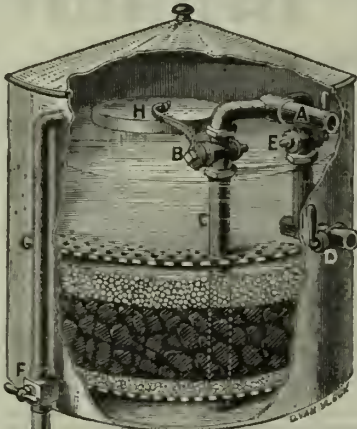
Night and Day,

Which cannot be said truthfully of any metal truss whatever.

It becomes a matter of decided consequence to avoid like calamities, if possible.

## SNOOK'S PATENT TANK FILTER.

FOR PURE WATER USE THE



SNOOK PATENT TANK FILTER.

It is self-regulating, will last many years without renewing filtering material. Is simple, durable, easily cleaned, and not liable to get out of order. A sure preventive against snakes, worms, bugs and all other impurities in the water. It will filter all the water required for any dwelling house, and is not expensive. These filters are expressly designed to use in place of a tank. May be connected to any tank and through the usual pipes supply all the house, or the water may be used direct from the filter, where no tank is required for other purposes. Every house should be provided with one and thus avoid one of the most fruitful sources of disease. Full satisfaction guaranteed and filters kept in repair free of expense. For sale by

G. &amp; W. SNOOK, 427 Pine Street, S. F.



The Agonies of a Billious Colic, the indescribable pangs of Chronic Indigestion, the debility and mental stupor resulting from a costive habit, may be certainly avoided by regulating the system with that agreeable and refreshing Standard preparation, TARRANT'S SELTZER APERIENT. Procurable at all druggists.

## UNIVERSITY OF CALIFORNIA, 1877.

Colleges of Agriculture, Chemistry, Civil Engineering, Mechanics, Mining and Letters.

Examinations for admission—June 2d, 4th and 5th; also, August 8th, 9th and 10th. Term commences Thursday, August 9th.

Applicants for admission should present themselves for examination in June, as above. Any minor deficiencies may thus be made up in the long vacation which precedes the opening of the term.

Tuition free to residents of California.

MARTIN KELLOGG,  
Dean of Faculty.

## THOROUGHbred FOWLS,

BRONZE TURKEYS,  
Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$5.50 per doz.

BRAHMAS

LEGHORNS



Eggs Shipped to

Any part of the

Coast to Hatch At

ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

DON'T BUY ANY OTHER THAN

Walter's Patent

FRUIT DRIER AND PRESERVER,

Manufactured and for sale by the

Walter Fruit Drying and Preserving Co.,

315 DAVIS STREET, SAN FRANCISCO, CAL.

25 FANCY CARDS, all styles, with name, 10c; 25 Transparent Cards, all styles, with name, 20c; 20 Swiss Motto Cards, 15 styles, with name, 20c; pre-paid. J. B. HUSTED, Nassau, Rems. Co., N. Y.

## SEEDS.

## SEEDS.

IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton

Yellow Flint Corn.

Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail  
Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE

Comprising the Most Complete Stock  
EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

Trade Price List on application.  
My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge  
Cochins, White and Brown  
Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Seabright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal

## ARITHMETIC MADE EASY.

ROPP'S

## EASY CALCULATOR

is a new publication that must prove of incalculable benefit to Farmers, Mechanics and Business Men. It is so rapid and original as to startle the most scholarly, and yet so simple and practical that the most illiterate in figures can instantaneously become his own accountant. It enables thousands to accomplish in a minute what they could not learn to calculate in many months.

The first part contains an entirely new system of tables, which show at a glance the exact value of all kinds of Grain, Stock, Hay, Coal, Lumber, Merchandise, etc., from one pound up to a car load, and for any price that the market is likely to reach; the interest on any sum for any time at 6, 7, 8 and 10 per cent.; correct measurement of all kinds of Lumber, Saw Logs, Cisterns, Tanks, Granaries, Bins, Wagon Beds, Corn Cribbs; a Time, Wages and many other valuable tables.

The second part is a practical arithmetic, and embodies a simple mechanical principle which enables any one familiar with the fundamental rules to become a lightning calculator; and by which over two-thirds of the figures and labor required by the ordinary methods, and fractions with their intricacies, are entirely avoided.

The work is nicely printed on fine tinted paper, is well and elegantly bound in pocket-book shape and is accompanied by a Silicate Slate, Memorandum and Pocket for papers. It is by far the most complete, comprehensive and convenient pocket manual ever published.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter, or receipted by express. Address

DEWEY &amp; CO., San Francisco.

WHEN so many poor watches are being sold, it is not too much for us to say that those who buy the New York Watch Company's movements will be sure of a good article at fair prices.

Take the paper that stands by your interests,



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, JUNE 9, 1877.

[Number 23.]

## Webber Lake and Its Attractions.

[Written for the Press by J. G. LEMMON.]

The hot and long summers with cloudless skies in the great basin of Nevada and the great valley of California, render it very desirable, often necessary, that their inhabitants sometimes escape to the mountains conveniently situated between the two States, where, at the same time, the most delightful climate is experienced.

The highest and most interesting as well as health-giving retreats are inaccessible, however, except by certain gaps or

### Passes of the High Sierra.

The most noted of these are Walker's pass, near the extreme south end of the Sierra in Kern county; next King's pass, leading to Mts. Whitney, Brewer, Tyndall and other of the highest peaks of California; next, Mono pass, connecting Mono valley and the world-famous Yosemite valley; next, Silver Mountain pass, between that celebrated peak and the Big Trees of Calaveras; next, Carson pass, leading by the crystal, azure-hued, mountain sea of Tahoe; next, Donner pass, where now winds the C. P. R. R. through 40 miles of snow-sheds and 13 long tunnels; next, Henness pass, leading to the varied attractions of the alpine lakes of Webber, Independence and Meadow; next, the low Beckworth pass, at the north end of the large and fertile Sierra valley; next, Fredonier's pass, between Susanville and the high Big Meadows, with their enormous springs; and lastly, Lassen's pass, leading by that lofty perpetually snow-clad peak in Shasta county.

### Webber Lake and Valley.

Of all the popular resorts found on these passes the highest and prettiest, and that which proves the most satisfactory because most beneficial and cheaply enjoyed, is the noted mountain gem of Webber lake, a snow-formed, crystal sheet of water reposing in a gently sloping, basin-shaped, forest-clothed valley, occupying the highest part of the well-known Henness pass through the high Sierra, 20 miles north of Donner pass and the railroad.

Webber lake is nearly circular in shape, about a mile in diameter, and nearly 7,000 feet above sea level in Lat.  $39\frac{1}{2}^{\circ}$  north by Long.  $129\frac{1}{2}^{\circ}$  west, hence the region is sub-alpine, the scenery peculiarly grand, the flora rare, often new to science, the forest open with no impeding chaparral, the fishing and hunting unexcelled, the climate cool and health-giving, the waters pure and delicious, added to all which the entertainment or medical assistance furnished by the proprietor, Dr. D. G. Webber, at his spacious hotel and sanitarium is of the most satisfactory kind, for he is a genial, efficient, liberal-hearted gentleman, and one of the most skillful, sympathetic, benevolent and successful physicians in California.

The forest immediately surrounding the lake is composed exclusively of the graceful *Pinus contorta* or California tamarack, clustered into gravel floored, flower-carpeted groves, affording cool but not gloomy shades and most romantic drives. Outside the groves, investing the bases of the mountains, is a denser growth of the several Sierra pines, decorated on its upper edge by a fringe of the dark green trees of the two rare and exquisite California firs, *Picea grandia* or white silver fir, and very rarely, *Picea amabilis* or red

silver fir; the latter only found in limited alpine regions of California and by all observers admitted to be the most lovely evergreen in the world. So beautiful and desirable is it, with its regular whorls of limbs rising like a diminishing series of verdant wings, looking a straight shaft, red-painted below and white above, stuck full of immense fawns, that its seed sells in London for its weight in gold, and agents of the Prussian and other European governments have been sent here to obtain seed for renewing their forests. Large sections of one of these trees that was 30 feet in circumference, were sent to the Centennial exhibition and elicited universal admiration. Another beautiful and rare tree, *Abies Pattoniani* or silver spruce, is found clinging to the sides of the highest peaks.

This enclosing forest is broken at two points on the north side of the lake by small meadows, lined with willows. Between and nearly enclosed by them extends a symmetrical grove of the tamaracks described, forming a natural site and a fortunate sun-shield for the hotel and accessory buildings, cottages for tourists, etc., located

The high north and south passes open to scenes similar to the Webber, but contrasting each other; the north one, threaded by a trail precipitous at a few places, leads over through a grove of *Picea amabilis* described, and down eight miles to Sierraville and Campbell's sulphur springs, in the south end of the rich and populous Sierra valley, described in last season's "Botanical Excursions."

It must suffice for this article to show the relations of Sierra valley to Webber lake. They are connected by the short bridle-trail described and by a good wagon road that skirts the mountain eastward and enters Webber's valley by the east pass, 16 miles. Sierra valley is also noted for its salubrious climate and for its excellent sporting.

Many tourists and families resort there annually, and a hotel costing \$12,000 has been built at the medicinal hot springs near Sierraville and Randolph, by Mr. John Campbell, a genial gentleman and an appreciative, enterprising early settler. Many magical cures are reported, and no doubt these waters are as potent to cure as

amounts of capital in claims and mills at Meadow lake; so the future is bright for the mines and the pleasure resort of its citizens, as of yore—Webber lake.

### Peaks around Webber Lake.

Between the four passes described arise lofty mountains, easily climbed, and affording grand views of bare, glistening, towering peaks, with myriads of shining lakes nestling at their bases. To the southeast 10 miles, only a half-day's ride away, towers, among a noble group of peaks, Mount Lola, on which is placed one of the signal stations for central California, communicating with Mount Diablo; and beyond a few miles the startling ruins of an immense castle are reared against the sky. To the southwest appears the hump-backed peak which has named itself Old Man, overlooking Meadow lake. Further south and east extend the culminating crests of the Sierras, the view ending with Job's, Tellac and Pyramid peaks, far beyond Tahoe. To the west is the black, frowning French peak, girt about with lakes, and standing out in full view of denizens of the great valley. In the

northwest sky looms the sharp, many-toothed comb of Downieville buttes, about 20 miles away. Further north and a little east is Haskell's peak, overlooking Sierra valley. Still further northwest, among continuous crests of the Sierra, are Saddleback, Table-rock, and Fir-top, their peculiarities distinctly visible, while away over them, 90 miles north, appearing like a vast iceberg on the horizon, shines the snow-clad, historic Lassen's peak, its sides gullied by numerous avalanches, revealing its black body of lava.

### Short Trips at Webber's.

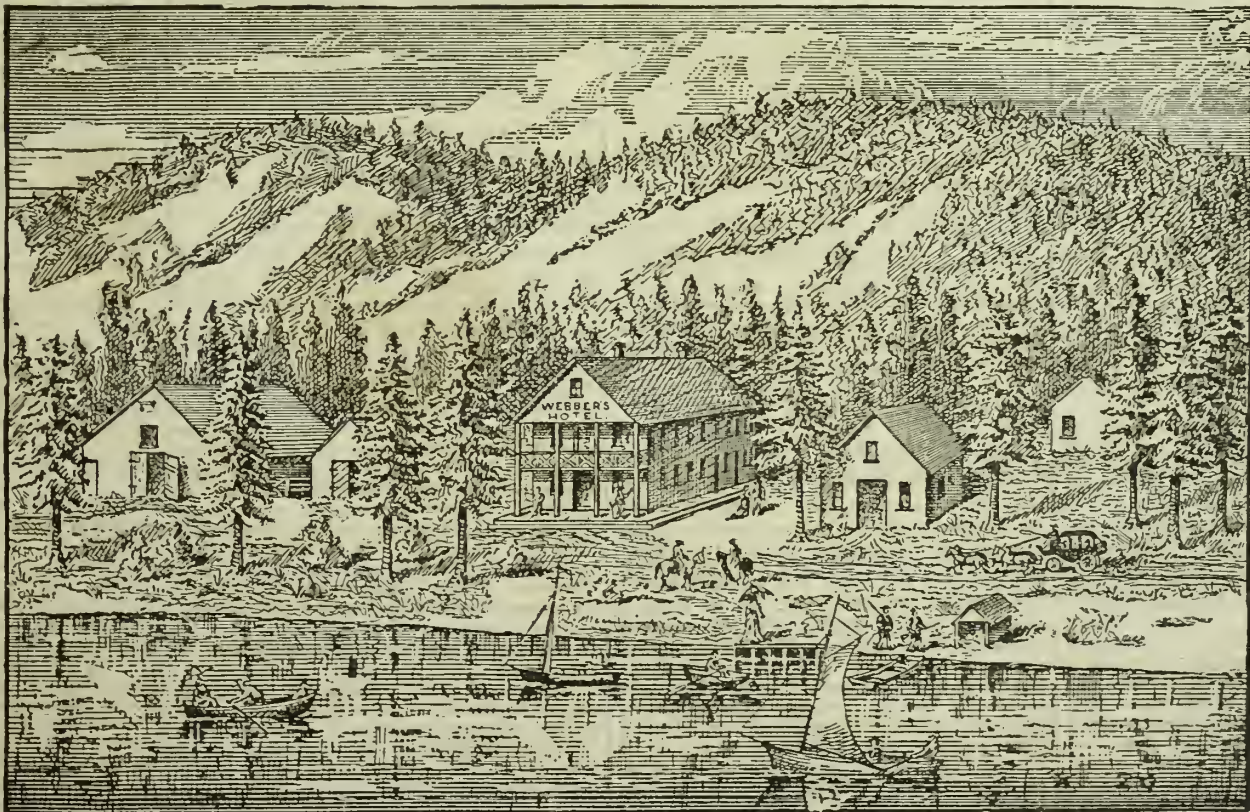
One of the first trips taken by all lovers of nature is performed without waiting for horse or carriage. You jump into a boat and row half a mile to the outlet and dam, then walk another half mile through clean, open woods, by the flower-bordered stream to the cataract and canyon. This beautiful fall is double: first, a plunge of 25 feet into a deep, rock-lipped basin, then a sheer cataract in winter or a broken cascade in summer of 85 feet, to the floor at the head of the deep gorge. A stairway cut in the soft

rock facilitates your safe descent to the base of the cascade, where, if you have chosen a morning hour of a sunny day, you may see the misty sheet bedecked with miniature rainbows. The steep-walled gorge winds another half mile before debouching into Scott's valley. These walls are about 200 feet high, and exhibit countless strata of rock, draped with rare ferns and flowers—an open book of geological records illuminated by floral vignettes. You gather specimens of rock, fern and flower, meditating the while upon the time when the lake above filled all the valley, and querying whether a gradual wearing of ages upon ages has excavated this gorge, or whether a freshet or cloud-burst of more recent date tore this channel through the then soft rock—a phenomenon similar to and perhaps coeval with, but of course vastly inferior to, the eight-mile canyon of Yosemite.

Another short trip is by boat across the lake to a dense part of the forest, where are hidden, but a few rods from the lake shore, Dr. Webber's Monument, a dome of white granite rising through the trees; and just beyond, Lover's lake, green with reflections of the overhanging trees. This part of the forest is a noted bear haunt, and a log trap is built here for Bruin's inspection.

A third trip is by boat also—always a boat.

Continued on page 364.



A RAMBLING SKETCH OF WEBBER LAKE.

eated in a line skirting the lake and but a few feet from its shallow, gravel-bottomed shore.

This beautiful grove, for several rods back from, and for a mile along the lake shore, has lately been cleared of hundreds of fallen and uprooted trees, the vestiges of a terrific storm which tore through the valley from south to north several winters ago.

Across the lake at the south end a larger break in the forest is occupied by a broad meadow, extending four miles up the valley and comprising several hundred acres of pasture annually cropped by thousands of sheep. This meadow, like the floor of the groves, is smooth-laid gravel, affording excellent travel in any direction. Through its center winds a silvery streamlet fresh from snow-banks in sight the year round.

### Passes to Webber Lake

The jagged mountain rim of the valley is deeply indented at four points by four passes nearly corresponding with the cardinal points of the compass. The low east and west passes are great gateways, for through them proceeds the once densely thronged Henness pass emigrant road; Webber lake, on the summit, being the principal station and half-way camp.

Down the east pass also flows the outlet of Webber, plunging off a ledge of rock a half mile from the lake and forming a lovely cataract and deep gorge, hereafter to be described.

celebrated springs of the lower valley, and certainly the surroundings are ten times more romantic and pleasant.

Special conveyances are furnished by Mr. Campbell whenever his guests desire to visit Webber lake.

The high south pass leads up by a good wagon road, through a grove of silver spruce, eight miles south and west to Meadow lake and the once populous town of Summit City. The scenery around this truly alpine lake is magnificent. The visitor finds himself amidst snow banks and treeless, bald, white peaks, admitting through their gaps views of other high peaks, the highest in northern California. To revel among these snow banks, bordered with quick-growing, strange and abundant flowers, during the dog-days, is a privilege easily and cheaply obtained by the habitues of Webber, for horses and vehicles are always furnished gratis to visit this and other places of exceeding interest in the vicinity.

The broken roofs of 300 houses tell a sad tale of mining failures and abandonment, but the rock is known to be rich here, only it is loaded with sulphurets. The discoverer of the ledge, Harry Hartley, has never despaired of discovering a process for removing the sulphurets, and now a French chemist has extracted sufficient gold from the rock at a rate so cheap as to inspire parties in San Francisco to invest large



## CORRESPONDENCE.

### The Report on Education.

(Written for the Press by C. L. ANDERSON, M. D.)

Having had the subject of common school education prominent in my mind for the last 20 years, and having made myself familiar with the detail workings of various laws in several of our States, I have consequently formed some quite positive opinions, and have settled some questions in my own mind that do not seem as yet to be quite settled in the minds of other people.

I have read with considerable interest the report of the Committee on Education, which has appeared in the last two issues of the Press. It is an important document and invites discussion on a subject that ought to be discussed—especially from the standpoint taken in the report. Its suggestions, for the most part, are thoughtfully and kindly made. The status of our schools is simply stated, the evils hinted at, and the remedies mildly and somewhat timidly proposed. The object of the report is mainly to discuss a "plan of improvement for the use of the Legislature at its next session." The Legislature and a law being the sovereign remedy for all diseases of the body politic! We have at present a very good school law—the matured growth of many years. In nearly every respect it is practical and definite, giving plenty of room for many changes and improvements in the workings of our common school system. It might be well to make a careful revision, retaining its main features, but simplifying it. But I fear we shall get a worse law if we undertake to make radical changes in it. Reform is a word of very indefinite meaning, and the application of reforms is not always attended with the best results, for in many cases the people are glad to reform again back to the old ways.

The report estimates that California has already expended upwards of thirty-one millions of dollars in educating her children. This sum, says the report, cannot be regarded as an investment from which a money income is to be expected, except a small amount from the University fund.

Suppose we subtract the thirty-one millions from the value of the education received by our children in the public schools since California became a State. Or, to put the problem in a more tangible shape, what would have been the damage to our State from the absence of our public schools during the time mentioned? In actual money value would not our State have suffered more than 10 times that amount? The San Francisco mint coins as much money each year. We produce in our State more than that amount of bullion each year. The annual wheat crop for market cannot fall short of that sum.

I am inclined to think, therefore, that the investment pays an interest greater than any broker receives, and I am sure our committee—well, let us see what they say: "The results from this outlay cannot be shown with any detail of exactness; a negative statement may truthfully be made that your committee has learned of no instance in which, by a common school education, has a child in California been given such an industrial training as to enable it to make a livelihood."

Our committee is composed of intelligent, cultured men, trained in the learning of books, and in the practical affairs of life. But when they make such statements as the above they either misconceive the nature of a "common school education," or else they place a very unusual meaning to "industrial training." As much as to say that while the child was using its energies laying a foundation for the pursuit of any branch of knowledge or industry—learning to read and write, and compute numbers, it was not being trained in mechanics, agriculture, or mercantile pursuits. It was not learning that kind of knowledge that would enable it to make a livelihood!

But the main drift of the report refutes this statement as we shall see. And our committee might, with more consistency, have made a positive instead of a negative statement, admitting that an education such as that provided by our State is an essential feature towards making an honest livelihood. That the physical training for performing labor is a secondary consideration and that the use of tools and implements of industry depend in a great measure on the cultivated and trained intelligence of the laborer; that, to quote from the report, "practical education, such as is desired, is that which will dignify and ennoble labor."

Without the controlling, cultured mind to guide the hands, the labor of the horse and the ox is just as dignified as that of man. There is no particular dignity about labor aside from what is controlled by the purely intellectual, and this should be and is obtainable, as far as I know, in our public schools.

I wish to be understood as not undervaluing the value of labor. But mere physical training for the industries of life always should be held of secondary importance in our public schools. It would be desirable could there be a harmonious combination of the two—practical

and intellectual. It may be that our committee in their suggestions mean the same.

I am of the opinion that a more extensive introduction of object teaching—teaching by observation—in all our schools would be attended with good results. The phenomena of plant and animal life—the nature of minerals, fluids, gases and forces of matter, should be amply illustrated by teachers themselves trained in these branches of knowledge.

The committee recommend a longer period and a more thorough course at school. This is well, and should be insisted on. But, unfortunately, most of pupils must commence out of the schools just what our committee would introduce into them, and at an early age, too—the practical application of making a livelihood for themselves and dependent relatives. So that they have none too much time in school to acquire the actual necessities of reading, writing and arithmetic, which every common school should furnish first and paramount to all other things.

But to those who are not compelled by the force of circumstances to consider it "all of life to live," or the chief end of man to get food and raiment, we would urgently recommend for consideration as wise and truthful the following sentiments of our committee: "Education must fit for society and citizenship, as well as for science and industry, and it should not be emasculated by any narrow utilitarianism." "Culture and knowledge have not always a definite money value for the time being, but they constitute the power that has evolved the splendid achievements in science and industry."

Our committee, however, complain that "in the schools no children become learned in the theory or skilled in the arts of husbandry." Let us not mistake the functions of our common schools. They are not intended to make farmers, or mechanics, or merchants, or professional men. But they are intended to lay a foundation on which any of these occupations may build. There are, or should be, schools for these specialties, either public or private.

"Nothing can be done," say our committee, "by way of improvement of the educational system of the State without changing the laws which control it. Legislation is therefore what is meant by reform."

If that is all, our State is a much reformed State. Every two years our Legislature issues a bundle of reforms—an expensive volume of acts supplementary and amendatory of acts, and so on *ad infinitum*. If nothing can be done by the way of improvement without more law and more legislation, then indeed is it becoming that we should have a universal report from all the industries and occupations. But I do not think our common school system is quite so chaotic as that remark of the committee would lead us to infer.

The report of the committee is full of suggestive topics. The subject is prolific and of vast practical importance to the welfare of our State. Our public school system is susceptible to improvement. But the inauguration of so-called reforms should only be made with due deliberation, after acquiring a full knowledge of what we have and what we need.

### Taxation.

EDITORS PRESS:—It is, or should be, a well-established principle that all property should be taxed once, and once only. Every one should pay taxes in proportion to the amount of property he owns. Thus only can taxation be properly equalized and just. If A is worth \$1,000, and B \$10,000, B should pay just 10 times as much taxes as A, no matter what this property consists in, be it lands, credits, bonds, houses, any species of property subject to ownership. One man may own a farm, be free from debt, own notes, bonds, mortgages—any species of stock, and on all these he should be taxed to the exact cash value. Another may also own a farm upon which he is owing half of its value. He should be taxed half the value of the farm and no more, provided this is all the property he owns. Any other course would be a hardship to him, a poor man. The one who had the claim upon him would pay the taxes upon the other half of the farm; thus all the property would be taxed, and only once taxed. This course would be just and equitable, as all will readily admit. Any other is unjust and oppressive. "But," says the objector, "this will not do; it is quite too Utopian; half the farms in the country are more or less under mortgage, and if we cannot look to the lands for our taxes, our public funds will run low; for the mortgages are here, there, everywhere; they are too dishonest to give in all their property to the Assessors, and disaster would result." Perhaps there is too much truth in this; I was speaking of the world, not as it is, but as it should be. Still I think something may be accomplished in this direction. Even if there was much wrong and perjury it could not well be worse than it is now. The poor man often has to pay more taxes than the rich man, and discontent and discouragement result.

Some half-a-dozen years ago the legislators of Kansas passed a law exempting mortgages from taxation. That saw that, else, property was twice taxed, that such should not be, and they took this course to remedy the evil. But it did not reach the root of the evil, the wrong people had to pay the taxes; a popular clamor was raised against the law, and at the next meeting of the Legislature it was repealed. I know not upon what law was based the decision

of the Supreme Court of California whereby mortgages are exempt from taxation, but certain it is the result is not all that could be desired. While in some cases it prevents double taxation, in others property escapes taxation entirely, and in still others taxes are not paid by the right persons.

As regards taxing growing crops something can perhaps be said on both sides. So far as they are property, so far as they add to a man's assets, it would seem that they should be taxed. The seed before sown is liable to taxation, a man's labor as applied to improving his farm is liable to taxation; why not the growing crops as they exist at the time the Assessor makes his estimate? The property—for they certainly are property—is taxed once only—when the matured wheat and barley and raisins are taxed, it is for the succeeding year, and of course right. The colt and the calf are taxed, although they are only of prospective value, like the growing crops. Assessors are too prone to rate property too low. Every species of property should be assessed at its real cash value, else the man whose property consists in money, which is rated at its face value, pays too much. A farm worth \$10,000 should be assessed at \$10,000, and not at \$5,000, and he who owns 100,000 acres of wild land worth \$5 per acre should have it assessed at \$5 per acre, and not, as is far too frequently the case, at 50 cents. In case of doubt, of course the Assessor should put the property too low rather than too high, for it is a hardship to be compelled to pay more than is just. When all property is assessed, and at its real cash value, the rate may be reduced to half its present figures, and the revenue will be ample. When every one pays his just proportion of tax, contentment will smile over the land, and grumbling will subside; prosperity will brighten up every industry, and idleness will diminish; enterprises will increase and crimes diminish; the good time coming will have made vast strides in its onward march to its destination.

S. P. SNOW.

Santa Barbara, Cal.

### The Salmon Fisheries on the Columbia.

EDITORS PRESS:—I doubt if the extent of the salmon fisheries on the Columbia river, or the magnitude of this suddenly developed interest to our State, is generally understood.

To visit some friends engaged in this business I last week went down the river to Brookfield, W. T., the site of one of our largest canneries, and on this trip learned much of this industry that was a surprise to me. Owing the Press a great good will, I will tender for the benefit of its readers, some of my observations.

To make my statements more easily understood by all, I will observe, in the outstart, that much the greater part of the fish taken here are put up in tin cans of one pound weight, and that each establishment manufactures its own cans; hence they are spoken of and known as "canneries." The most approved and quite expensive machinery is employed, with Chinese labor, in making these cans, which are produced with great facility—the establishment at Brookfield turning out fully 25,000 cans per day.

The proprietors of the several canneries are not fishermen, but rather contractors and packers. They furnish the fishing boats, nets, etc., and hire experts to take the fish, paying them this season 50 cents for each fish delivered at the cannery. The fishermen are mostly sailors, and are of almost every known nationality. Not all of them are complete models of purity and sound morals.

The waters of the Columbia, habitually limpid, are remarkably clear this spring, compelling fishermen to do their work at night. The character of this work is indicated by the following: A fishing boat (or smack) is put in charge of each fisherman, who employs an oarsman to manage it for him. To each boat is attached one net (or seine); these are variable in size, the average being 200 fathoms (1,200 feet) in length, by 15 feet in depth. The meshes of these nets are large enough to admit the head of the fish to a point behind the gills, but too small to allow his body to pass through. It is suspended between two lines, the upper supported by corks or floats, while the bottom line is provided with leads to sink and hold the net in perpendicular position. The boat being provided with oarsman, sail, anchor, line, net and ballast, the fisherman, about sunset, moves out into the river and drops his net on a line across the current, by which it is borne down many miles, as is often happens, before the coming morn. The fisherman during the night passes back and forth along the line to release his net from snags and remove to his boat the fish he may find entangled in its meshes. At day light the nets are hauled aboard, and all the boats belonging to each cannery assemble and, with their bowlines attached to a steamer, are towed up to their respective quarters, where they now discharge the catch of the night. The fish, on reaching the cannery, are, by a process of butchery and cooking, which I shall not now attempt to describe, quickly transferred to cans, hermetically sealed, and packed in four dozen cans, ready for shipment to any part of the globe.

Wheat has been the great staple of Oregon, and the main dependence of her people for revenue, but the salmon fisheries on the Colum-

bia, it is shown, in product, last year, exceeded in value, by far, her entire wheat crop. So large has the demand abroad for Oregon salmon become to be, and so profitable its supply, that not a few of the men engaged in the business found themselves suddenly worth hundreds of thousands. The discovery of this fact has served to so stimulate the business, that the run of 1877 finds the facilities for taking fish in the Columbia nearly, if not quite, double. No less than 1,000 fishing smacks are now on its waters, and the river from the lower cascades to the bar at its mouth, a distance of 150 miles, is said to be a maze of floating nets. The amount of capital required to prosecute this business on the scale attempted this year, is immense, which, to make appear, I will give a few figures kindly furnished by my friend Mr. Truman Tyrrel, Superintendent of the Brookfield cannery.

The cost of buildings and machinery was not given, but I think it cannot fall short of \$70,000; 50 fishing-smacks, rigged complete, \$300 each; 50 nets, costing the sum total, boats and nets, \$30,000; steam tug *Edna*, of Brookfield, just built, \$18,000. Then passing over the heavy outlay for plate-tin, packing-cases, salt, etc., we note the wages, at \$1 per day, of 55 Chinamen can-makers, 250 Chinamen, employed in the packing-house, at \$2.50 per day; also 100 white laborers employed, including fishermen.

The above relates to but one establishment of the 29 on the river, a carefully prepared statement of the working capacity of each of which I will now give.

The capacity of each cannery is measured by the number of cases they are prepared to pack this season, if the fish can be taken. It must be remembered a case, as here given, comprises 48 one-pound cans:

Proprietors and locations.	Capacity, in cases.
F. M. Warren & Co., Cascades	20,000
Jackson, Myers & Co., Rahner	20,000
Quinn & Co., Quinns	15,000
John West, Westport	30,000
Watson & Bannon, Manbattan	25,000
J. W. & V. Cook, Clinton	50,000
Hepburn & Co., Woody Island	15,000
Watson & Co., Tongue Point	20,000
Bradly, Davis & Co., Upper Astoria	25,000
Anglo-American Packing Co., Upper Astoria	20,000
J. A. Hawthorn & Co., Upper Astoria	25,000
Fisherman's Packing Company, Upper Astoria	20,000
Bradley & Co., Upper Astoria	35,000
A. Booth & Co., Upper Astoria	50,000
Geo. A. Delain & Co., Astoria	30,000
Geo. W. Hume, Astoria	25,000
Stemberger & Co., Astoria	20,000
Kimber & Co., Astoria	50,000
T. M. Warren & Co., Brownsport	20,000

#### WASHINGTON SIDE.

Wm. Hume, Eagle Cliff	20,000
Cutting & Co., Eagle Cliff	35,000
Joseph Hume, Eagle Cliff	50,000
Haggood & Co., Waterford	25,000
Warren & Co., Cathlamet	30,000
Leuridge & Prindle, Ray View	30,000
Columbia River Salmon Company, Glen Ella	20,000
Fitzpatrick, Davis & Co., Fisherton	30,000
J. G. Mezger & Co., Brookfield	50,000
Pillar Rock Packing Company, Pillar Rock	20,000

Total, in cases 1,135,000

Should the catch of salmon this year enable all of these establishments to run to the full limit of their capacity, as above given, 1,135,000 cases, or 54,480,000 cans, of fish will be the product, aside from barreled fish, which are put up in considerable quantity. These canned goods, at \$6 per case (the price generally obtained last year), will represent \$6,810,000 in gold coin, quite a clever sum for an infant industry, and a handsome fruitage for our beautiful Columbia. It is estimated that an average fish will fill 16 cans; hence, to meet this year's lay-out of these canneries, 378,333 salmon will be required, and the pay to the fishermen, for catching them, will be \$189,166. The fishing season is now fairly in, and will probably continue till about the 15th of August.

I want to say, in conclusion, to your readers, that for many facts in this brief of our piscatorial bonanza up here, they are indebted to Mr. Truman Tyrrel, of Brookfield, a gentleman every way trustworthy, and to him and his talented lady, the writer is under obligations for the cordial hospitality of their pleasant home during his sojourn in that place.

N. W. GARRETSO.

Albany, Oregon, May 1st, 1877.

### An Alkali Soil and Treatment Therefor.

EDITORS PRESS:—The analysis of the "alkali" of the soil sent by W. G. McPherson, Esq., Chairman Committee on Alkali Soils, Westminster Grange, three weeks ago, has just been completed, with the following result:

Amount of soluble salts in the soil..... 0.54 per cent.

This amount would not be enough to interfere with the well-being of many crops, but for the very caustic character of its ingredients, as the analysis shows, to-wit: Composition in 100.00 parts, by weights, of the salts:

Chloride of sodium, or common salt	10.57
Carbonate of Sodium, or sal soda	61.48
Sulphate of Potash	20.61
Carbonate of Potash, or "Saleratus"	6.60

99.26

This is nearly the composition of the ash of seaweed or kelp, or rather, of the lye made from such ash. It is in quality the most corrosive I have met with; hence its effect on vegetation, notwithstanding the smallness of the amount present. At the same time the large proportion of potash present in the mixture will be greatly to the advantage of crops so soon as the corrosiveness is relieved. This can be accomplished by the application of plaster or gypsum.

It is hard to predict just how much land plaster will be needed to reduce the alkalinity



of the soil sufficiently for all crops. The surface soil sent is doubtless richer in alkali than the subsoil, and in the permanent water you allude to as being several feet below the surface, the amount may be quite small. Try from 600 to 1,000 pounds per acre, put on just before the winter rains, sown broadcast. After a good soaking rain, plow as deep as you can; for in general the deeper you plow the more you dilute the alkali, which as a rule accumulates on the surface as a consequence of the evaporation of a weak mineral water underground. For weak alkali soils, therefore, deep tillage alone often affords relief. The fact that the strongest alkali is mostly found in low spots does not indicate that the subsoil of the higher levels lying even with such low spots is therefore as strongly impregnated as is the surface of the latter. The alkali accumulates in the low spots because there a lively surface evaporation goes on throughout the season, while on the higher land, where the water is farther from the surface, evaporation is vastly less, and in the dry seasons may be almost nothing, at least so far as the direct ascent of the alkali water is concerned. By draining the low spots so as to lower the water table a foot or two during the dry season, the alkali is sometimes so diminished in a few seasons as to give no further trouble. I hope the members of your Grange will act upon some of the above suggestions, and report results.

E. W. HILGARD.

University of California.

## ARBORICULTURE.

### Coffee Again.

EDITORS PRESS:—There are always two sides to every question, as evinced by your "coffee letter" from Mr. Mackin, of Nordhoff. He appears to think that we, who are experimenting with coffee, are doomed to disappointment. But I would remind him that one year's experience in any part of California is not enough by which to judge the climate of the whole State; for no other region of equal extent possesses a greater variety of soil, or is subject to more varying climatic influences.

No man now testing coffee considers its success other than a problem as yet unsolved. We propose to first find out whether it will grow here, since the tree is decidedly ornamental; and then we shall soon settle the question of profitable yield. A plant is well worthy of trial which is cultivated in Arabia, Ceylon, Java, India, Central America, Brazil and Liberia; nor can a culture so widely extended be properly called "restricted."

The process of gathering by shaking from the tree and then passing through the pulper, although not practiced in Ceylon, appears to be quite possible. B. L. Hill, American Consul at Nicaragua, states that the berries are shaken off. I am glad to hear of the method in use elsewhere.

My impression is that the large force employed on tropical plantations is rendered necessary by the inefficient character of the labor, and by the failure to use improved machinery. Americans could economize greatly in these directions. This, however, is of subsequent importance. Just now we want to test the tree.

Tables of mean temperatures, summer and winter, of the principal coffee regions would aid our conclusions. I should like to hear from Professor Hilgard on this coffee affair, and I shall await with interest a further letter from Mr. Mackin.

CHAS. H. SHINN.

Niles, Alameda county, Cal.

### Setting Orange Trees.

EDITORS PRESS:—I am setting several dozen of orange trees this spring. By accident they were kept out of the ground, without even being wet, till the ninth day after they were dug up from the nursery. They were then set out, but the leaves were mostly dry and blew off, leaving trees and branches perfectly bare, just as our first hot spring weather came on. I gave them a severe top pruning, then covered each tree, body, branches and all, with white cotton cloth. I did this over a month ago. A week ago I took the cloths off the branches; some of them had grown a foot, and all were doing finely; while of three that I had left uncovered, one died and the other two have not grown at all. In setting a great many orange trees, I've never lost a larger percentage than that usually met with in transplanting peach, apple or plum trees. And as this is the season for setting such trees, I will give my rules briefly:

1. Set when the ground is warm.
2. If the roots are not covered with earth from the nursery, dip them in a batter of thin mud and set them out with as much mud as possible adhering to them.
3. Thoroughly saturate the ground with water where you are going to set your tree, and keep it moist around your tree till it starts into growth after transplanting.
4. If the leaves blow off, or curl up, so as to expose the body and branches to the direct rays

of the sun, shorten in the branches by pruning, then cover the entire tree with light cloth till it starts into vigorous growth.

5. Set them during a period of dormancy, rather than when in active growth.

### Blue Gums.

I am setting several hundred of these trees, and give my method here in detail. Sow the seed in boxes of earth about four or five inches deep. When the trees are a foot high, cut out each tree by cutting the earth through between the trees to the bottom of the box. Set each tree where it is to grow, taking care to keep as much dirt as possible adhering to its roots. After you have set your tree put two or three sloping stakes around it an inch higher than the tree, throw over them a piece of wet cloth—I use a half of an old barley sack to cover each tree—and leave the tree so covered a week or more; then, on a cool, cloudy day, take off your covers, or, in the absence of cloudy days, take them off in the evening, keep your trees watered and you will not lose three per cent. from transplanting. If your trees are large, shade them with boards for a while, keep them watered, and you may depend upon but a minimum of loss.

### Unjust Criticism.

Many friends have asked me why I did not notice Robert Lyon's captious review of my lecture in the RURAL of April 21st, and I have finally consented to notice his botany. What I said about producing seedlings like the parent trees, I learned many years ago from botany. It was fully explained by Linnaeus 150 years ago, and has been taught in every botany since his time. I have often proved the truth of the theory by experiments, both by raising seedlings true to the parent plant, and also by hybridizing with pollen from some other variety. This hybridizing affects the seed only, and not the fruit. Neither Mr. Lyon, nor any one else, can tell by the appearance of eggs from Brahma fowls whether they have been hybridized from scrub poultry or not; but set the eggs, see what grows from them, that will tell the story. No it is with seeds, neither they nor the fruit show by appearance whether they are mixed or not; but plant them, that tells their parentage. And pure seed, fertilized by their own pollen, will as surely produce after their own kind as will anything else in nature.

W. A. SANDERS.

Kingsburg, May 20th.

### Irrigating Orange Trees.

EDITORS PRESS:—On the whole I think this dry season will not prove as serious in its consequences as at first feared. We have abundant facilities for irrigating, of which the greater portion are not yet developed. With wells and good windmills enough of our land can be devoted to tropical fruit culture to place us in a position to be sure of a regular income, even such seasons as this.

In connection with this subject I remark that such irrigation as orange and lemon trees need can be given better and easier with a small stream such as a windmill can lift, than by flooding the surface, which many suppose to be the only way to water anything. Very many here are watering trees with a portable tank and hose, taking seven to 14 barrels of water at a load. Newly-planted trees are as yet the only ones watered in this way. Some are watering hills for squashes in this way.

Ventura, Cal.

HENRY SHAW.

## THE DAIRY.

### Dairying on the Tules in Napa.

As has been heretofore noted, Hon. John A. Stanly, President of the California Dairymen's Association, has been for several years working at the problem of dairying on tule lands. After undergoing the accidents which attend all new enterprises, Judge Stanly's venture has now reached the position of complete and gratifying success. We trust that at the next meeting of the Dairymen's Association the President will give us a full account of his experiences in this line, and thus do good service for all our men who have the nerve to transform the waste places of the State into fruitful fields.

A writer for the Napa Register has just made an examination of Judge Stanly's property and we quote his observations: The success attained on the tules of the Sacramento river is not the only illustration of the fact that this sort of land, which hitherto has been considered worthless, is really the richest of all lands and only needs to be properly treated to become the gardens of the Pacific coast.

In company with T. H. Thompson we visited, on Wednesday of last week, a field of 35 acres of reclaimed tule land belonging to Judge J. A. Stanly, of Oakland, and adjoining his dairy ranch, lying two and a half or three miles south of Napa and about half a mile west of the river. Fifteen acres of this land are covered with a splendid growth of wheat, the like of which we have seen nowhere else in this valley, although there are some fine fields of this cereal in many localities. And this wheat which is five to six feet tall and stands in a wavy, luxuriant mass, is growing on some of that same tule or marsh

land that has been so long considered worthless for crops. The seed wheat was evidently not perfectly clean when sown, and there are bunches of barley here and there, which is of the same rank sort that the wheat is, and a few of its heads, clipped as a sample, feel as heavy in the hand as a large bouquet. The wheat is just past the blossoming period. The blossoms look like fly-blows on a piece of meat but are a little larger.

The land was reclaimed four years ago, previous to which the tule rushes were so thick and tall that a man could not be seen in them a few yards off. Last year 17 acres of this land were sown in rye and alfalfa, but the rye grew so rank as to choke out the alfalfa and the rye yielded about five tons to the acre, which supported 100 milch cows from the middle of October to the 1st of March, and there are 25 tons left now untouched in the barn. This may seem a large story but we have the testimony of several witnesses to its truth. The wheat is the second crop on the land and was sown last fall. The soil is as full of richness as a compost heap and resembles it in character. And it grows richer every year by receiving the deposits of the annual washings of the entire valley when the winter rains sweep down and feed the streams, and then the marshes overflow. It will require several years' plowing and cultivation before the rooty, fibrous soil becomes thoroughly broken up and decomposed, and when this point is reached these reclaimed lands will be like the cream of a Jersey cow's milk, only needing a little shaking to wake it up into golden, delicious butter, and care has to be taken not to disturb such cream too much lest the butter appear when it is not wanted. So with this land. Seed must be kept away when not to be planted, or this soil will seize it and expand it into a bountiful harvest. Several farmers, with whom nothing short of seeing is believing, have visited the piece of grain above referred to and have indulged in surprise to the fullest extent at the bounteousness of the tule land when reclaimed by ditches, and they returned home thoroughly convinced that really and truly good could come out of Nazareth. We recommend other skeptical farmers and citizens to make a similar pilgrimage.

## THE STABLE.

### Pool Selling.

The New York legislature, at its last session, passed a law making pool selling a criminal offense, and as a consequence the wretched gamblers of New York city have either moved their dens to Jersey City or are floating about on the Hudson river, having their gambling machinery set up on boats. Can we learn a lesson in this State from New York? The *Pacific Life*, ostensibly a "sporting paper," thinks we can, and we are glad to see a paper of such character speaking aloud concerning the greatest of racing evils. The *Life* says:

What the turf needs is to be stripped entirely of all semblance of dishonesty, whether it arises from the manipulation of the pool box or any other cause. The former, however, at the present time, is the very factor upon which all the fraudulent races are founded. It is a well known fact among the sporting fraternity, in almost every instance, that horses are driven to suit the pool box and its handlers, and not to test the speed and endurance of the animals. A majority of the purses that are announced to be given are merely delusions, and have no more foundation than "the baseless fabric of a vision." They are nothing more than *ignus fatui* to make all honest people believe all is fair, when in reality they are announced only to make the race appear important, to draw the crowd. These, when drawn, are tempted from the well known merits of horses to invest in the pool box, either on the time to be made or on the heats themselves. The frequent disappointments that attend such investments, and the surprisingly moderate time in the speed of well known fast horses, show sufficiently well where the "little joker" lies.

But if all the purses offered were in reality put up—and we are aware that in very many instances they are honestly up—the pool box should, notwithstanding, be abolished. It would inure greatly to the owners and proprietors of race tracks, and associations that have racing under their supervision, in very many ways. While it would draw the stigma that now attaches to races, many horsebreeders who now withhold their support and countenance, would gladly assist remuneratively, as well as by their moral support, in upholding the sports of the turf.

### A Radical Cure for Heaves and Asthma.

Fine horses are sometimes, by over-driving and the use of musty feed, subject to the heaves. A friend of mine once gave me the following recipe as a certain cure, properly administered, for the heaves. Oliver Ayres is well known as a noted horse doctor and the biggest man in Bennington county (Vt.) He paid a farrier \$10 for the recipe, and buys every good horse that will insure him on sales from four to ten times as much money, when cured.

R.—To one gallon of the very best sharp cider vinegar, drop in as many fresh whole eggs as the vinegar will cut shells; sometimes 135. Let stand two days. Heat

up well and strain. Then add three pounds of strained honey.

Dose.—Beat and give one quart every morning. Sometimes one dose cures. Let the animal rest one week.

This remedy will often cure bad cases of asthma in human subjects, when given in small doses, night and morning, before eating.

SOLOMON W. JEWETT.

Shepherd Home, Vermont.

## SHEEP AND WOOL.

### Truth about Wool Clip, Etc.

EDITORS PRESS:—Always taking the report of the PRESS as reliable, I find in your last week's issue a notice, under head of Los Angeles items, an account of a wonderful wool clip, from 39,400 sheep, of the San Fernando Company, averaging over nine pounds each. You do not say if this is a *six months'* growth or not, but we all understand that they clip twice a year in California. That being the case, it would make, say, an average of 15 to 18 pounds each for the year. Being in the sheep business myself, both here and in Texas, I am prepared to disbelieve this report, and very many with whom I have talked are of the same mind. There is undoubtedly a mistake somewhere, for there are grave doubts of there being a flock of sheep of this size that will average the quantity named. Please state for the satisfaction of wool growers if this was the average for a *semi-annual* clip or for the *entire year*.

I have only a few days since received account of sales of our *yearly* clip from our Texas flock, amounting to 40,609 pounds, which was sold in San Antonio, Texas, at 25 cents per pound net, cash in gold coin. The clip was sold under sealed bids, there being 10 bids, ranging from 23½ to 25 cents, there being two at the latter figure, one sold out to the other.

I do not wish a publication of this letter, I only write to call your attention to what seems, as is too often the case, a "California story," but possible you can modify it by stating if the wonderful clip was a year's average in place of the impression your readers have of its being a six months' clip.

We are here in California given to too much *boasting*, and thereby making ourselves ridiculous to the sensible people of the eastern slope, who come out here and investigate the startling newspaper articles that are sometimes published, and very often with the greatest innocence on the part of the publisher.

J. MADISON THOMPSON.

Suscol, Napa county, California.

We beg our correspondent's pardon for publishing a letter which was not for publication, because we see nothing in it which can do him harm, and several points which we would like to make prominent in the pointed way in which he writes. We have also several comments to make.

With regard to the wool clip in Los Angeles county, we find the statement in our Agricultural Notes under a credit to the Los Angeles *Herald* in the item above. If the matter were inexplicable we should call upon the *Herald* for explanation, but we had and still have the impression that the clip was for the year, that is what is known to the trade as a 12-month clip. This it seems to us appears in the context, which reads: "The wool clip of the San Fernando Company *this year* was in many respects a remarkable one," etc. The fact is that we have in this State both six-month and 12-month clips, according to the method of the sheep owner. Thus in our market report for April 7th there were these quotations, to meet the classes of wool which were then arriving: "12-month burry, 12@16c.; six-month burry, 12@14c." The clip to which our correspondent alludes was a 12-month clip, we have no doubt.

The remark which our correspondent makes of the California tendency to exaggeration, especially in newspaper articles, is true, and it is a tendency which we have done our best to escape from in everything which we print in the RURAL PRESS. It does us more harm than good as a State. In our own writing and in the writings of contributors we restrain this false glory as far as possible, according to our knowledge of the facts. The truth about California is good enough for us, and good enough for all the world besides. It is unnecessary as well as evil to publish anything more than the truth.

We congratulate our correspondent upon his Texas achievement, and trust his California ventures may prove as successful.

### Poisoning with Wool.

A curious case, the first that ever came to our notice, happened to Mr. R. P. Gray, living near Mussel slough. During sheep shearing, some two months ago, he was taken with pain in his face and head, centering on his upper lip near the nostrils, and extending through the chest and back to the lower extremities, completely paralyzing one of his legs. The physicians failed to discern the cause, and their remedies proved abortive. Sleep, without powerful opiates, became impossible and his suffering during waking hours were almost insufferable. Finally Dr. Brandt, who lives in the same locality, suggested poisoning by handling wool. Mr.

Continued on page 362.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

GRANGE DIRECTORY.—A full list of Subordinate Granges, Masters and Secretaries of California and Nevada, is published as often as once a quarter in this department. See issue of March 17th for latest insertion.

### Suggestions for Grange Action.

EDITORS PRESS:—I am much pleased with the resolutions adopted by the Executive Committee of the State Grange, in calling a convention, to the Grange hall in San Francisco, July be held at 10th, in 1877; there to determine what legislation is needed by the producers of the State. I think this action will result in much good to the people of the State if judiciously managed. It is to be hoped that all the evils that the people have a right to complain of, will be thoroughly ventilated by this convention, and in order to have unity of action, as is recommended, I think there should be some way devised that all the Subordinate Granges be represented in that Convention; and that there be public meetings held by every Subordinate Grange to discuss this system of unjust class legislation which has been the rule in our State, by which the rights of the people have been infringed upon in almost every conceivable way. I have not the patience if I had the ability to point out all the wrongs that have been inflicted upon the people by their so-called representatives, but will only present a few for the consideration of your many readers.

What has become of our public domain—the people's birthright? If our land has been properly disposed of, why are there so many tenants in California? And why is it that a few individuals hold large tracts of good agricultural assessed only as grazing land? And why that the homeless man can only take 80 acres under the homestead law, and the pre-emptor must pay \$2.50, double minimum. I understand the legal answers to these questions, but are the people satisfied, and have they ever given their consent to be governed by such laws? We must bear in mind that if Congress had a right to give away any portion of our land, under any pretense whatever, she had the right to dispose of every foot of it.

And last but not least, the desert land bill. Can we believe that this bill was passed by Congress under the impression that it would be a benefit to the people of the State? Did the people want such a law? If they did not, why submit it?

To remedy the evil complained of in our system of taxation there must be a reduction in our expenses by dispensing with all unnecessary offices, and a reduction of the salaries of the needed officers. And then it will not be necessary to tax growing crops, and our little household and kitchen furniture. It seems to me that a certain amount of improvements should be exempt from taxation, and other property that is actually necessary for the maintenance of a family.

It appears to me that a radical change should be made in our present school laws, but as this is considered by some a sacred question, I will content myself for the present by presenting a few of its most objectionable features. That it is unnecessarily expensive, and is not what it purports to be, a free school system, and in its operations unjustly discriminates between city and rural school districts. In many districts the funds will only defray the expenses of a school for six months in consequence of the people being deprived of their rights, not being allowed to hire a teacher without a certificate from under the hands of the Board of Examiners.

The County Board of Examiners and the State Board of Education is a farce, and an imposition upon the rights of a free people. I know that it is the opinion of some that there can't be a Board of Trustees elected in the School District by the people who are competent to judge of the qualifications of a teacher. According to this mode of reasoning the people should be deprived of the rights of suffrage, and all our officers in every department of our Government should be appointed by our so-called educated men; for what do the great masses of the voters know of the qualifications of the men who constitute the State Board of Education and our County Superintendents? And I appeal to every sober thinking individual who will take the trouble to investigate and become acquainted with its workings if it is not a complete monopoly, and wholly inconsistent with our form of government. In conclusion, I would suggest that the people come together and discuss all these questions, and arrive at some decision as to what they are entitled to, before our State election, and impress it upon the minds of those who may be elected to represent us in our next Legislature that we want no third house composed of lobbies in the interest of corporations—the money power of the State. That they want no commission appoint-

ed to sit on the fence and watch the movement of corporations in order to prepare a whitewash in the shape of a report to be made to our next Legislature. And that we ask for nothing but what we are justly entitled to, and that we must and will have it, or else we will proceed against them as vigilance committees did against horse-thieves in the early days of California.

H. W. RHYNE.

Paso Robles, San Luis Obispo County, Cal., June 1st, 1877.

[Our correspondent makes his points over his own signature, and we print them without assuming responsibility therefor. We refrain from comment except upon one point, and that is that we believe that the farmers can make their influence felt through the regular channels as provided by law if they labor together to this end; and we look upon any threat of resource to extra-legal methods as endangering and weakening the cause.—EDS. PRESS.]

### What Has Co-operation Done.

In a recent address before a Grange audience in Colusa county, Bro. J. W. A. Wright gave the following points on progress in co-operation:

1st. The co-operative work in the United Kingdom, commenced by the Rochdale Pioneers, 33 years ago, and now comprising over 1,000 co-operative societies, formed on the true system of co-operation, with over 400,000 registered members, and doing a business of more than \$60,000,000 annually.

2d. The Patrons of Husbandry, comprising the farmers of the United States and Canada, and whose work was begun in California only four years ago.

3d. The Sovereigns of Industry, who commenced their work some three years ago, and who now comprise 11 State Councils, and have already been introduced into California. The Sovereigns are combining in Councils, on similar principles to the Grange, the earnest working men and women of our towns and cities. These Councils and Granges can work together in many ways.

Here Mr. Wright dwelt at some length on what the Grange organization has actually done in the United States for the farmers in a social, moral, educational, business and political point of view. He stated facts and figures, drawn from different parts of our country, including California, which proved conclusively that the Grange had done very much more than has generally been supposed. He urged on our farmers the necessity of making the Grange work perpetual, as it was always intended it should be, and as the speaker predicted it would be, no matter how many of its workers might become faint-hearted and fall by the way. Evidently, the Grange movement has never before been so strong in its business enterprises and general influence, for good, as at present. In the jurisdiction of California there are at present more than 200 working Granges, notwithstanding some incorrect statements to the contrary. Though five old Granges surrendered their charters last quarter, five new ones were organized during the same time in our State. The speaker stated that the true principles of

#### Rochdale Co-Operation.

As so thoroughly worked up in England, and so heartily recommended by the National Grange to our Order, have been infusing new life into the work of the Grange wherever they are really understood. Could our Granges have known at first this plan of co-operation as a business system, as we have learned it within the last year, we could have avoided some mistakes in the past. The word "co-operation" is generally used merely in the sense of working together. The Rochdale co-operation indorsed by the National Grange, means much more than this. It means the safest known system of trade; that is, in the declaration of the National Grange itself, it is a "pro rata division of the net profits of business among those who do business together. This includes the producer, distributor, capitalist and consumer." Its principles of trade are, in brief, a moderate capital subscribed in small shares, and paid in full or by easy installments; a cash business; purchases of the best articles in the best markets; a small profit allowed on the capital invested, usually from five to eight per cent., according to English rates of interest; sales to members and others at usual prices, where they are not exorbitant; fair salaries to managers and employees; frequent inventories and strict accounts, with full quarterly reports from the Directors, certified, after careful examination, by two or more Auditors, who are selected by the shareholders; remaining profits, after paying expenses and the interest allowed on cash capital, divided among members and other customers, in proportion to their purchases, outside traders usually receiving half the dividends of members; no adulteration in commodities, or, if any, make it known; just weights and measures; one vote by every stockholder, no matter how many shares of stock he holds.

#### The True Co-Operative Faith

Is expressed by Mr. Neale, one of their leading and most experienced co-operators, in these words, worthy of earnest study and remembrance:

"There is one way, and one way only, in which the mass of the people can permanently improve their material position, and that way has three stages.

"1. They must unite to economize labor and increase production.

"2 They must provide for the equitable distribution of the products of industry among all who are concerned in producing them, whether the contributors of present or past labor, producers or consumers; and

"3. They must introduce well concerted arrangements in their homes and the surroundings of those homes, so as to derive from the results of human energy the full measure of advantages or enjoyments, which human power and will could secure for all mankind, if it took for its guide the steady light of reason in place of the delusive flicker of self-seeking interest."

### Open Grange Meetings

For Stanislaus, Merced, Fresno, Tulare, Kern, Los Angeles, San Bernardino, and San Diego counties:

Bro. Pilkington, Worthy Lecturer of the State Grange, will hold open meetings at the places and time indicated below:

Cottonwood, Merced County.....	Monday, June 11th.
Merced, Merced County.....	Wednesday, June 13th.
Fresno City, Fresno County.....	Thursday, June 14th.
Centerville, Fresno County.....	Friday, June 15th.
Kingsburg, Fresno County.....	Saturday, June 16th.
Grangeville, Tulare County.....	Monday, June 18th.
Hanford, Tulare County.....	Tuesday, June 19th.
Visalia, Tulare County.....	Wednesday, June 20th.
Farmersville, Tulare County.....	Thursday, June 21st.
Soda Springs, Tulare County.....	Friday, June 22d.
Tulare City, Tulare County.....	Saturday, June 23d.
Glennville, Kern County.....	Tuesday, June 26th.
Bakersfield, Kern County.....	Thursday, June 28th.
Tehachipa, Kern County.....	Saturday, June 30th.
Los Angeles, Los Angeles County.....	Monday, July 2d.
Compton, Los Angeles County.....	Tuesday, July 3d.
Anaheim, Los Angeles County.....	Wednesday, July 4th.
Westminster, Los Angeles County.....	Thursday, July 5th.
Azusa, Los Angeles County.....	Friday, July 6th.
Rincon, San Bernardino County.....	Tuesday, July 10th.
Riverside, San Bernardino County.....	Thursday, July 12th.
San Bernardino, San Bernardino Co.....	Saturday, July 14th.
San Luis Rey, San Diego County.....	Thursday, July 17th.
Poway, San Diego County.....	Thursday, July 19th.
San Pasqual, San Diego County.....	Saturday, July 21st.
Bear Valley, San Diego County.....	Monday, July 23d.
National City, San Diego County.....	Thursday, July 26th.

Appointments for Santa Barbara, Ventura, San Luis Obispo and Monterey will be made in a few days.

Bro. Pilkington is an able and interesting speaker and no farmer, or the friends of farmers, should fail to attend his meetings.

AMOS ADAMS, Sec'y State Grange.

June 6th, 1877.

### Assessment of Growing Crops.

EDITORS PRESS:—The following resolutions were adopted by Pomo Grange, May 19th, 1877: Resolved, That the members of this Grange deprecate the action of the so-called State Board of Equalization in requiring the Assessors of the various agricultural counties of the State of California to assess growing crops as personal property.

Resolved, That we believe such action by said Board to be unconstitutional, contrary to all precedent, unequal, unjust, ruinous to the prosperity of the State, and subversive of the interest of labor, which creates the prosperity of all countries.

Resolved, That common sense teaches that growing crops are but means by which property may be created, and have only a prospective value, something to hope for, but by no means possessing the actual value of a chattel. Why should the sprouting seed which has been already taxed, the growing stems and leaves be classed as personal property, any more than the growing clip from a sheep, or the prospective interest accruing upon a note secured by mortgage? The only difference we can see is that the sheep and the field upon which the crop is growing has been taxed, and the growing crop may produce a marketable value annually, but the note which has not been taxed is sure to produce it, two or four times a year, because it is generally secured by double the value it represents. The growing plant is merely an agent for transforming the values of soil and works into marketable commodity. The note is also a sure agency for transferring money from the borrower's pocket to the coffers of the lender. It is urged by our modern Lycurgus that to tax notes secured by mortgage would be double taxation; but the farmers' grain is taxed in the granary, is taxed again when it is in the soil and germinates, and if it matures it is harvested by taxed machinery, put into taxed sacks, and if not disposed of until the Assessor's annual visit, is taxed again.

Resolved, That we view with wonder and amazement the tendency of our modern law, as construed by our Supreme Judges, to place the whole burden of taxation upon the producer, the manufacturer, the mechanic and poor, laboring classes.

Resolved, That we pledge ourselves to use every lawful means, and in this we earnestly desire the co-operation of every lover of justice and right, to enable us to procure the repeal of laws which operate so unequally and unjustly towards a large majority of citizens of a common country.

Resolved, That a copy of these resolutions be sent to the RURAL PRESS for publication.—T. W. DASHIELL, Committee; E. V. JONES, Sec'y.

"WHO READS AN AMERICAN BOOK?"—A very handsome and extended notice of Dr. E. S. Carr's "Patrons of Husbandry on the Pacific Coast," appears in the *English Farmer*, of May 7th. The editor says: "This is a most remarkable and important book, and the interest which it affords the reader is equaled only by the ability displayed by the author in writing it. It is a striking landmark in the history, not less of the Order of the Grange in California, than in the history of agricultural progress in that, in many respects most splendid of the stars which make the American Union so grand a galaxy." The editor sums up a lengthy and critical review of the book by saying: "If what the Grange has already done for its members may be taken as an earnest of what it will do for them in the future, the benefits it will confer on them are incalculable, but it is devoutly to be hoped that they will use their immense power wisely and justly. If they do this, the Order which has united them will rapidly hasten the development of agriculture throughout the entire Union, while it will add enormously to the sum of the national prosperity."

PASO ROBLES GRANGE.—The following are Master and Secretary of Paso Robles Grange, No. 203, San Luis Obispo county: O. C. Blagney, W. M.; A. J. Blagney, W. S.

### Women in the Grange.

EDITORS PRESS:—From the dark shadows of the unenlightened past to the promising brightness of the present, the oft recurring and vexations question, "What shall we do with the women?" finds a place in the deliberations of conservatives, and not unfrequently those who style themselves reformers.

When the beautiful Order of the Patrons of Husbandry came into existence with its platform strong enough and broad enough for husbands and wives to stand upon without jostling each other, thousands of good men and women throughout the country rejoiced that time-worn prejudices were giving way to a new order of things, where simple justice promised to rule. The doors of old secret Orders might never turn on their rusty hinges to admit women to equal standing with men, but new doors had been made that opened alike to both sexes, the same tests of admission applying to both. This departure from old customs is likely to serve the cause of humanity better than all the Orders of the past and present, churches included, where it is "a shame for a woman to speak." Few thinking people in the 19th century will deny that woman's intellectual capacity is equal to man's, and her moral perceptions as acute. Hence I shall take a position at issue with "San Joaquin" in the PRESS of May 19th, where she says, "To make good the boast that all are equal in the Grange all offices should be open to either. But in the eternal fitness of things, I believe woman would very rarely fill some of them."

Are we to infer then that "San Joaquin" considers one of the fundamental principles of the Order of Patrons simply a boast?

Then again we are variance, for I believe the idea of equality in the Grange was no idle vaunting for unworthy ends, but the result of mature reflection prompted by justice. The line dividing the offices has not been drawn by the originators of our Order farther than the name indicates—which standing against the principle of equality proclaimed, should not have a feather's weight in our elections.

In looking over the list of officers of the Subordinate Granges of California I find women as Secretaries, Overseers and Lecturers, either of these offices being as important as that of Master, and "in the eternal fitness of things" I presume fill them worthily and acceptably to their Granges.

Women should endeavor to qualify themselves for every office from the lowest in the Subordinate to the highest in the National Grange, and if she never fills them nothing is lost and much gained. Men can do no more and should do no less.

As a Grange, prosperity attends us. Our numbers are small, but wide awake in every good cause that is brought before us. Promptness in attending the various duties assigned, and perfect harmony, two elements of success, have always characterized our meetings. Some of our charter members have grown weary of working and seldom meet with us, but we are hoping that Bro. Pilkington will get up a "revival" when he comes. FLORA M. KIMBALL, Secretary National Ranch Grange, San Diego.

### Notes on Meetings.

EDITORS PRESS:—The convention of wheat growers will be held in the Grange hall on Thursday, July 12th, 1877. The importance of this convention cannot be over-estimated, as efforts are now being made to depress the price of wheat in this market at a time when the price is firm in Liverpool, with an upward tendency. Nothing but a systematized concert of action can prevent the farmers from falling into the same snare that has so many times been set for them. Let each wheat grower appoint himself a delegate to attend the convention.

In reply to inquiries, we will say that the meeting called for the 10th of July to select subjects for legislation is purely a Grange meeting, and none but members of the Order will be admitted.

AMOS ADAMS,

Secretary State Grange.

### Note from Bro. Pilkington.

EDITORS PRESS:—Finding that picnics are the order, and arrangements being made to meet my visits, and that out-door speaking is generally looked for at picnic meetings, I desire to say through your Grange columns that I cannot hold out on my long trip south and make out-door speeches. Nor can I do so effectively the same work; therefore for the good we desire to do as well as to be able to meet all my appointments, I fraternally request that provision be made in all instances for indoor speaking, and greatly aid our cause and accommodate the State Lecturer.

B. PILKINGTON.

Oakdale, June 5th.

THE Auditor of the city of San Francisco has prepared his estimates of the amount of money necessary to be raised for municipal purposes for the fiscal year 1877-8. The amount required is estimated at \$3,909,812.64, and the tax levy at the rate of \$1.17 on each one hundred dollars.

THIRTEEN failures were reported in the last fortnightly statement of the London Stock Exchange, some heavy.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**ANOTHER HORSE DISEASE.**—*Gazette*, June 2: A disease of an alarming character is said to be prevalent among the horses in Eden township, Alameda county, but no cases are reported yet as having terminated fatally. It is described as a severe throat affection, attended with a slight cough and swelling of the glands in lumps as hard as bone. A number of valuable horses at San Lorenzo and San Leandro are suffering with this new disease.

## COLUSA.

**FINE WHEAT.**—*Sun*, June 2: Hon. John Boggs brought to town on Monday a sample of his winter-sown club wheat. The heads will average two and a half inches and the grain is very plump and full. There are not so many grains in a mesh as some wheat we have seen, but it will turn off at least 30 bushels to the acre. Three weeks ago Mr. Boggs did not think he would make anything from it. The field was attacked by mildew and then the dry weather seemingly killed it, but the cool weather of the past three weeks has brought it out until it will make a fair average crop even for his good rich land. Mr. Boggs thinks, however, that the yield is largely due to the fact that he used a Gorham seed sower instead of the ordinary broadcast plan of sowing. He thinks this will make a difference any season. This is one experience for farmers to treasure up. He also rolled his ground with a heavy roller, and this too is a good thing and pays.

**TWICE PLOWING.**—Mr. Kendrick, a large farmer who resides on the plains just north of Germantown, was in town this week and, as is our custom, we interviewed him about his crop prospects. He says that he cross-plowed some of his worst land last spring after it had been plowed early in the winter; some he run a cultivator over, and some he left with one plowing. That that he plowed once will make some wheat, but the cultivated land has grain some six inches higher; the twice-plowed some six inches higher still, and a difference in each case of more than five bushels to the acre. The grain was sown cross-wise of the plowing so that there was no difference arising from the sowing.

## CONTRA COSTA.

**THE LAST RAIN.**—*Gazette*, June 2: The somewhat unexpected rain on Monday last was more general throughout the county than any we have had during the spring. Here it reached about a quarter of an inch in measure, but was much heavier in the San Ramon section than with us. We hear that with wind and rain together considerable of the heavier grain was lodged, but are inclined to believe that the cool airy weather since the rain will help it up again.

## FRESNO.

**GRAIN.**—*Expositor*, May 31: Last Saturday, H. C. Eggers left at our office samples of wheat and barley grown on the Eggers farm. The samples are most excellent, and we are assured but fair samples of the entire portion of the irrigated grain on the farm. Such being the case, a yield far above the average grain crops of this valley will be the result. The heads of grain are well filled out and the kernels large. The crops on the farms along the various irrigating canals will demonstrate the value and necessity of a complete system of irrigation.

**BORDEN.**—From C. L. Peterson we learn that there will be several farmers at Borden who will make good crops this season. Mr. Chapman has about 300 acres of good wheat; Mr. Reading has about 400, and Mr. Peterson has about 350 acres. These crops he thinks will average fifteen bushels per acre. General Reading's grain has grown without the assistance, this season, of irrigation; last season, however, it was well watered. The theory has been frequently advanced that if the soil was well wetted one season, with the lowest rainfall on record, good crops could be secured on the same land next season. Gen. Reading's success seems to support this theory.

## LOS ANGELES.

**MORE HONEY.**—*Herald*, June 1: Fine showers of rain still continue to fall, which will have a good effect upon the small flowers in the secretion of nectar, which will be much increased. The sages, wild alfalfa and wild buckwheat we fear are too far gone to be revived. Sumac and other plants will no doubt be much benefited.

**THE DESERT LANDS GRAB.**—*Express*, June 1: The Los Angeles U. S. Land Office is doing a very lively business in filing claims under the Desert Land Act. Over 40,000 acres have already been claimed, and the chances are that before the meeting of next Congress every foot of land in this district, that can be by any stretch possible be made to come under the Act, will be taken up. The great bulk of this land is located along the west bank of the Colorado river, and is excellent corn and sugar land, and requires but very little labor to bring to it irrigating ditches from the river. We also understand that about 100,000 acres on the other side of the river have been filed in the Prescott Land Office under the Desert Land Act, and still the work goes on. It is also stated that a party is fitting out in this city to go to the Colorado river for the purpose of gobbling up such land as is still left and worth taking. We have further heard that claims have been taken up all along the east side, of the mountains, facing

the desert, and that even a few have been filed on this side. Thus this mischievous measure is showing itself to be the instrument of creating great land monopolies, not only in places to which its provisions fairly apply, but also to lands that were never looked upon as desert wastes.

## MONTEREY.

**RECLAMATION.**—*Index*, May 31: Messrs. Winham & Markley's work of reclaiming the slough across the S. P. R. R., beyond the depot, is rapidly approaching a successful termination. The amount of land reclaimed will be about 85 acres, of which 60 acres will be put in crop this season—50 acres of barley, five acres of wheat, and five acres of alfalfa. It is the intention next year to put the whole tract into alfalfa, for which the land is admirably adapted. The ditches will be so arranged that it can be flooded with water to a depth of several inches in the driest seasons. They are now sowing wheat and barley which will be continued as the ground becomes dry enough. There is big money in it for the enterprising promoters of the scheme.

## NAPA.

**THE EFFECT OF THE RAIN.**—*Reporter*, June 2: Mr. W. F. Bradley, of Yountville, thinks the rain of last Monday rather a detriment than otherwise, as by it a good deal of grain was thrown down, which will cease to fill. Supervisors Robinson and Dewese were of the opinion that the rain would be of considerable benefit to late sown grain, and would do even the early sown grain a friendly turn, by enabling it to fill to the uttermost. They knew of no grain beaten down by the rain to hurt, and no hay materially injured. Mr. E. G. Young's wheat crop on the Big ranch will yield from 20 to 25 sacks to the acre. The rain of Monday last lodged it a little, but not to hurt. Mr. Custer's crop, in the same neighborhood, is also extra fine.

**SHEEP.**—Mr. Wm. Clarke, of Foss valley, has purchased 1,200 sheep from the dry regions, to eat the spare range on his fine place. He gave \$1 per head for the sheep, delivered at Napa City, lambs thrown in.

**GRAPES.**—Mr. Wm. Fleming, of Brown's valley, is sanguine that large shipments of table grapes will be made this season hence to Chicago and other Eastern cities. He says the crop is extra good on his place, and in his locality; that he will have 300 tons of grapes for sale from 50 acres, and his neighbors will do as well, probably.

## SACRAMENTO.

**DOAN'S STEAM WAGON.**—*Record-Union*, May 31: This traction engine started out at the appointed time yesterday to make such a practical test of its pulling capacity as would be required of it in ordinary road freighting. Four large freight wagons were loaded with lumber, comprising in the neighborhood of 10,000 feet, and with these and a light wagon loaded with men it started up town, taking the grade on Tenth street, near K, in its course, and surmounting it without difficulty. Stopping for a time in front of the Sacramento Plow Company's works, where it was built, to take in coal and water, it was again started up J street, with the intention of taking it for a severe test through the piece of sandy road so much dreaded and avoided by all teamsters, lying just beyond Burns slough, and thence around to Poverty hill, where the steepest grade anywhere near the city could be tried. Unfortunately, however, when about half way through the above named piece of sand, one of the cast iron step-boxes in which the ends of the counter-shafts which transmit the power to the wheels are stepped, broke short off, from the full force of the engines being suddenly thrown upon it, and caused such damage to the gearing of the hind wheels as to disable them, and compel the deferring of the completion of the trial until the breakage can be repaired. The hind wheels were therefore disconnected from the machinery, and driven (or drawn) altogether by the forward wheel, it came back to town with only the light wagon and its passengers. The necessary repairs will be made to-day, and to-morrow the test will be continued in the most thorough manner; for its projectors say they are determined to put it through every vicissitude likely to befall it in active service, in order to insure its durability, maintaining the correctness of the principles upon which it operates, being established, thorough developments of the weak points of its construction is the near cut to perfection. So far as the test went it was entirely satisfactory to all interested.

## SAN DIEGO.

**DAIRYING.**—*Union*, May 31: Dairy farming can be carried on with advantage in our mountain valleys, as we have always insisted. For proof Mr. John Treat's Cuyamaca dairy farm may be cited. He has been doing a good work during the last four years for this county in improving stock, having introduced Jersey thoroughbreds. Mr. Treat has the advantage of a magnificent range, where the grass is abundant and water plenty, and is making a success of his undertaking. He is now milking 100 cows and making 75 pounds a day of the choicest butter, which is sold in the city as fast as it is brought in.

## SAN JOAQUIN.

**CROPS.**—*Independent*, May 29: The cool weather of the past two weeks has done wonders with the grain fields of this county in stimulating the grain to fill out its heads. In cool weather the sap appears to flow more freely than under any other atmospheric condi-

tions. The growth of the wheat plants has by this time ceased, and all the sap that flows goes now towards filling out the grain. Many fields that a short time ago were thought to be a total failure will yield something, and the best fields will harvest more than was anticipated. We predict that there will be far more wheat in this county this year than has been calculated upon by the shrewdest observers.

**STOCKTON MANUFACTURES.**—Thomas Powell, of this city, the inventor of the electric elevator, shipped on Monday two derricks and thirty of his patent nets for unloading grain from the wagon in a wholesale way, to Dr. Glenn, of Colusa county. The doctor has also ordered nine more derricks and ninety-two nets from Mr. Powell, all of which are of use on the mammoth farm of Dr. Glenn, who seems to be patronizing Stockton agricultural implements in a way highly flattering to our manufacturers. The amount of the present order to Mr. Powell is \$2,500. Mr. Powell has, in addition to his patent netting, invented a new form of derrick, by means of which the act of elevating the load trusses and braces the derrick. By this means the derrick can be made much lighter than ordinarily.

**DOUBLE-HEADED BARLEY.**—Patrick Brannan, who lives on the French Camp road, three miles above Atlanta, brought to our office on Saturday a bunch of barley, of which each of the stalks bore two to three heads. The heads were all as long as the average, and some of them larger, while the berries were unusually plump and large. Mr. Brannan discovered these plants growing in a field of the ordinary kind of barley and has saved enough of the seed to raise a few hundred pounds next year. He will also plant some of it this year and get a reproduction of the variety, if possible, this season.

## SAN LUIS OBISPO.

**CROPS.**—*Tribune*, June 2: In one of the driest and, apparently, most unpromising sections of this county, sufficient grain will be raised to supply the farmers with seed and bread for the season. We allude to the Estrella valley. In all portions of the county, where the land has been thoroughly and well cultivated, and the seed put in at the right time, there will be crops of hay and grain gathered that cannot be complained at. Upon some of the highest and driest of our valley land, barley is growing that will make from 10 to 15 bushels to the acre; but in different parts of the same field, where the sowing was done just before and just after a certain rain, there is a marked difference in the growth, perceptible to the very furrow where the different sowings join.

## SANTA BARBARA.

**INJURY TO FRUIT TREES.**—*Press*, May 26: We were talking the other day with a gentleman who has made fruit culture a study, and who is thoroughly posted on the matter, relative to the cause of the failure of some fruit trees, especially the apple, pear and peach trees, to put forth their leaves and blossoms. He has proved to his own satisfaction that the dry season is not the cause, as he has thoroughly irrigated some of his trees as a test, and they are no more forward in leafing than those which were not irrigated. He attributes the failure to the hot winds that prevailed for two or three days early in February, and which appeared to be general throughout the southern portion of the State. He says that the trees all show both the leaf-bud and the blossom-bud, but that they have dried up altogether, and break off like tinder. A few trees in his garden that had not started so early, being of later sorts, have put forth leaves and blossoms as well, and will bear fruit.

## SANTA CRUZ.

**CROP PROSPECTS.**—*Courier*, June 1: By a ride of 15 or 20 miles among the fields we are convinced that our mountain farmers have most substantial reasons for congratulating themselves on their crop prospects, for the yield is an average, in some instances more than an average, and the quantity of ground seeded large. Fields of grain growing between the foothills and the bay show the want of water, but so soon as you enter the little valleys that wind between the hills the brown and yellow give place to the richest green and most promising heads of grain. The crops on the Sequel creek are good, improving as you ascend its tributaries.

## SONOMA.

**MEETING OF WINE GROWERS.**—*Democrat*, June 2: There was a meeting of wine-growers of this part of the county at the Court House on Saturday, to consider the matter of the establishment of a bonded warehouse for the storage of grape brandy in Santa Rosa. The meeting was well attended. The Hon. J. K. Luttrell was present, and explained the provisions of the bill. The law was freely discussed by those present, among others Dr. Boyce, Judge Southard, Gen. Whallon, Barney Hoen and others. It was decided to petition in proper form to the authorities, and a committee was appointed to prepare said petition, and report at a future meeting. There should be two bonded warehouses in this county. One in the town of Sonoma is essential, and one at Santa Rosa, which would accommodate all the grape-growers in the northern part of the county residing on the line of the railroad or in easy reach of it. Sonoma county last year made about 3,000,000 gallons of wine. One-third of that amount, including all the lees of wine and other refuse now wasted, will be distilled into brandy if the facilities which this law was passed to afford are not rendered ineffective by the machinations of the all-powerful whisky ring.

**HOW TO RAISE CARP.**—Levi Davis, in Petaluma *Argus*: My success in raising carp has been good. Last season I raised 4,044 fish from five, which is an increase of nearly 4,000%. This season I anticipated double that number from the same five fish. Last season they commenced hatching June 10th, and this year May 24th. The hatching pond should be as natural as possible, with some brush or grass, or both in it, for the fish to spawn on or in. They spawn in February or March, and hatch in May or June, and then the brush can be removed. Box ponds will do very well for feeding, but not for hatching. My hatching pond has some seven or eight square rods in it, and is from riddle down to four feet of water, with a stream of three-quarters of an inch flowing in. If a large quantity of water is let in, the accruing sediment is liable to cover and spoil the eggs. As to feed, it may consist of wheat, barley, corn meal, bran, blood or boiled potatoes. This is for fish of considerable size; for the very young ones, the best food is the curd of sour milk, bread made of middlings and boiled rice. Carp will eat almost anything that hogs will eat.

## STANISLAUS.

**HEAVY YIELD.**—*News*, June 2: The other day, by accident, we fell in with Judge Benadon, of Waterford, who has spent some time in the irrigated region on the West Side, under the San Joaquin ditch. The Judge is still an enthusiast in the cause of irrigation. He says it is a treat, a rare feast to the eyes, to one of our dried-out farmers to visit that section and witness some of the magnificent grain fields and meadows now to be seen under the line of the irrigation ditch. He cites an instance of a neighbor who has some 600 acres in barley, that is being cut for hay, two acres of which turned out 1½ tons. It is estimated that the whole field will average four tons to the acre. It would be good for from 40 to 50 bushels per acre if cut to grain, but the high price of hay makes it more valuable for that purpose.

## TULARE.

**THE RAIN.**—*Delta*, June 2: The late rain, though of little value to grain, and a temporary loss to the hay crop, is still of great benefit to the valley. Along the foothills the feed will revive sufficiently to sustain the almost starving herds for another month or two, and perhaps save many from great suffering. The deposit of snow in the mountains will very likely keep down the temperature for a few weeks longer and sustain the general health. The late rains go far to confirm the idea, often expressed by old settlers, that what we do not get early we are likely to get late. We feel thankful for the late rains. They inspire confidence and improve business. Our rain gauge gave eight-tenths of an inch as the measurement for the rain on Monday night, which was the heaviest of the season for the few hours during which it fell, making five and one-eighth inches of rain for the season. The rain was more general than usual over the county.

## TUOLUMNE.

**EDITORS PRESS:**—The rain descends in earnest, 10 P. M., May 28th, and no time through the winter did we listen to such a constant patter of a determined rain. No use speculating on results. While it rains amongst the foothills it snows towards the Sierras, on the sheep, the poor sheep, and the worn-out shepherd. You who enjoy the luxury of a comfortable fireside and couch of down, know nothing of the privations endured by the hardy mountaineers, who follow their flocks through sleet, snow and rain. 'Tis a sad life in such weather as we have had this spring, especially when there was so little feed to satisfy the sheep's hunger. The dead and starving flocks were a sickening sight to the weary watcher. Many went to the mountains with thousands, and will return with hundreds. "Whom the Lord loveth he chasteneth." Surely this year he is using the chastening rod to the children of men. The sheep men and farmers in particular. "The darkest cloud has a silver lining." The future may reflect the bright side of the present darkness. There is much hay exposed in this county, and much standing to be matured for grain. These showers are aiding many of these fields to mature and fill. So far as this county is concerned we are in a prosperous condition, in comparison with the great plains immediately below the foothills. Corn is being platted which will supply any deficiency of food for cattle next winter.—J. TAYLOR.

## VENTURA.

**HOGS.**—*Signal*, May 26: Mrs. S. White, of Saticoy, one of our heaviest hog raisers, delivered at Hueneme, on the 16th instant, for J. Logan Kennedy, 202 hogs, weighing 129,908 pounds. This, we believe, is the heaviest lot ever shipped at one time from this county, the lot averaging 323 pounds per hog. Who can beat it?

## YOLO.

**FIRST WHEAT SHIPMENT.**—*Mail*, May 31: Basil Campbell, of Hungry hollow, shipped one car-load of wheat yesterday from Madison, the first of the season from Yolo county. The Fishbeck Brothers cut and threshed a portion of their wheat, commencing on Tuesday of last week, May 22d; also their barley. They inform us that their barley turned out more than they expected and their wheat up to expectations. The farmers of the county generally are busy with their headers this week, and the harvest will continue for two or three weeks, owing to the cool weather, which has kept the winter-sown back. It is thought that the yield generally will be good.





### Genteel Living.

She wears a ten-button glove,  
Her hand is shapely and small,  
The gentleman falls in love  
With the lady fair and tall.

He toys with the little hand,  
So beautiful, soft and fair,  
And asks if in spirit-land  
Such delicate hands they wear.

She scorns all honest toil,  
Owns time at ten per cent,  
Those hands she need not soil,  
With ma o'er the wash-tub bent.

She sleeps, whenever she feels  
Too weary to rock and read;  
Ma rests while she darts her heels,  
And tends to every need.

She marries a genteel man,  
He marries a genteel girl;  
She worries him all she can,  
They live in a genteel whirl.

State Journal.

### Love and Melody.

This love creates their melody, and all  
That waste of music is the voice of love,  
That even to birds and beasts, the tender arts  
Of pleasing teach. Hence the glossy kind  
Try every winning way inventive love  
Can dictate, and in courtship to their mates  
Pour forth their little souls.

Thomson.

### Humble Attire.

Give me a look, give me a face,  
That makes simplicity a grace,  
Robes loosely flowing, hair as free;  
Such sweet neglect more taketh me  
Than all the adulteries of art;  
They strike mine eyes, but not my heart.

Bru Jonson.

### May-day Celebrations.

Although the May-days of 1877 have passed into history, there are May-days yet to come. We have thought, therefore, that some notes on the origin of May celebrations would be excellent to put on record for the benefit of future holiday-making. At a May picnic in Colusa county, J. W. A. Wright made an address in which, as an exordium, he introduced a better history of these festivities than we ever read before. He said:

The latest and best authorities teach us that May is from an old Sanscrit word meaning to grow; hence, it is the growing month. This is especially true in the greater part of Europe and our older States, where spring comes much later than with us on the Pacific coast. This month, then, ushering in the growing season, would naturally become in Europe a season of rejoicing with all engaged in agriculture.

History tells us that the Floralia, or Floral Sports, celebrated for five days, from April 28th to May 2d inclusive, were established at Rome 238 years before Christ, or more than twenty-one hundred years ago, in accordance with an oracle in the Sibylline books. Their object was to induce Flora, their imaginary goddess of flowers and spring, to protect the blossoms, "that," as their words expressed it when translated, "all things might bloom and flourish well." But Dr. Wm. Smith perhaps the greatest living historian and antiquarian of England to-day tells us that even before the time when the Romans celebrated this festival—in ways to be condemned—the Floralia, or May day festivals, were, to use his own words, "originally

#### Festivals of the Country People.

Which were afterwards, in Italy and Greece, introduced into the towns, where they naturally assumed a more dissolute and licentious character, while the country people continued to celebrate them in their old and merry, but innocent manner." Here, then, you see, my friends, is decided testimony, showing some of the advantages of country over town life, even in that remote age of Grecian and Roman antiquity. Dr. Smith also says: "It is highly probable that such festivals did not become connected with the worship of any particular deity until a comparatively late period." Just think of it! (Calling a date 21 centuries ago "a comparatively late period" in this matter! Always since, with the nations of Europe, May day has been a time of innocent merriment and joyous festivities, and in various forms it has been transmitted from them to us.

In England it has long been a custom to select the most beautiful girl of the village to preside at the festivities as "Queen of May," while the custom in Germany has been to choose the most witty and handsome youth as "Count of May," and the life of royalty was sometimes imitated by the people with amusing ceremonies, and not without satire. In England it was formerly part of May day ceremonies for the young people to go, before sunrise, to the woods, and

groves to gather wild flowers and green boughs—especially the hawthorn—and thus welcome the return of spring. With these they adorned the doors and windows of their homes and their

#### Noted May-Pole.

Around the latter they danced and sang the livelong day with festive ceremonies. In the day of their powerful but jovial King Henry VIII, even he and his queen joined with their court in this "going-a-Maying," as it was called.

An old English writer, nearly three centuries ago, referring to a still more remote time in English history, says: "I find also, that in the month of May the citizens of London, of all estates, lightly, in every parish, or sometimes in two or three parishes, joining together, had their several Mayings, and did fetch in their several May-poles, with diverse war-like shows, with good archers, morris-dancers, and other devices for pastime. All the day long, and towards the evening, they had bonfires in the streets."

#### The Ancient Druids.

Who were worshipped under such oaks as shade us here, in their old superstitions—so many monuments of which in stone remain in Europe to this day—used to light large fires on their high hills the eve before May day, and "herald with devout joy the coming spring."

To show again how universal among civilized and even semi-barbarous nations this habit has been—a sympathetic outpouring, as it were, of the natural fondness of mankind for spring and its flowers—we will cite another authentic fact: The heathen Chinese, who seem to have so little that is sentimental or attractive in their odd compound, have one of their chief festivals in the month of May, and their historic records show that they celebrate it as the "birthday of Kam Fa, the goddess of Golden Flower, Guardian of Children."

We see, then, how wide-spread for ages has been some celebration of this day, and how generally it has become associated with two of the most beautiful and attractive features of nature.

#### Flowers and Children

Bright flowers, promoters of fruit, and lovely, happy children, promising useful manhood and womanhood.

We, in our enlightened and comparatively unsuperstitious day, celebrate each return of this occasion in more rational ways, in keeping with the spirit of our age. Knowing and reverencing the only true God, we on such occasions express praise and thanks to Him as the Giver of all good.

### What Animals Have Done for Men.

They have had a splendid show of small animals in New York city, and at the opening an address was delivered by Dr. Bergh, well known as the friend of the poor dumb brutes. In this address he said:

The connection of animals with the affairs of mankind is more remarkable than is generally recognized. Let me cite a few instances: The protest of Balaam's ass prevented the commission of a great crime against heaven and the eackling of geese saved Rome. When the armies of James II and William were confronting one another, the noise made by a wren picking up some crumbs from the top of a drum awoke the sleeping drummer and thus saved the army of William. God is in the zephyr as well as in the whirlwind, and the moth is as effective an instrument in His hands as the thunderbolt! Scott tells us that the most splendid event in the history of Scotland—viz., the ascent of Bruce to the throne—was owing to a simple spider, and one of the greatest naval victories of England resulted from the crowing of a cock. The dog has detected and brought murderers to justice. In all ages he has been the intimate companion of the mightiest of the earth as well as the most humble. In his affection he is the equal of mankind, and his services cannot be over-estimated. The St. Bernard dog named Barry, during 12 years of service on the mountains, saved the lives of 40 travelers.

Grayfriar's Bobby lay upon the grave of his master nine years, and his unparalleled devotion has been perpetuated by a monument, erected by the Baroness Burdett Coutts. One or two more illustrations and I have done.

A young man once rowed out into the middle of a river with a dog and then threw him overboard. The faithful animal clung to the boat, but was as often driven off by his cruel master, until at length, during one of his efforts, he lost his own balance and fell into the stream. Did the dog desert him? No; he seized him by his clothes and held him above water until succor arrived. One of those cruel enthusiasts known as dissectors of living animals, being once in need of a subject, actually took his own dog, which had been for years in his family, confined him to a table and ripped him up as though it had been a senseless object. The suffering creature groaned and howled in his agony, and just before dying raised his head and licked the hand of his savage tormentor.

ABSENCE OF MIND.—Lessing, the German author, was, in his old age, subject to extraordinary fits of abstraction. On his return home, one evening, after he had knocked at his door, the servant looked out of the window to see who was there. Not recognizing his master in the dark, and mistaking him for a stranger, he called out, "The professor is not at home." "Oh, very well," replied Lessing; "no matter—I'll call another time!"

### Sun-Bonnets.

There was once a time when no one item of a lady's dress required more attention than the sun-bonnet. The prettiest style must be chosen and the daintiest stitches inserted. Such hemming and rolling and whipping of ruffles as there used to be. But for a number of years hats of all sizes, shapes, materials and prices have been steadily gaining favor, both for dress-up occasions and for every-day country wear.

No doubt there are many children growing up who would scorn to appear in a sun-bonnet. Still there are mothers who will be glad to know that just now, and through the summer they will be "the rage," both for young and old. Fashion is already at work, and is exercising her ingenuity in devising the most charming styles.

Those who are fond of horticulture will rejoice at this return to fruit principles. Now the most tender, dainty complexions need not be sacrificed to this pleasure.

The bonnet in vogue now is large enough to screen the face, and has a cape to protect the neck.

A straw hat soon becomes burned by exposure to the sun, but a bonnet that can be washed comes forth each time as fresh as new. Some select Scotch gingham, or percale, muslin, linen or cambric—when made of white for children, they are very pretty trimmed with a ruffle of Hamburg embroidery, tucks, or clusters of shirring. A style which is new and quite jaunty is as follows:

An oblong section of the goods is folded cross-wise, and its back edges are slanted off diagonally from the fold to the ends. The extra width of the front is folded underneath for a lining, extending as far as the crown at the top, while at the front portion of the cape it is only about three inches, or just wide enough to retain the bonnet in shape about the face. Gradually clusters of cords are arranged lengthwise between the outside and lining and stitched to position to form shirrs, and after these are arranged, the diagonal edges of the back are seamed together, leaving a tiny opening at the top whose use will appear. The division of the crown and cape is marked by a casing run back of the last cluster of shirring a little more than half way from the bottom, and through this casing are passed tapes which draw the crown and cape closely to the neck. The ends of the drawing tapes are carried through a small opening in the casing, and can be untied to let the cape out perfectly plain for washing. A short strap is fastened at one end to the center of the last cluster of shirring and its other end is provided with a button hole and passed through the tiny opening mentioned, and fastened over a button sewed on the underside, thus completing the shaping of the crown, so that the fullness can be let out in a moment. This bonnet can be allowed to project over the face or can be turned back. It is pleasant to know that a few of the really good and useful styles are being revived. And none will come in more acceptably just at the beginning of the scorching suns than the old-fashioned sun-bonnet.—A. K. Leckie, in Journal and Farmer.

### Victuals versus Verses.

A newspaper paragraph conveys the intelligence that a cook at Oxford University is paid \$1,500 a year while the professor of poetry receives \$500. This is a little disproportionate—the professor of poetry gets too much pay. Good dinners, which can be supplied only by good cooks, are not any too common, but the editorial waste-baskets of the country are full of good poetry, as well as that which is not so good, and if the author could be found, whether a professor of poetry or not, it is very likely he would be tumbled into the waste-basket too. Bad poetry is always rejected because we always know that more will come along. There is any quantity of it lying in wait to slide in at an unwary moment and keep the basket full. A poor diner is treated with some sort of respect, because one is not always certain that he will get another, though he is certain he does not want to. Poor poets are bad enough, but a dyspeptic is any number of times worse, and in the interest of humanity the salary of the cook should be raised. To have a professor of poetry living in riotous luxury and waxing wealthy on the munificent salary of \$500 a year, while the deserving and accomplished cook is put off on a mean \$1,500, shows a parsimonious spirit on the part of the university managers, and is not altogether righteous. Philadelphia Times.

HOME-SICKNESS.—This is not commonly considered a disease, except in a rhetorical sense, but it is known sometimes to assume the form of a mental disorder. Among a number of recruits who recently came with the 75th regiment to garrison at Montelimart was a youth named Marchise, from Correze. From the time of his arrival he did not cease to weep and lament for his country home day and night. His grief was so great as to move the pity of the officers, and they softened some of the military regulations in his favor. It was of no use. The mountains of Correze were ever before the tear-filled eyes of the unhappy conscript. One day, instead of returning to the barracks at the evening call, the poor youth betook himself to the railway, and placed his neck on the rails. He was killed by a passing train.

### A Monument on the Sand.

It is perhaps well that the Washington monument, which has been the mortification of the people ever since it was begun, has not been completed.

The commission heretofore appointed to examine into the sufficiency of the foundation of the Washington monument, consisting of Lieutenants-Colonels Kurtz, Duane and Gilmore, submit their reports as follows: First. That the stratum of sand and clay upon which the monument rests is already loaded to the limit of prudence, if not, indeed, to the limit of safety, and that it does not offer sufficient resistance to compression to justify completion of the shaft in accordance with the modified design or any other design that will load the underlying soil beyond 10,000 pounds per square foot. Second. That the additional weight imposed at the top of the structure will, in all probability, cause additional and probably extensive spilling and splitting in the ashlar facing near the base. Third. It is evident that the masonry foundation was not given spread enough to carry safely the weight it was designed to place upon it. If sufficient spread and depth had been originally provided, the full light of the structure might have been placed upon it, and the weight distributed over a larger area, so as to be within the limits of security. Fourth. There has been an actual compression of the soil to the extent of between eight and nine inches; the shaft is sensibly out of plumb, and the foundations show an increasing departure from horizontality. The imperfections may be expected to increase as additions are made to the weight of the structure, if not to a dangerous degree, at least to an extent that will make the monument very unsuited to the purpose for which it was designed. If it were a tower, or shaft, or chimney, intended for manufacturing or industrial uses, such defects might be overlooked and useful results still expected from it. But this structure is to be an exposition to the world of the estimate which is placed upon Washington by his countrymen. It is a great bare obelisk, plain to severity—a conception, perhaps, most suitable to symbolize the great character it would commemorate, but for these very reasons exacting in all its parts and particularly in all its foundations. The stones which compose the foundation should be strong and perfect, and truly shaped and accurately placed together. There should be no yielding of the parts and no disturbance of the levels. Upon such a foundation a monument could be reared fit to commemorate Washington, and worthy of the nation of whose foundation he was the chief master-builder.

PARIS WORLD'S FAIR.—The buildings for the Paris exhibition of 1878, says *Engineering*, are growing rapidly. On the Champ de Mars the foundations are laid. The angle pavilions, which are of masonry and 50 feet high, are ready for the iron domes that are to cover them; and the walls of the central gallery, which is likewise of masonry, and intended for the fine arts exhibition, are almost finished. The piers of the rest of the building are ready for the superstructure of iron and glass. On the Trocadero, in spite of the great difficulty of laying the foundations on the hill undermined by quarry-galleries, the two elliptical wings are built, the substructures of the great towers are laid, and the masonry of the central rotunda is finished. Two thousand men were employed upon the works; and up to the 1st of April 1,500,000 francs had been expended upon excavation and masonry; covering 158,000 cubic meters of excavation, 30,000 cubic meters of concrete foundation and 35,000 cubic meters of masonry. Six miles of pipes and sewers had been laid.

A TRIFLING MISTAKE.—In the House of Peers, during the examination of the magistrates of Edinburgh, touching the particulars of the Porteous mob, in 1736, the Duke of Newcastle having asked the provost with what kind of shot the town-guard, commanded by Porteous, had loaded their muskets, received the unexpected reply, "On just sic as ane shoots dukes and fools wi!" The answer was considered as a contempt of the House of Lords, and the poor provost would have suffered from misconception of his patois, had not the Duke of Argyll (who must have been exceedingly amused) explained that the worthy chief magistrate's expression, when rendered into English, meant to describe the shot used for ducks and water-fowl.

VENTILATING CHAMBERS.—When it is considered that pure air is essential to the purification of the blood, and that the food we eat never becomes nutriment until it meets with the air in the lungs, and when it is furthermore remembered that a full third of our entire existence is passed in our sleeping apartments, it must be clear to the commonest understanding that the difference between breathing a pure and impure air while we are asleep is literally incalculable as to the effects upon our happiness and well-being.

WOMAN AS A FINANCIER.—The imputation that woman knows only enough about money to spend it, is refuted by the fact that several ladies now occupy responsible positions in banking and mercantile houses, and are accredited with superior ability as financiers.



## \$10,000 for Charley Ross.

P. T. Barnum, the great showman, has entered into a contract with the father of Charley Ross, the abducted boy, the terms of which are that the former offers \$10,000 reward for the recovery of Charley, if he be still living, and to have the privilege of exhibiting him, or to be paid back the amount of the reward, as the Ross family may elect. Mr. Ross, it is said, has already expended \$60,000 in the search and Mr. Barnum proposes, out of the proceeds derived from his exhibitions, to reimburse the father for his outlay. Barnum has issued a proclamation accordingly, which will explain the whole case. It is as follows:

I will pay \$10,000 in cash for the delivery to me alive of the kidnapped child Charley Ross, or for information that will lead to his recovery. I most solemnly and sacredly pledge my word of honor and my reputation as an upright business man not to attempt for myself to discover the identity of the persons negotiating with me in this matter, nor to convey to any other person any hints or clues by which any accusation, or even suspicion, shall be directed against them. The parents of the child unite with me in this pledge, and agree, if their darling child is by this means restored to them, to abandon all attempts to punish any person connected with his abduction or concealment; they agree never to appear against such parties, and with myself will use every endeavor to shield them from exposure. For the last three years these parents have suffered more than death, and, now that Mosher and Douglass, the real abductors, are dead, it is hoped that the persons who have the child in custody will be willing to accept this reward and immunity. The reward will be paid in current money as soon as the child is identified by its parents. As an additional security to the persons bringing him, a reasonable time shall elapse between his delivery and the public announcement of the fact, that the parties delivering him shall have every opportunity to avoid discovery.

**RECREATION.**—The literal meaning of this word is to make over again; but in its ordinary acceptation it is intended to convey the idea of rest, refreshment, or rather, renovation. The body is refreshed by rest; the brain is renovated by sleep, by absolute repose. But both brain and body may be invigorated for a season by changing the direction of their respective activities, and also by working alternately. A man who has become tired of riding on horseback or in a carriage, rests himself; gets rid of his fatigue, by walking. The brain which has become weary in thinking of one subject is refreshed by taking up some other study. On the other hand, a man who feels tired all over, by work or a long walk, will get "rested" sooner by sitting down to read than if he did nothing. Rachel, the great tragic actress, when returned from one of her performances, at two or three o'clock in the morning, rested herself by spending an hour or two in changing the furniture of her rooms. The best sedative which a public speaker can take after a great effort, is to read a newspaper or anything else which has a variety of short statements. The great practical idea we wish to convey is that recreation is not idleness, but a change of direction in the operation of the physical or mental forces. A French actress lately went mad within an hour after the play, because she went home, laid down, and let her mind run on in the same track. She should have changed to bodily activity, like Rachel.—*Hall's Journal.*

**BRONZE CASTINGS FOR LINCOLN'S MONUMENT.**—A communication from Springfield, Ill., to the *Chicago Times*, gives the following particulars of the bronze groups for the pedestal of the Lincoln monument: It has already been reported that the two bronze groups designed to ornament the base of the National Lincoln monument have arrived here, and that they are to be placed in position at once. These two groups were designed by Larkin G. Meade, of Florence, Italy, who is also the architect of the monument, and who designed the statue of Lincoln, already described. The groups were cast in bronze by the Chicopee Arms Company, of Massachusetts, and are said to be the most elaborate bronze castings ever executed in this country. They are now on the monument grounds, and have been so far stripped of their casings that a comparatively good view is to be had of them, and a really excellent idea of the spirit of the composition is obtained.

**POWER OF FAITH.**—"I can conceive," said Lord Erskine, "a distressed but virtuous man, surrounded by his children looking up to him for bread when he has none to give them, sinking under his last day's labor, and unequal to the next; yet still supported by confidence in the hour when all tears shall be wiped from the eyes of affliction; bearing the burden laid upon him by a mysterious Providence, which he adores; and anticipating, with exultation, the revealed promise of his Creator, when he shall be greater than the greatest, and happier than the happiest of mankind."

**A POWERFUL NARCOTIC.**—The poet Malherbe having dined one day with the Archbishop of Rouen, had scarcely left the table when he fell asleep. The prelate, being about to preach, awoke him, and invited him to hear the sermon. "Pray excuse me," replied Malherbe, "I shall sleep very well without that."

## YOUNG FOLKS' COLUMN.

## Which Loved Best?

"I love you, mother," said little John; Then, forgetting his work, his cap went on, And he was off to the garden swing, And left her wood and water to bring.

"I love you, mother," said Rosy Nell; "I love you better than tongue can tell." Then she teased and pouted full half the day, Till her mother rejoiced when she went to play.

"I love you, mother," said little Fan; "To-day I'll help you all I can; How glad I am that school doesn't keep!" So she rocked the baby till it fell asleep.

Then stepping softly she fetched the broom, And swept the floor and tidied the room; Busy and happy all day was she, Helpful and happy as child could be.

"I love you, mother," again they said Three little children going to bed. Now do you think that mother guessed Which of them really loved her best?

## Boys and Birds.

We are sorry to see some of our youngsters robbing the nests of the sweet little birds that beautify the country and make all the air resonant with their melody. They not only destroy the eggs and break up the nests, but cruelly carry off the young to starve and die away from their mother's fostering care. This is very cruel and hard-hearted, and we cannot conceive how any really good little boy can do it. We can readily imagine the anguish of little 10-year John and Billy and Sammy, should some gigantic bird, such as we read of in the Arabian Nights, swoop down on one of our beautiful homes and knock the dwelling to pieces, gather up the aforesaid John and Billy and Sammy by their hair, or mayhap a talon stuck conveniently through a little fat leg here and there, and carry them off, despite their tears and entreaties, to the inaccessible eyrie of their mountain home, there to slowly starve to death, and when they had furnished sufficient amusement for their cruel captor and his family, torn conveniently limb from limb and eaten by the wolves and vultures of the forest. Yet this is no worse than destroying the nests the dear little birds have built so carefully, carrying off their young before their eyes and keeping them to starve and die—dimming their beauty and hushing their sweet song forever. Little boy, don't you think that the God who notes the sparrow's fall will pay attention to how you treat the little birds? We should think so, certainly. We think parents should look out for this a little, and not allow such cruelty to grow up with their children. As for us, we have only to say that we shall protect the little birds as far as is in our power, and that if any boy interferes with a nest over which the *Star* has the most remote or contingent jurisdiction, we shall everlastingly hoist that boy—if he isn't over two feet high, and we and our devil are big enough to get away with him.—*St. Helena Star.*

**THE DEACON'S CONUNDRUM.**—"Boys!" said Deacon Green to a group of red-cheeked fellows the other day, "I never see a healthy, go-ahead crowd of young folks like you that I don't say to myself, 'there's a chance for practical religion.' Do you know the reason?"

"Is it a conundrum?" asked three of the boys in a breath.

"Yes," said the Deacon, with the air of a man who had intended to make a speech, but had suddenly decided to keep it to himself. "It is a conundrum."

Then the Deacon gave a pleasant nod, and walked off.

"Now, what *did* he mean by that?" said one of the fellows.

"I know," cried Bob King. "He meant that some folks think religion is intended only for Sundays and for sick people, and the Deacon would like to see more well people trying it on week days—that's all."

"Humph!" said John Salters. "You know a heap—you do!"

"The Deacon does, anyhow," answered Bob, meekly. "You can't get around that."—*St. Nicholas for June.*

**ADVICE TO YOUNG WRITERS.**—To a young writer William Cullen Bryant once gave this good advice: "I observe that you have used several French expressions in your article. I think, if you will study the English language, that you will find it quite capable of expressing all the ideas you may have. I have always found it so, and in all that I have written I do not recall an instance when I was tempted to use a foreign word, but that, on searching, I found a better one in my own language."

**A BISHOP'S HUMOR.**—Bishop Marley had a good deal of the humor of Swift. Once, when the footman was out of the way, he ordered the coachman to fetch some water from the well. To this the coachman objected, that his business was to drive, not to run on errands. "Well, then," said Marley, "bring out the coach and four, set the pitcher inside, and drive to the well," a service which was several times repeated, to the great amusement of the village.

## GOOD HEALTH.

## Clean Hair.

A lady says in the *Western Stock Journal*: No matter what our work is, the dust will gather upon the hair. With housekeepers this can be largely prevented by wearing something over the hair while sweeping or working where there is dust in the atmosphere. A cap made of cambric is as good as anything to wear, and may be made in this wise: Take a square of cambric of the usual width (three-quarters of a yard), cut from it as large a circle as possible, turn a hem an inch and a half in width all around, stitch it down, and outside this make another row of stitching, leaving a space of one-fourth of an inch between the two; into this space run a piece of elastic cord, and draw up until it is the right size for your head. Such a cap is easily made, looks well, will fit over your hair in whatever manner it is dressed, and will thoroughly protect it from dust. However, if dust does, and it will, collect upon the hair, it can sometimes be removed by brushing, but always by washing, provided we wash it properly. Never use soap—it leaves the hair stiff and unmanageable. The same is true of ammonia. Use the yolk of an egg, and in this way: Beat the yolk of an egg in a teacup, fill the cup with tepid water, let down the hair, shake it out well, and pour on a little of the egg and water, rubbing the head briskly meantime; repeat the process until the whole is used. If not enough to wet the hair thoroughly and to make a good lather, use more water on the head. After rubbing well, rinse the hair well with tepid water, applying a little cold water at the last. Dry it as well as possible with towels, and if it is long let it remain down upon the shoulders until quite dry. There is no danger of taking cold from this process if ordinary care is used. For children who are in school and often come home with something in their heads, which you think is scarcely an idea, yet is certainly animate, a wash with ammonia and water will destroy both parasites and their larvæ. Use 10 or 15 drops of ammonia in a tumbler of water, and apply it in the same manner as directed for washing with egg. If anything is cruel, it is to take a little curly head between your knees upon a pillow and rake it through and through with a fine-toothed comb until the little scalp is red and bleeding. Try the ammonia cure, and the children will rise up and call you blessed.

**POISONOUS CANDY.**—The *Boston Herald* says: "The City Board of Health has, after considerable effort, succeeded in bringing five cases of adulteration of candy before the criminal courts, which the prosecution hope will stand the test of law and evidence, and result in the punishment of the persons accused and the deterring of others in the same business from using unwholesome ingredients. Within a few months quite a large number of specimens of candy have been subjected to analysis, and the trash found only shows that to the ordinary purchaser at random, candy is a good deal like Mark Twain's hash—a mystery. Only five of the cases, however, proved to be so strong as to convince the Board that convictions could be had, and in these the evidence was presented to the Grand Jury. Bills were found and yesterday William F. Schaffé, William Schnetzer, George Fera, William F. Stahl and S. Herbert Chase were arrested, brought into the Superior Criminal Court and gave bail in \$600 each for their appearance for trial. The material portions of the indictment are substantially as follows: 'That the defendant unlawfully and fraudulently did adulterate a certain substance, to-wit: one pound of confectionery, with a certain substance injurious to health, to-wit: with a certain substance called chromate of lead.' The second count charges the adulteration 'with a certain substance injurious to health, the name of which, and a more particular description of which is to the jurors unknown.' The indictment is drawn under chapter 106, section three of the Revised Statutes."

**LEMON-JUICE IN CARBUNCLE.**—The *Doctor* says: Dr. Gibbons, having been a sufferer from carbuncle, relates in his admirable journal his own case, in which lemon-juice seemed to have a most beneficial effect. Wine, whiskey, tonics, and all the usual remedies gave him no relief, and did not help digestion. As soon as he took lemon-juice digestion improved, as well as the local symptoms; and the effect was such that he intends to treat his patients in the same way. He also thinks blue pill frequently useful. We have found in other diseases lemon-juice a most grateful remedy, especially where (as Dr. Gibbons mentions in his own case) there is a desire for acid drinks and vegetables.

**FOREIGN BODIES IN THE NOSE.**—Parents are often puzzled to help their children when they get beans, buttons, etc., in their noses. The *Medical Record* says: Blow the patient's nose for him, by closing the empty nostril with your finger and blowing suddenly and strongly into the mouth—an efficient method which has often succeeded when instruments have failed. The glottis closes spasmodically, and the whole force of your breath goes to expel the button or bean, which commonly flies out at the first effort.

## DOMESTIC ECONOMY.

## Strawberry Syrup.

Use strawberries of a good flavor; do not forget that if the berries possess no flavor you cannot expect to obtain a syrup of fine flavor. Avoid, also, rotten berries, because, unless you do, you may be sure to find as flavor the smell of the rotten berries in your syrup. Mash the fruit in a barrel or other suitable vessel by means of a pounder, and leave the pulp for 12 or 24 hours at a temperature between 70° and 80°, stir occasionally, press, set the juice aside for one night, add for every pound avoirdupois of juice one ounce avoirdupois of cognac spirit or deodorized alcohol, mix, set aside for another night, and filter through paper.

For one pound of the filtered juice take one and a half pounds of A sugar, and heat to the boiling point, taking care to remove from the fire or turn off the steam as soon as the mixture begins to boil; remove the scum and bottle in perfectly clean bottles, rinsed with a little cognac spirit.

Blackberry syrup can be prepared in the same way as the above. For home use the filtering may be dispensed with, as also the cognac. Put a little in a tumbler and fill up with fresh cool water and see what a refreshing drink you will have.

## Tests for Soap.

The factory-made soaps in use for laundry purposes, and in fact for all purposes, are largely adulterated. One of the tests of impurity is the cheapness of the article, but that does not apply to all cases. Two or three experiments easily tried by the housekeeper are these:

**THE SO-CALLED SPOON TEST.**—A good quality of soap sometimes shows dark and light shades, but it soon changes into a dark shade if a spoonful of soap be held over a spirit or other flame, and although it becomes soft, it does not, if good, become liquid, as occurs with an inferior quality.

**SEPARATION BY SALT.**—Weigh a certain quantity of soap, and cut it into small pieces, allowing it to melt in a pan of water placed over the fire, adding a handful of salt to the water, and allowing it to boil. The soap-lather should not run over the pan, or overflow. Now try and see if the soap allows itself to be easily separated from the water; if not, add some more soap till this takes place, when the whole may be allowed to cool, skimming off the lather, drying, and weighing it. As in the previous case, the loss of weight between the first and last weighings represents the adulteration of the soap.

**APPLE PUDDING.**—A few weeks since, while on a visit to my mother-in-law, I had the pleasure of eating and learning to make the very best article in the shape of an apple pudding that I ever tasted; and thinking that some young housekeeper would be thankful for the recipe, I send it for publication: For six or eight persons have, when pared, quartered and cored, two quarts of tart apples; put them in a small pan, with not quite water enough to cover them. Then take nearly a pint of thin, sour cream, three-fourths of a teaspoon of saleratus, one-half teaspoon salt; mix as stiff as biscuit and roll out just large enough to cover the apples; pinch tightly to the pan all around—do not cut it or leave the least place for the steam to escape, cover it with another pan that fits the first in every place; set on top of the stove and, with a good fire, it will be done nearly as soon as the apples will stew. It is best to give it plenty of time, for if it is done before it is wanted there is no danger of its falling. For sauce I prefer sugar, cream and nutmeg.—*Mrs. S. C., in Rural New Yorker.*

**STEWED ONIONS.**—Have the hands, knife, and onions wet with water while peeling them, or peel them entirely under water. Place them in a tin or a porcelain-lined kettle (keep some old tin for the purpose) with plenty of water and boil rapidly, at least one-third longer than the time usually allowed; toward the last, cook more slowly. Do not change the water, for this would waste much of the nutrition and gain but little with regard to the oil which goes off with the steam. Stew down the water until it is creamy; dish this for a dressing to the onions. If you have nice fresh cream, add a little to the dressing and pour it over them as you dish them, but do not scald the cream. Or use, instead of the cream, a little oatmeal milk, added before the onions are removed from the fire; use no butter, pepper, or salt. If well cooked from one and a half to three hours, according to the kind, they will not taint the breath perceptibly, though that is more than we can say of the room in which they are cooked.

**HONEY AND WAX.**—To separate honey from wax, put honey-comb and all in a tin pan upon a moderately warm stove, adding a tablespoonful of water to each pound of honey. Stir occasionally with a piece of wire until the contents of the pan are in a liquid condition. Do not allow boiling to begin. Remove the pan from the fire and set it aside to cool. The cake of wax, to which all impurities will adhere, may then be carefully lifted off with a knife.

**TO DRESS SWEET POTATOES.**—Put two or three platefuls in the oven, bake till soft; peel and put them on tin sheet, and bake for half an hour.





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 2.00 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 5.00 14.00 40.00  
Four insertions are rated in a month.

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper inserted at special rates.

THE ORIGINAL ARTICLES in this paper are mostly set in solid type, giving in our columns one-third more reading than is contained in ordinary leaded matter.

DEWEY & CO.

A. T. DEWEY, W. B. EWER, O. H. STRONO, J. L. BOONE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:

Saturday, June 9, 1877.

## TABLE OF CONTENTS.

ILLUSTRATIONS.—A Rambling Sketch of Webber Lake, 353. Denney's Improved Washing Appliance; Snook's Patent Water Filter, 361.

GENERAL EDITORIALS.—The Week; Notes on Killing Insects; Silk in the United States; Southern California Horticultural Society, 360. Acadia Trees; Chronos of California Grapes; Improved Washing Appliance; Snook's Improved Water Filter; Cutting Uncle Sam's Fingers; Land Decision, 361.

QUERIES AND REPLIES.—Alfalfa Fiber; Monarch of the West; Almonds Dropping Off; Alfalfa Seed, 360.

CORRESPONDENCE.—The Report on Education; Taxation; The Salmon Fisheries on the Columbia; An Alkali Soil and Treatment Thereof, 354.

ARBORICULTURE.—Coffee Again; Setting Orange Trees; Irrigating Orange Trees, 355.

THE DAIRY.—Dairying on the Toles in Napa, 355.

THE STABLE.—Pool Selling; A Radical Cure for Heaves and Asthma, 355.

SHEEP AND WOOL.—Truth About Wool Clip, Etc.; Poisoning with Wool, 355-362.

PATRONS OF HUSBANDRY.—Suggestions for Grange Action; What has Co-Operation Done; Open Grange Meetings; Assessment of Growing Crops; Women in the Grange; Notes on Meetings, 356.

GENERAL NEWS ITEMS on page 356 and other pages.

AGRICULTURAL NOTES from the various counties in California, 357.

HOME CIRCLE.—Gentle Living, (Poetry); Love and Melody, (Poetry); Humble Attire, (Poetry); May-day Celebrations; What Animals have Done for Men; Absence of Mind; Sun-Bonnets; Victorials versus Verses; Home Sickness; A Monument on the Sand; Paris World's Fair; A Trifling Mistake; Ventilating Chambers; Woman as a Financier, 358. \$10,000 for Charley Ross; Recreation; Bronze Castings for Lincoln's Monument; Power of Faith; A Powerful Narcotic, 359.

YOUNG FOLKS' COLUMN.—Which Loved Best? (Poetry); Boys and Birds; The Deacon's Conundrum; Advice to Young Writers; A Bishop's Humor, 359.

GOOD HEALTH.—Clean Hair; Poisonous Candy; Lemon-Juice in Carbuncles; Foreign Bodies in the Nose, 359.

DOMESTIC ECONOMY.—Strawberry Syrup; Tests for Soap; Apple Pudding; Stewed Onions; Honey and Wax; To Dress Sweet Potatoes, 359.

HORTICULTURE.—Seeds and Seed Planting, 362.

## NEW ADVERTISEMENTS.

Hay Presses, Price Press Co., S. F.; Wakelee's Exterminator, H. P. Wakelee, S. F.; Centennial Hay Press, John H. Gove, S. F.; Patent Fruit Drier, Harris & Bradley, S. F.; 50 Fine Cards, Clinton Bros., Clintonville, Conn.; 25 Fancy Cards, J. B. Husted, Nassau, Remus Co., N. Y.

## The Week.

The week has brought the first of the new wheat to the sea-board. The grain is plump and fair to look upon, and is said by some of our wise professional wheat historians to be the best sample of wheat which has come to this market since their memories began operations here. Certain it is that the grain shows no signs of short diet or thirst, but bears conclusive evidence that, in one field at least, this year's conditions could not well be improved. It was very suggestive to look upon this rich, full grain, fresh from its growing; it was assurance that the anticipations of weeks and months ago were blacker than they need have been, and that He who has promised seed to the sower and bread to the eater does not forget the pledge to his dependent creatures.

Now is fairly beginning the busy, bustling harvest time. The prospect is that when the thresher plays his rattling havoc among the heads which are now falling fast in the fields, that there will be more time used in sack sewing than any one thought would be required, and that many a once hopeless field will yield a fair return. It is to be hoped that this, indeed, will be this harvest's disclosure, for the results of the next few weeks will determine a year's happiness or discomfort in many homes. The coming lines between a year's rigid economy and year's comfortable sufficiency will soon be drawn; and, as the lines are falling, it is our wish, for all our readers, that they may fall in pleasant places, and that heavy will be the burdens, not of want but of grains of comfort, which all shall bear until the seed-time and the harvest come again.

## Notes on Killing Insects.

The warfare against injurious insects must be waged with all vigilance and perseverance if our agriculturists would keep in check the flood of these pests which is now coming upon our fields, orchards and gardens. Let every one send us accounts of the insects which he observes injuring his crops, with specimens, so that the villains may be identified. We promise on our part to bring all the light we can command to bear upon the subject, and spread abroad information of the ways and means of the needful warfare. At this time we would present a few notes concerning the destruction of some of the pests which we know are working in this State.

We hear of cut worms in many parts and on many crops. The farmer has as yet no certain and adequate remedy for this pest, which comes in such abundance. A practical writer in the *Country Gentleman* has had success in the following ways: "The best method I know of, for keeping the cut worms from the plants in the garden or patch, is to prepare at your leisure, a quantity of small paper boxes—say four to six inches square, having neither bottom nor top. They must be made a little tapering, so as to flare about half an inch. Set these boxes over the plants, the widest edge up, and the worms cannot crawl over the top. If the boxes are dipped in a strong solution of gumshellac, they will stand the weather, and with care last for years. Should there be any danger of the cut worm taking the corn in the field, the following, if practiced, will be found beneficial: As soon as the corn makes its appearance, coming through the ground, apply to each hill a small handful of lime and salt in the following proportions: One-third salt and two of newly slacked lime. Put the mixture in a bucket and sprinkle it on with the hand; an old glove, if put on the hand, will prevent the lime from cracking the skin. I do not know that this mixture kills the worms, or that it keeps them entirely off the hills, but I do know that it makes the corn grow so rapidly that in a short time it is out of their reach."

Mr. Russel Heath gives the Santa Barbara *Press* a fact concerning the destruction of the scale insect which we never saw on record before. The principle is a good one, for if we can do anything to contribute to the balance of forces in insect life, we shall call in a power on our behalf which is more potent than artificial efforts. We read as follows: "The fact that the ant is a deadly enemy to the scale bug that infests the orange tree may not be generally known. Mr. Russel Heath gives the information as a fact gained by personal observation. He says, some time ago that he noticed some of his orange trees were covered with the common garden ant, and thought at the time that they injured the tree, but he watched the tree for several hours, and discovered that they went for the scale bug, and gobbled him up wherever they found him, and invariably cleared the tree of the vermin. He afterwards offered special inducements to the ants, and attracted them to his orchards in large quantities, and he has found them to be a thorough cure for this pest."

The *Florist and Pomologist* says that the following is strongly recommended for mildew, scale, red spider, etc., upon greenhouse or window plants and out-door shrubs and trees: "Flour of sulphur, two ounces, worked to a paste with a little water; sal soda, two ounces; cut tobacco, half an ounce; quicklime, the size of a duck's egg; water, one gallon. Boil together and stir for 15 minutes, and let cool and settle. In use it is diluted according to the character of the plants which are to be syringed with water after the application."

The *London Cottage Gardener* says: "The following modes of destroying the scale and mealy bug which have been found successful by Mr. Kerr, at Netherby, are worthy of being tried by others who are troubled with these destructive insects: Scale on peach trees—two wine-glassfuls of paraffine oil to three gallons of water; mix thoroughly and syringe the trees. Mealy bug—two tablespoonfuls of paraffine to one pint of water; apply with a sponge."

The great good which the birds accomplish in the devouring of injurious insects is not sufficiently understood. Many birds which destroy fruit more than balance this injury by ridding the trees of insects. For some birds are both animal and vegetable eaters. We have not now available information concerning the habits of our Pacific coast birds full enough to point out the friends and foes of the agriculturist, but we hope to draw upon the investigations of our local ornithologists to supply this lack, and shall be pleased to receive communications on this subject. The following from the report of the meeting of an English farmers' club, shows how our friends across the water are learning the habits of their winged insect-destroyers. Some of the birds mentioned have brothers or cousins on this coast with like habits and doing similar good work. We read as follows: "Pheasants and partridges are very great devourers of wire worms during the winter months. In the crop of a cock pheasant 852 wire worms have been found alive. No fewer than 1,225 of these destructive larva have been found in the crop of a hen pheasant in the month of January. The lapwing also, it has been computed, will swallow at least 100 in a day. Wagtails, robins, blackbirds, thrushes, and starlings also are very fond of wire worms."

## Silk in the United States.

Since we gave the hopeful view of making silk production profitable, which our friends in Kansas cherish, we have had but little to say on the silk question. It is not without interest in this State, however, because we have received several queries of late for the eggs, and we have referred such parties to one of our readers whom we know is making the subject one of constant and careful experiment. We have lately read that a gentleman in Stockton is keeping up a continual propagation of the worms, chiefly for his own amusement, we believe. It is well to keep the subject in mind. The latest uprising of the silk fever is in Utah. At a recent meeting of the Deseret Silk Association much spirit was manifested, and a general disposition to put in mulberry trees was reported. Ladies announced that their daughters were learning to reel cocoons. There would seem to be a special adaptation of the Salt Lake region for the production of silk because of the great numbers of unemployed children who could be brought to the reeling. If stories were to be believed, some families would increase nearly as fast as the cocoons, and thus there would always be a supply of labor to meet the needs of the industry.

A correct notion of the state of the silk manufacturing interest in this country may be gathered from the report which was presented to the Silk Association of America at the annual meeting this spring by Franklin Allen, the Secretary. The total manufactures of silk for the past year are valued at \$26,593,103, the items which run into the millions being tram, \$2,768,490; organzine, \$1,614,961; machine twist, \$6,301,059; millinery and tie silks, \$1,679,166; dress goods, \$1,350,535; ribbons, \$4,526,556; ladies' dress, \$3,705,076. The report states that on the whole last year's business was very unsatisfactory, though the raw silk consumed in manufacture was within 150,000 pounds of the largest amount used in any previous year. This unsatisfactory condition is ascribed to the great rise in the price of the raw material, amounting on the average to 100 per cent.; to the pressure brought to bear on our markets for goods by foreign manufacturers who had injured their markets abroad by excessive adulteration, in some cases reaching more than three-fold the weight of the silk; a pressure which became a crisis at Lyons and caused the surplus goods there to be thrown on this market, thus keeping the price of goods here comparatively low, while the price of the raw material was rising; and to the great extent of frauds by undervaluation at the Custom-house. The estimate of loss to the revenue from the last-named cause alone is put at \$4,000,000. Goods are sold here, "duty paid," at about the same price as they bear at the place of export without duties. The report suggests that the honest foreign manufacturers' interest and those of American manufacturers and honest merchants coincide. At the same time it does not recommend the substitution of specific duties, or of a mixed tariff, but the continuance of the present simple ad valorem rate of 60 per cent., which is sufficient if the present laws are thoroughly enforced.

## Southern California Horticultural Society.

Readers who perused the interesting discussion of the question of budded or seedling orange trees which was given in the *Press* two weeks ago, will no doubt look with favor upon the idea of a Southern California Horticultural Association. Skillful fruit-growers like those who took part in the discussion to which we allude are the best possible foundation material for a society, and we are glad it has been formed, that the wisdom of our citizens may be drawn out, experience and observation compared, and the truth disclosed so that all may profit by it. The next meeting of the society will be held in Los Angeles, June 16th, and it is urged that all persons interested in fruit culture immediately open correspondence with the Secretary, L. M. Holt, Pomona, Cal., with a view to being enrolled as members. A permanent organization has been resolved upon, as noted in our paper last week. If the vigor which set on foot the enterprise remains unabated, and is shared in by all parties interested, the society will become a power second to none of its kind in the State. Its possibilities are very great, and its powers for good are almost unlimited.

It is possible for it to meet monthly, discuss and finally settle questions of the utmost importance to fruit-growers—questions that can be settled only by the fruit-growers of this section—and these questions vitally affect the pockets of the people and the prosperity of the State.

It is possible for it to publish its proceedings and monthly discussions for free circulation among its members, and for general circulation everywhere, thus giving members in remote parts of the district all the benefits of meetings when not convenient for them to attend in person.

It is possible for it to gather and crystallize the thoughts and experiences of a thousand fruit-growers, all of whom feel the need of other people's experiences, and thus save to this class of people fortunes which would otherwise be sunk in useless experiments.

It is possible for it to build a horticultural hall at Los Angeles, and hold annual, semi-annual or quarterly fairs for the exhibition of fruit, and by the judicious award of premiums materially stimulate the fruit-growing interests of a section which for fruit-producing has no equal in the United States.

## QUERIES AND REPLIES.

### Monarch of the West.

EDITORS *Press*.—We send by express a small case "Monarch of the West" strawberries for sample. This variety, in our estimation, excels all others we have ever grown, being more uniformly large, more productive, early, and the vine a more vigorous grower.—C. M. SILVA & SONS, New Castle, Cal.

The express company clung to the strawberries 48 hours longer than their lease of the package called for, consequently the berries had begun to show signs of departure. It was, however, plain to see from the remains of former greatness that the sample had been one of unusual excellence, so far as uniform largeness of berries was concerned. Color and flavor were destroyed by the decay. We have, however, opportunistically received testimony as to the qualities of this berry from R. H. Haines, a large New York grower of strawberries, who writes us an account which we doubt not our New Castle friends will approve. Mr. Haines writes: "Monarch of the West," the fame of this variety has reached all portions of the country, and from all quarters I am constantly receiving reports of the success that attends its cultivation. There are few if any strawberries that will give with the same care such immense berries as will this. Other kinds by high cultivation have at times exceeded them in size, but usually these scarlet "Monarchs" will carry off the prize where only ordinary cultivation is given. It is not unusual to obtain berries five and six inches in circumference, and in a few instances specimen berries of this regal sort have measured nearly seven inches. In flavor they are all that can be desired, and their bright and attractive color renders them very superior table fruit.

### Alfalfa Fiber.

EDITORS *Press*.—We send you by this mail a sample of fiber like the tow of flax. It was brought to us by Mr. Joseph Hunsaker, of Mussel Slough, and we were a little surprised to be informed that it was nothing more than the fiber from alfalfa stalks, which had lain out during the winter in the field. He had quite a large wad of it mixed with fractional parts of stems. The rank growth of alfalfa in portions of his field caused it to lodge so it could not be cut with a mower, and this spring Mr. Hunsaker gathered it with a horse-rake and placed it on the crossings of his ditch, where the grinding of the wagon wheels reduced it to a fibrous mass, the sight of which suggested the uses to which it might be applied. It looks quite reasonable that the manufacture of cordage or paper of fine quality would be both feasible and profitable. The matter is certainly worth experimenting upon.—EDITOR DELTA, Visalia, Cal.

The matter is indeed quite interesting and worthy of examination. The fiber is long and strong. We hardly think it is as strong as tow, but it might doubtless be substituted for it in some uses. It also has some apparent adaptations for paper stock, but whether it is fitted for this use would depend upon whether it contains much gum. Paper stock must be freed from gum. There is believed to be no better paper material in the world than flax, but it must be cleaned of all its gum, and how to accomplish this cheaply is a problem which the practical chemist has yet to solve. Whether this alfalfa fiber has this gum must be determined by an analysis. Of course the fiber must be cleaned from the stem fragments before it can be made available for manufacturing. A possible value in alfalfa in this direction is an important matter, because the plant grows with such perfection in this State. If any one of our readers desires to see the sample which we have received with a view to turn it to useful account we shall be pleased to show it.

### Almonds Dropping Off.

EDITORS *Press*.—The *Press* of May 26th is at hand. Mr. Clough's idea of the almond failure is quite interesting with my own conclusions, up to nuts half grown, at which time it does seem, on land with dry subsoil, one wetting then would be beneficial. Our atmosphere is very dry all summer, and no water for at least 60 feet, except applied through surface irrigation. I shall be glad to hear further discussion on the subject. I feel very grateful to you and Mr. Clough.—D. C. TWOOOD, Riverside, Cal.

We should be pleased to hear from our horticultural readers concerning the unusual behavior of fruit trees, almond and other trees, which we have reported from many orchards. Mr. Twoood's trouble is described in our issue of May 26th; both this and other manifestations of abnormal growths we should like to have commented upon in the light of the experience and observation of other readers.

### Alfalfa Seed.

EDITORS *Press*.—Will you please inform me what the usual yield of alfalfa seed is per acre, and who are the principal parties who furnish seed for market? Is there any seed imported, and from what country?—C. A. SAYRE, Borden, Fresno county, Cal.

We have no exact data for the reply to these queries. The yield is variable, perhaps from 100 to 400 pounds per acre, and yet some fields sometimes do not yield five pounds, because of unfavorable conditions of growth. The seed comes to this market from all over the State, from the Sacramento and San Joaquin valleys, from San Bernardino, Kern and Los Angeles, and other sections. Seed was imported last fall from Salt Lake and Chile.

### Poisoned Meat for Coyotes.

EDITORS *Press*.—I am settled on 80 acres Government land several miles from town, and keep about 200 chickens distributed among four hens. My practice has been to shut them up nights and let them out mornings after sunrise. Lately something, presumably coyotes, have been lurching on one or more a day. I have put out poisoned meat several nights, but they don't seem to find it, or else they do not hanker after it. What quantity of strychnine ought I to use for a goat or sheep carcass, and in what way should it be applied to thoroughly impregnate it, so that every pound will carry destruction and death to the coyotes?—E. H. MORSE, San Bernardino, Cal.

Will some successful poisoner answer these queries?



## The Gum Arabic Tree.

We have many acacia trees in this State, and they grow well in some localities, while in others they are destroyed by a scale insect. We are not aware of the species of all the acacia trees in the State, nor do we know whether any one has the "Egyptian Gum Arabic Tree" (*Acacia Vera* L.). If not, the introduction of it would seem to be a matter of interest, and possibly the foundation of a promising industry. The locality in which the experiment might be tried would have great influence upon the result, for the tree is represented to be a fastidious grower. It is said to be doing well in Florida, and Mr. Benjamin Hall gives the Florida *Agriculturist* the following interesting account of the tree: "This semi-tropical tree, or, more properly, shrub, rarely exceeds fifteen feet in height, and is remarkable for its peculiar, crooked shaped trunk. Its foliage is of a pale green color, and may be said to be the most beautiful of the acacia family. It puts forth its flowers in March, and its seeds, which grow in a hard, coriaceous pod, somewhat resembling the *Acacia jansonia*, and its seeds those of the lupine, which yields a reddish dye, used by tanners in the preparation of leather. This tree, which affords the finest gum arabic of commerce, is a native of the sandy deserts of Arabia, Egypt, and the western parts of Asia; it also grows abundantly in Barbary and other parts of Africa, particularly on the Atlas mountains. In Cairo and Alexandria in Egypt, many streets are adorned with this tree, which is set on either side. In Morocco, where this tree is called "Attelep," large quantities of this gum is collected for export. The trunk of this tree is covered with a smooth, gray bark, while that of the branches is of a yellowish green or purple tinge. At the base of the leaves there are two opposite awl-shaped spines, growing nearly erect, and having a slight glandular swelling below. The wood is hard, and takes a good polish. The gum exudes spontaneously from the bark of the trunk and branches of the tree in a soft or nearly fluid state, and hardens by exposure to the air or to the heat of the sun. The more sickly the tree, the more gum it yields, and the hotter the weather the more prolific it is. A wet winter and a cool or mild summer are unfavorable to the crop. The gum begins to flow in Egypt in December, in Florida in March, immediately after or near the time of the flowering of the tree. Afterwards, as the weather becomes hotter, incisions are generally made through the bark to assist the exudation of the gum. The gum when new emits a faint smell, and when stored in the warehouse, it may be heard to crack spontaneously for several weeks, and this cracking is the surest criterion of new gum, as it never does so when old. Several kinds of gum, yielded by different trees, are occasionally to be met with, but that which is commonly substituted for it is brought from the island of Senegal, on the coast of Africa, and is called "Gum Senegal." This tree is remarkably sensitive to sudden changes of the weather, and its leaflets are open only to the rays of the sun. There are several trees growing successfully on the Indian river, and appear to be adapted to this soil and climate. This tree is possessed of much merit, and is worthy of culture, both for ornament and profit. It is propagated by its seeds, which can be obtained by mail, at letter postage rates, through the American Consul, resident in Cairo, or Alexandria, in Egypt."

**CHROMOS OF CALIFORNIA GRAPES.**—The *Alta* notes the progress of a work which has been frequently mentioned in our columns: Edward Bosqui, under the patronage of the Vinicultural Society of California, is now printing chromo-lithographs by what is called the oleographic process, of 20 leading varieties of the grapes cultivated in this State. The original pictures are each about 10 by 12 inches, showing at least one bunch of the grapes with part of the stem and the upper side of one leaf and the lower of another, thus giving the points by which the different kinds are usually distinguished. The painting is done in water-colors, by Miss Millard, of San Jose, and is highly meritorious in an artistic point of view, and true to nature in form and color. The designs are transferred to stone by William Hanning, an artist of experience and merit. Each picture must receive at least 16 impressions, all different tints, before the effect is complete, and to print 500 copies of each of the 20 pictures will require more than a year's labor for four or five persons. The expense of the publication will be \$20,000, and when complete it will probably be one of the finest artistic works ever issued from the press at the demand of industrial interests. Artistically considered it is decidedly superior to the illustrations of Audubon, and wherever seen it will do much credit to the intelligence and enterprise as well as the horticulture of California.

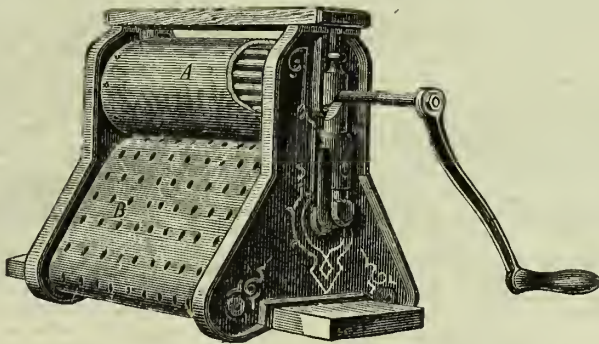
The strawberry growers whose meetings at Alviso have been noticed, have finally concluded to consign their fruit to five commission firms. The five firms that receive the fruit are to meet every morning and fix the lowest rate at which sales can be made for the day, and any surplus that will not sell at or above those rates, is to go to the canners. The new arrangement went into effect on Monday.

**ON FILE.**—"Honor your Calling," E. B.; "Notes from Lake County," A. U. S.

## Improved Washing Appliance.

We herewith illustrate a washing machine which is novel in principle of construction, mode of operation, and in the peculiar adaptability of the material employed to do the work, viz: that of vulcanized india rubber, which the practical working of this machine has shown to be as well suited to the purpose of washing wearing apparel as it is well suited to the purpose of wringing the articles after they have been washed. The rollers in the machine are corrugated, but are differently spaced to create an abrading action when they are revolving. The top roll is covered with a sleeve of vulcanized rubber, prepared expressly for this purpose, with cloth inserted to prevent stretching to get loose upon the roll. An endless band of same material revolves with the under roll. It has an inclination outward, and crosses under the machine. The band is perforated to allow a circulation of the suds and air from the channels in the under roll. The elastic force of the confined air drives the suds through the goods, thus cleansing them. The inclination of the band prevents the clothing dropping off when run through past the rolls, and allows the articles to be washed out to the ends. To enter the goods they are pressed against the band, to which they adhere, and are carried in without danger of pinching the fingers.

The advantages possessed by this machine over that of naked wooden rollers will be apparent to every intelligent person. The soft, elastic character of the rubber adapts it to washing all grades of wearing apparel and other domestic goods, from the coarsest to the finest, without possibility of injuring the texture of the finest articles used. Double the spring pressure is



DENNEY'S IMPROVED WASHING APPLIANCE.

applied to the rolls that is applied to wooden rolls, thereby increasing its efficiency. The rubber is specially prepared for the machines. It is almost indestructible, white and attractive in appearance. For any further information concerning the machines, address the inventor, S. L. Denney, Gap, Lancaster county, Pa.

**INFLUENCE OF AGE ON LEAF AND FLOWER.**—Decandolle, the celebrated Swiss botanist, has started a question which promises to be a very interesting one. Does a tree produce flowers or fruit earlier as its age increases, temperature and other circumstances remaining the same? He gives a number of observations to show that in some cases they do, and in other cases they do not, and botanists are in a quandary. It is generally found in these contradictory cases that there is a near reason, not discerned, that will explain the whole. It has been noted by American botanists (see Salem volume of "Proceedings of American Association") that trees of the strongest constitutions leaf the earliest. Thus there are varying times of leafing in Norway spruces, though both be of one age. In a severe winter, if one or two such die, it will be the one which leafs the latest. The early one is the hardiest. Now a young tree is always more tender than one approaching a flowering condition. Young trees are often destroyed when older ones escape. This being the case, there would be a difference in the time of leafing between such young ones and their elders. On the other hand, where young trees had as strong a constitution as older ones, and there may be many such cases, there would be little difference.

**CURIOUS INSECTS ON A ROSE-BUSH.**—At the last meeting of the S. F. Microscopical Society Col. C. Mason Kinne presented some curious forms of insect life, which were obtained by Mr. Thos. F. Eyre, from a tree and rose-bush, under the same growing at Mazatlan, Mexico. They were mistaken by the casual observer for the thorns which are the proverbial necessary evils of the sweet smelling rose, from the fact of the thorax being raised into a sharp-pointed crest, which had the appearance and feeling of a veritable rose-thorn. Mr. Kinne remarked that the tree-hoppers (*membracidae*) furnish many varieties of this peculiar form of raised thorax, but the variegated sharp crest curving upward and backward from the head of this gives, perhaps, as beautiful and pointed an illustration as is often found of the species. In the struggle for existence which has gone on for ages in the animal kingdom, the "mimicry of nature" plays an important part, and this little tree-hopper, from its appearance and known habits, is a good example of the theory.

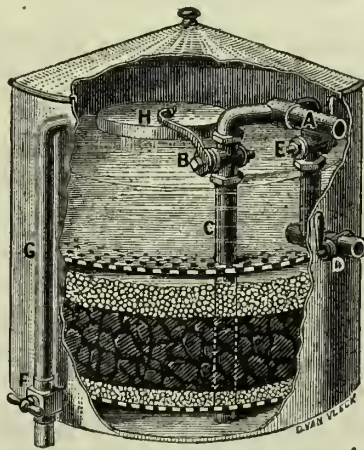
## An Improved Water Filter.

We illustrate on this page an improved filter, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by G. & W. Snook, which is intended as an attachment to water pipes through which water is conducted under pressure, so that the water can be purified and cleansed for drinking and other purposes. By the means employed the inventor is able to use an open-topped tank as a filtering vessel.

The water is admitted in the pipe, A, passing through the stop-cock, B, and pipe, C, discharging into the lower chamber of the filter. It is then forced up through the filtering material, and may be drawn off at pleasure through the stop-cock, D, connecting with pipes to any part of the house. The supply is regulated by the float, H, attached to the stop-cock, B. To clean the filter, close the stop-cocks, B and D; then open the valve, F, at the bottom of the overflow pipe, G, when the water will flow down through the filtering materials and out of the valve, F, into the overflow pipe, G, carrying all the impurities with it. If it is desirable to give a more thorough cleaning, open the stop-cock, E, and let the water flow into the upper part of the filter until thoroughly cleansed; then close the stop-cock, E, and valve, F, when it will be ready for use again.

This filter is simple, durable and easily cleaned. It is self-regulating, and, we are assured, will last many years without renewing the filtering material. It is of a capacity to filter all the water required for an ordinary dwelling house, and is a preventive against worms, bugs and all other mechanical impurities in water. They may be connected to any

tank, and through the usual pipes supply the whole house, or the water may be used direct from the filter, where no tank is required for other purposes. Several sizes of these appliances are made to suit varied requirements. They are inexpensive, and will be kept in repair free of expense by the patentee. The man-



Snook's Patent Water Filter.

ufacturers are G. & W. Snook, 427 Pine street, in this city.

**DISEASES AMONG EASTERN SWINE.**—It would seem reasonable now that those who import hogs from the East should exercise scrupulous care that they do not get animals from the infected localities. If such care is not exercised we may bring into the State contagious diseases far more ruinous than any we now have. Of the alarming destruction of hogs by disease in the prairie States Mr. Dodge, Statistician of the Department of Agriculture, reports as the result of an investigation of the losses from diseases of swine during the past 12 months, the destruction of 4,000,000 animals of all ages, and a money loss of more than \$20,000,000. One-fifth of the loss occurred in Illinois. Next in prominence are Missouri, Iowa and Indiana, which together lose \$10,000,000. Several Southern States are also losers. Losses are very small in the country bordering on the great lakes and the Pacific coast. Of the remaining districts, West Virginia comes nearest to exemption, and Ohio and the Atlantic coast States stand better than alluvial districts. The apparent loss is equivalent to one-third of the sum of the exports of pork products last year.

The debt statement shows a reduction of the debt for May of \$6,981,274. The reduction from July 1st, 1876, to date is \$36,062,000.62.

## Cutting Uncle Sam's Timber.

A few days ago the telegraph brought news of a heavy verdict gained by Uncle Sam against parties who had been cutting timber on public lands in Louisiana contrary to the law. We have information that similar encroachment has been practiced in several parts of this State, and we are advised that the United States Land Office at Washington will take charge of the prosecution of those guilty of the depredation. An official circular from J. A. Williamson, Commissioner at Washington, gives the Land Offices in this State the following instructions in the matter. Whether the department at Washington think its men can be sharper in pursuit of the depredators than the local land officers, we do not know, but it is evident that the department means business in the premises.

For the information of all we quote from the circular, alluded to above, as follows: The Secretary of the Interior has concluded to change the method formerly adopted for protecting the timber on the public lands, by which you were made agents for that purpose within the limits of your respective land districts as per circular of December 24th, 1855. Pursuant to the directions from him of the 5th ultimo, the instructions of that circular are hereby revoked.

Hereafter, as it may be found advisable, from time to time, for the end in view, clerks or employees will be detailed from this office to act under instructions of the Commissioner in ascertaining when, where and by whom depredations have been committed upon the public lands, and to report to him the facts in each case.

If, upon an examination of the reports so obtained, the Commissioner finds that the facts elicited in any case warrant the commencement of legal proceedings to punish the trespassers, or to collect damages for the waste already committed, or both, he will report the same to the Secretary of the Interior, with his opinion thereon, in order that such further proceedings may be had in the premises as the case may require.

The clerks or employees detailed as aforesaid will not be permitted to make any compromise for depredations committed on the public lands. If any propositions are submitted to them with that object, they will be required to report the same to this office, with a full statement of the facts in the case, showing the nature and extent of said depredations, when and by whom committed, the amount and value of the timber when cut, and the value of the land in its present and former condition, all of which, together with the opinion of the Commissioner, will be submitted to the head of the department for further consideration.

If, in any case, the emergencies should seem to require more prompt action than is contemplated in the rules above indicated, in order to arrest the offender, or to secure the Government for the damages suffered, it will be the duty of the clerk or employee detailed to act in the matter to make direct application to the United States District Attorney for the district in which the waste was committed to institute the proper legal proceedings for that purpose. This course, however, must be taken only in cases where the evidence is clear and indisputable.

The foregoing is communicated for your information. You will observe therefrom that you are not hereafter to act as agents for the protection of the public timber, although your co-operation is expected whenever you may be called on to render assistance to officials charged with the duty.

**LAND LAW DECISIONS.**—A dispatch from Washington dated June 31 says: *Copp's Landowner* for June reports the decisions of the Interior Department in substance as follows: The burden of proving that land in dispute is excepted from railway grant is upon him who affirms the existence of a valid pre-emption claim thereto at the date the grant took effect. He must show that his pre-emption not only initiated a prior valid settlement, but that he possessed all the required personal qualifications. The filing of record is prima-facie evidence of a valid right as against the railway, and to secure a tract proper evidence must be furnished by the company to show that the pre-emptor's claim was abandoned or invaded at the time the right of the road attached. After lands have been offered at public sale and then withdrawn they may be restored to homestead and pre-emption entry. Until they have again been offered at public sale, they are not subject to private entry. The Commissioner of the General Land Office has the right to correct what he considers an erroneous decision without first giving notice of such intention to the attorneys of record in the case, but as a matter of courtesy such notice should be given when the interests of the Government are not injured. Deputy mineral-land surveyors must enter into bonds, with two or more sureties, in the sum of \$10,000, for the faithful performance of their duties in the survey of mining claims. Survey under the Mining Act does not withdraw land embraced thereby from sale or subsequent survey, unless by application for patent by the party having no interest in the mining application; but a person standing in the relation of *amicus curie* (a friend at court) has no right of appeal from any decision in the case.

THEY are having trouble with the Indians again in Arizona.



Continued from page 355.

Gray then remembered that while sacking wool he had a little scratch on his face at the point where the pain and swelling commenced. He also remembered that several sheep while in the hands of the shearers had sloughed off their fleeces, leaving their backs smooth and free of wool, as if lathered and shaved. After suffering some weeks, with the disease still increasing, Kennedy's Discovery was recommended, with the use of which in a couple of days the pain receded, the swelling came down and the use of his limbs were regained. Mr. Gray was in our office a few days since and was so changed in appearance that for a moment we failed to recognize him at all, though we have known him quite intimately for several years. He tells us that the disease, externally, much resembled scab in sheep, and extending into the nasal cavities was very offensive. Dr. Brandt was similarly poisoned on one of his hands by inoculating a sore, while handling wool. A local physician told him he had a cancer. Consulting a physician in San Francisco, he was told that he need not be alarmed—it was only a case of poisoning; and sure enough, a few days' treatment brought the offending member to its normal condition. We have thought a knowledge of the foregoing might prove interesting to sheep men.—*Visalia Delta.*

## HORTICULTURE.

### Seeds and Seed Planting.

EDITORS PRESS:—If I can succeed in interesting the thousands who read your columns, in one after another of the fascinating subjects connected with horticulture, it must be by feeling that I speak to many friends, both new and old, who are toiling with me in the blessed work of redeeming the waste places and deepening the broad acres. Our plans, attempts, successes, even failures, are guide-posts for other men, and "mutual help" should be our motto.

The beginning and the end of plant life are in the seed. Nothing so nearly is a constant miracle as this ceaseless round of Nature, from the planted seed, through the leaf, stem, blossom and forming germ, to the ripened seed of another generation. A deep interest attaches to every step of the process so often seen, so seldom carefully studied. Noiselessly, when the first rains of winter come, all the brown slopes thrill and quiver with a myriad of budding blades that climb from hidden seed. Noiselessly, too, over all the new-plowed, smoking acres, the promise of the harvest springs into being. This is the power of silence, that these irresistible germs found their palaces, build their spires and wave their flags, without noise of hammer or dull thud of pick. By the low marshes, where the sedges and yellow *Mimulus* grow; along the rivers, bright with lupin and aster; in the deep gulches, fit home of *Trillium* and *Aristolochia*; on the long mountain slopes, sown with larkspur and *Nemophila*—everywhere the glad germs spring, and the world laughs into leaf and blossom.

Men have learned to produce this miracle of germination at their own will, by imitating Nature's conditions of heat, moisture and darkness. So, mainly by seeds, which retain their life for a considerable period, we are enabled to possess the plants and flowers of every land; some of them to brighten our conservatories; some to give an added grace to the garden and some to become field products, and so increase the wealth of the individual and the prosperity of the State. As Tennyson held the "flower from a crannied wall" in his questioning hand, feeling that if he could only read its story the secret of the world would be known, so might we take the shelly seed of some Indian palm or tropic eyecad, and wonder long and feel the divinity of its quiet, hidden life. In such a mood the work of the gardener and of the farmer would seem to run parallel to the very fibers of being; in truth, a simple and holy work.

But after we have thought of the wonderful things connected with plant life, we must begin to put a practical point to our article. Given the seed—this germ and sealed mystery—and how shall we set it at work; how shall we rouse its energies and ensure success. What are the "laws of germination?"

Every kind of seed has a way of its own, which only experiment can reveal; but the general principles which underlie success are always the same. Warmth and moisture, moisture and warmth are as important elements in sprouting seeds as pork and beans, and pork and pork were in the miner's typical dinner. Not for nurserymen is this told, but for those whose successes with seeds are few and far between.

All flower, shrub and tree seeds are best sown in boxes two and one-half inches deep and one foot in length and breadth, if flower seeds are sown; or larger, if desired, for other seeds. Some holes must be made for drainage, and the boxes filled with prepared soil. Just here the amateur begins to be puzzled, if he has consulted a series of authorities. Peat, loam, silver sand, compost, sods, leaf mold, variously compounded with an air of mystery, look troublesome to be sure! But there is a simple way. Take any garden soil as a basis. Add sand,

and, if possible, the light mold from under an old straw stack or something similar, until you have a rich, friable soil. No definite rule can be given for mixing, except that the prepared soil should hold moisture well, have no tendency to cake, and never crack in the sun.

Fill the boxes, and, with a small board, press the soil closely and evenly, so that it will retain moisture. Sow your seed broadcast or in rows as preferred. Now, take a sieve, made by tacking a square of one-eighth inch mesh wire netting to a light frame, and sift light dirt over your box until the seeds are covered from sight. Take your little board again and firm the soil carefully. If any seeds are in sight, sift a little more dirt on and press again. Aim to cover them entirely, and but little more. Set your box so that it stands level, and water through a fine rose. Some very small seeds are best sown by wetting the box first, and then scattering the seed without covering, on the damp surface. With seeds liable to damp off, as most of the pines, it is best to sprinkle sand on the surface of the box. Never cover any seed more than twice its own thickness; make the surface level and firm; keep it damp, but not wet, and you will succeed. If panes of glass are used to lay over choice seeds, be careful to wipe the under side when obscured or the seed may rot. Water carefully, and keep your faith alive, for some seeds take a long time to arrange their underground affairs.

As plants appear you may pull up any well-known weeds, but leave all doubtful cases. Let the plants grow until the second or third leaves appear, then space them in similar boxes. In these they will become quite stocky, and may be transferred to the open ground, or to larger boxes, or put in pots for the green-house, or sitting-room. In these various moves a small trowel, with a blade not larger than the bowl of a teaspoon, will be found very useful. Any one possessed of a fair amount of patience can start a great many seeds without a green-house, or hot-bed, but some shelter from the hot sun must be contrived for the young seedlings.

This date of writing, May 26th, is rather late for seed-sowing in some places; but gardens are still in order wherever irrigation can be practiced, and this is a most successful time for tropical seeds of any description and for fall-blooming annuals. It is rather nice to sow a few seeds every month, "just for the fun of it," and this month my note-book shows sowings of *Yucca Baccata*, *Y. Whipplei*, *Y. Filamentosa*, *Salvia Carduacea*, *Primula sinensis*, *Browallia*, *Antirrhinum*, *Mimulus*, *Maurandya*, *Thunbergia*, *Cinneraria*, several kinds of eucalyptus, a dozen leading kinds of palms, with other things too numerous to mention.

CHAS. H. SHINN.  
Niles, Alameda County, Cal.

### DEWEY & CO.

#### American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

#### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, and EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

#### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

#### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

#### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

#### DEWEY & CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

#### EXCHANGE.

An eight acre farm near Redwood City, fenced, common house, two wells water, pipes laid through ground, fruit trees, etc. Cost \$3,500, will sell for \$2,500, or would take improved land near San Francisco in exchange. Address J. L. Tharp, this office.

THANK-OFFERING.—Rev. S. S. Harrison, President of Washington College, an interested observer of agricultural progress, writes: "I have just been looking over the RURAL PRESS. I am most favorably impressed with its contents. Its range of agricultural matter is wide and deeply interesting. One such number as the last is worth the price of the whole volume. It is a great, good work in which you are engaged, your audience is very large and should become larger every day. I do not know that truisms of this kind are of any value to you, but I write them as a sort of thank-offering for what I deem to be a very valuable service you are rendering to the State."

### CENTRAL CALIFORNIA COLONY.



BEWARE OF DRY SEASONS!  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan; four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

THE BEST ALFALFA LAND IN CALIFORNIA.  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

The Most Successful Colony in California.  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

#### WANTED.

Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited.

Send for maps and circulars to  
M. THEO. KEARNEY, Manager.  
303 Pine Street, San Francisco.

Take the paper that stands by your interests.

### CALIFORNIA



### MILITARY ACADEMY.

For circulars, address

Rev. DAVID MCCLURE, Principal,  
OAKLAND, CAL.

### Buy N. Y. Watch Co's Superior Watches.

C. H. DEWEY.

GEO. JORDAN.

DEWEY & JORDAN,

DEALERS IN

Watches, Jewelry, Silverware,  
Etc., Etc.,

No. 433 Montgomery St., near Sacramento,  
SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

### American Watches a Specialty.

#### MOUSTACHE PROTECTOR.



Gents' Delight. Boos Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Williamsville, Conn.

### MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco

### DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

### LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,  
SANTA BARBARA, CAL.

Correspondence solicited.

### PACIFIC RURAL PRESS.

A first-class 16-page Illustrated Agricultural Weekly, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

M. WICK, Oroville, Cal., breeder of Thoroughbred Cattle. Young Bulls for sale; also Horses of All Work.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Bred Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Poultry, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berkshires, all ages. Perfect pedigrees. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

## Poultry.

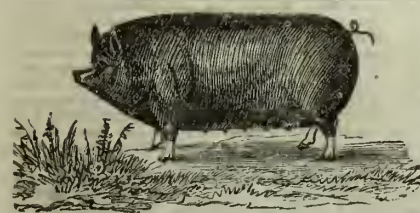
RENO, I. P. LORD, NEVADA. BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*

## LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Poultry, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK, 43 and 44 California Market, S. F.



R. S. THOMPSON,

IMPORTER AND BREEDER OF

PURE BERKSHIRE SWINE, NAPA, CAL.

THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING

## ROSES

strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.

E. GROTKASS,

COLIMA, MEXICO.

DEALER IN REAL ESTATE. Information given free of charge. Lands procured for sale or for rents on easy terms.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

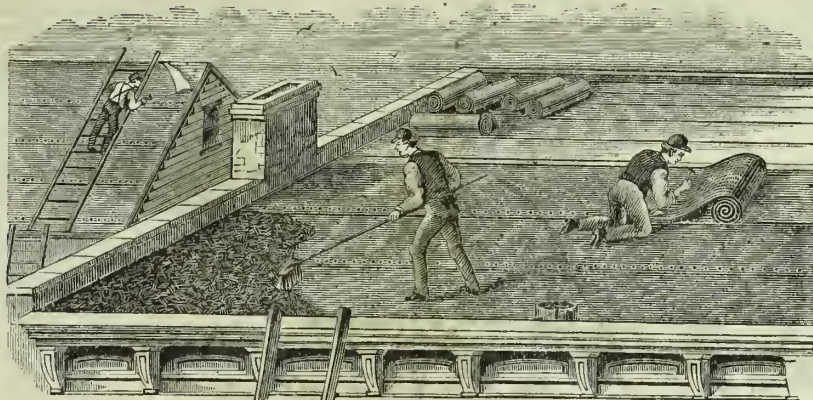
Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## H. W. JOHNS' PATENT

# ASBESTOS ROOFING AND ASBESTOS PAINTS, ASBESTOS CEMENT FOR LEAKY ROOFS

Asbestos Roof Paints for Leaky Roofs,  
ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson &amp; Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

## GREAT IMPROVEMENTS

ARE NOW

## BEING INTRODUCED IN ENGRAVING

BY THE

Scientific Press

ENGRAVING CO.,

AT

THIS OFFICE,

WHEREBY

## Good Engraving

Will be done at

REDUCED RATES.

E. SCHULTZ, Manager.



## HEADQUARTERS

FOR THE  
PACIFIC COAST  
OF THE

U. S. Camp Lounge  
COMPANY.

C. H. MOSELEY, Agt., 415 Sansone Street, S. F.

TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

## Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

## THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

## THE ALDEN FRUIT PRESERVING CO.,

OF CALIFORNIA,

No. 426 Montgomery Street.

Don't waste your time in reading cheap trash.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.

VICE-PRESIDENT.....JOHN LEWELLING.

TREASURER.....J. V. WEBSTER.

CASHIER.....ALBERT MONTELLIER.

SECRETARY.....FRANK A. CRESSEY.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of New York, we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

# HEALD'S BUSINESS COLLEGE

No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## Ground Fresh Bones for Poultry.

Owing to increased demand, I have reduced the price of bone meal as follows: 100 pound sack, \$4.00; 50 pound sack, \$2.50; 25 pound sack, \$1.50.

Carbolic powder 25 cents per pound or ten pounds for \$2.00. The carbolic powder can be packed in the mouths of the bone meal sacks, thus saving freight expenses.

Fresh bones ground up raw will stimulate hens to lay, hasten the laying of young pullets, and feathering out of young chicks; the natural result of the animal food and jelly they contain; while burnt bones pounded up being reduced to phosphate of lime or animal charcoal, will not produce the same result.

One ounce of carbolic powder will destroy more vermin common to poultry than a pound of sulphur, and not liable to injure the eyes of chicks; it will also drive ants and other insects from dwelling houses. Correspondents can remit coin, currency or postal orders at par. Address

C. P. STONE, Healdsburg, Cal.

Refer to Postmaster, Bank of Healdsburg or Wells Fargo & Co.'s Agent.



The Agonies of a Bileous Colic, the indescribable pains of Chronic Indigestion, the debility and mental stupor resulting from a costive habit, may be certainly avoided by regulating the system with that agreeable and refreshing Standard Preparation, TARRANT'S SELTZER APERIENT. Obtainable at all druggists.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,950 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE, Napa Co., Cal. P. O. Napa City, Box 51



Continued from page 353.

ride at first—to the ice-cold spring and Botany meadow on the west side of the lake. This spring is singularly cold, too cold to drink until tempered a little by exposure to air or mingled with lake water. A bucketful is always brought back in the boat to regale the stay-at-homes. The meadow is variegated with colors, showing where grow rare and interesting flowers, among them four species of *Gentian*, one a new species; a new *Ranunculus Lemmonii*; a new *Silene montana*; the little *Sagina Linnæi* and a one-flowered clover; the violet-like *Parterella carnosula*, etc., with hosts of more familiar flowers and a near grove of *Picea amabilis*.

A fourth trip is by wagons and saddles to Lake of the Woods, on the top of the mountain back of the hotel. This lake is about 80 rods long and half as wide, completely hidden in the dark forest of fir and tamarack. Beyond it a few rods is a high crest, the Observatory, vertical on the north side, overlooking Sierra valley and the peaks beyond. This trip and the scenery is generally highly enjoyed, especially by the youngsters, who love to tumble rocks down the cliff.

#### Longer Trips at Webber's.

The next four trips are each eight miles long and are connected one with each of the four passes. The first one with horses, the rest with vehicles also, and generally each is made the occasion of a social picnic. The north trip is to Sierra valley and Campbell's sulphur springs; the east one to Independence lake, to revel in the grand scenery of its steep, abruptly enclosing mountains; the third to Meadow lake, with its snow-banks and sublime views of peak and gorge; the fourth is westward to Jackson's old station and the picnic grounds on the Middle Yuba.

#### Excursion to Castle Peak.

Another grand trip, entitled by its extent and diversity to be called an excursion, is often taken by the tourists at Webber's who have the requisite strength and nerve, and in the latter regard ladies have often proved the best campaigners. For this excursion you require strong, sturdy animals and an extra one or two packed with provisions for two or three days, blankets, etc. The writer takes this excursion every season, sometimes alone, and is always richly rewarded. Some new lake or glen, generally a new plant, is found every trip. The objective point is Castle Peak, distant about 18 miles south-east, as the bird flies, but to reach it you climb several ridges, traverse innumerable valleys and wind around lakes and peaks in delightful profusion. Chiefest of the interesting objects passed in order are Lookout point and Bear valley, Emerald lake and Sliding rock—the latter weighing many hundred tons has but lately left its ledge on the top of a near peak; White rock peak and lake, the latter shining like molten silver in its granite basin; Mount Lola and the United States signal station, where a party of men remain all summer, telegraphing by a mirror or solistadt to Mount Diablo; Rock basin and Mount Rose, the latter red with the rare *Eriogonum Torreyanum*, and lastly the majestic ruined Castle. Each of these objects deserves a page of description, but space forbids. We generally camp the first night in a little valley under the lee of an immense snow-bank on the eastern brow of Mount Rose. This little dell is carpeted in September with the large flowered, purple *Primula suffrutescens*; the few mossy trees of *Picea amabilis* are cushioned around their bases by dense masses of the superb, crimson-flowered, spruce-like heather, *Bryanthus Brewerii*, and close up to the snow is found a little willow in full flower and fruit, yet only one and one-quarter inches high. It is *Salix arctica* and is identical with the dwarf willow growing on the shore of the Arctic ocean. By this you get an idea of your elevation, having ascended through all the climates to that of the Polar seas.

Mount Rose and the Castle are connected by a sharp lava ridge of a mile or more. You can ride half way, then tether your animals to jutting boulders and proceed on foot. On this dizzy wind-swept ridge grow rare and curious plants. There is *Eriogonum Douglasi*, forming a hard globe of tufted leaves; *Gilia congesta*, like a velvet lamp-mat; *Astragalus Hookerianus* with large purple spotted bladders pods, and over the ridge trailing from the crevices in the lava hangs the large pink-flowered *Epilobium abscordatum*. Your tracks in the snow fill with blood, seemingly. It is the "red snow" of Arctic highlands and, wonderful to state, is a plant *Protococcus*—meaning the first berry i. e., the smallest fruit; well-named, for it is a simple microscopical cell.

Farther on and away up on a narrow ledge on the vertical east wall of the Castle, the writer once spied a yellow-eyed flower peeping down. Digging steps in the soft rock with his botanical pick, he reached the ledge and secured seven plants of a bright flowered *Ranunculus*. It proved a new species—no wonder; it is named *R. oryotus*.

Slowly you climb on hands and knees now, to the base of the first turret. There in the splintered lava is a new woolly *Astragalus Austine*, named by request, to honor Mrs. Austin, an excellent lady and careful botanist of Quincy, noted abroad for her observations on the insectivorous *Darlingtonia*.

There are three turrets still standing of the old Castle, each 200 feet high. The first is easily scaled, the second is quite difficult of ascent, and the third, the most eastern turret, scaled like a decenter, has seldom been sur-

mounted. The writer climbed it once by removing his boots and wetting his stockings and gloves with snow, to enable him to cling to the round pebbles, half imbedded in the vertical side. The views from these turrets are among the widest and most interesting of any in California, for the Castle is favorably situated at the side of the Sierra and commands its crests for hundreds of miles each way. An easy traveled ridge, six miles long, connects the castle with Summit station, on the C. P. R. R., and facilitates visitation from that source.

#### Amusements at Webber's.

Beside the ever interesting amusement of rowing and sailing on the lake, awaking the oft-repeated echoes with shout and song, or casting the long trolling line for trout, or gliding along shoal-water at night with pine-knot light and impaling spear, there are other amusements of a more exciting sort. The roads are so even and hard, free from dust or stones, that visitors having fine animals are always tempted to let them show their points, and many a dash of speed is made on these fine courses that is worthy of record. Then the hunting has often a spice of danger in it, as when a grizzly, perhaps the famous monster self-named by an injury, "Club-foot," is suddenly stirred up from his lair. A few seasons ago five bears were hunted down here in four days—the wildest, most exciting sport imaginable. The entire population of Webber joined in the pursuit of the last one, several ladies riding fearlessly at the front and assisting to bring Bruin to grief.

But the most common, every-day sport at Webber's, enjoyed even by the invalids, if able to sit up, is trout fishing with rods. For this, you row, or sail at certain seasons, over to the inlet, deeply bordered with willows. Early in the season these willows are filled with mos-

bara by the sounding sea, and Webber lake up in the Sierra.

#### Routes to Webber Lake.

The best and cheapest route to Webber's for most persons is to go to Truckee on the C. P. R. R., then take Webber's stage, which leaves Truckee Tuesdays, Thursdays and Saturdays of each week during the season. This route enters Webber valley from the east, and affords a view of the canyon and cataract described.

Another principal approach is from the west, via the west gate of the Henness pass, connecting with Eureka, Nevada City, Grass valley and the narrow gauge to Colfax on the main railroad. This route is longer and much more expensive, unless visitors come, as many do, with their own conveyances. Families from that section move up here with their household goods and camp in the groves or occupy the cottages provided for season tourists. Besides these main entrances, the north and south passes admit equestrians as described.

#### Webber Lake in Winter.

About November 1st Webber lake is deserted alike by visitor and proprietor; one man being left in care of the property, to prevent the snow from breaking roofs, and, mayhap, to succor an occasional traveler crossing the Sierra on snow-shoes, or wending his way up to Meadow lake, where one or two families remain during the winter. It has been the privilege of the writer to spend two winters at Webber's hotel, spreading his plants and other objects of natural history on the dining tables, and studying them at will for six months in the year, in no one's way and eight miles from a human soul. He has enjoyed some as full weeks of charming weather in winter there as ever in summer, but, usually as in other places of such high altitude, the fierceness and power of the winds are simply terrible.

Snow often falls three or four feet in a night and six and one-half feet were once recorded between nine at night and sunrise. The wind piles it up in a beautiful shining Sierra along the north shore of the lake, its glittering pinnacles 15 to 30 feet high in front of the buildings. The lake will often remain open until late, a peculiarity of California climate. Tahoe lake, at the same elevation, being a vastly larger body, never freezes. The ice-covering of Webber, seemingly very good skating at times, is really always treacherous, crumbling to crystals to-day where it was solid but yesterday. As the season advances and snow clogs the outlet, water rises over the ice and, freezing nightly, soon a covering of three or four feet is formed, over which old bores find no impediment to his night work of Sierra-making.



quitos, but they soon disappear, and it should be noted that, except mosquitos for a few days at the beginning of the season, no insect pests of any kind are known at Webber's. In the deep holes of this inlet, extending like a chain for 100 rods up the stream, is often found the best fishing. No skill is requisite for catching trout when they do bite; a little child often hooking more than adults in the same boat, because of its greater nimbleness in baiting hooks and removing fish. As many as 400 fish have been taken by one boat-party in an hour.

#### Opinions of Visitors.

The Truckee Republican, in an editorial, said recently: "No lovelier spot is found in all the Sierra for real enjoyment of families and for the skillful care of the sick than Webber lake. It is as accessible from this general depot for tourists as Tahoe, and at the same expense of \$3 for stage fare. Webber's four-horse stage runs regularly between the lake and Truckee, 24 miles, three times a week, from June 1st to November 1st."

The Downville Messenger says: "Alternating at will between Campbell's sulphur spring and Webber lake, is about the most delightful occupation we know of in dog days."

The Sacramento Bee declares "Webber lake is decidedly the most enjoyable and cheapest pleasure resort in California."

A writer in the Sacramento Union: "Webber lake's resources, unlike those of Donner and Tahoe, cannot be exhausted by a visit of a day or two, for it is the exact center of more attractions than can be even enumerated in a long paragraph. Stay one day only at Webber, and perhaps you will pronounce it dull. Stay a week, and you will wish to prolong your visit a month. Stay a month, and you will certainly do as I have done, pass the heated term there season after season."

The Virginia Enterprise remarks: "We see several in town who have just returned from the usual summer tour of the Sierra lakes. They look fresh and fat and are loud in their praise of Webber lake. They declare that while each has peculiar attractions, Webber lake combines more for the same money than any other, besides affording by the presence there of a skillful physician, the good Doctor W., a sure relief for invalids."

#### Distinguished Visitors.

Among the eminent scientists who have lately visited the lake, may be mentioned the California artist, Mr. Hill, who spent a season here transferring the scenery to his canvases; the well-known traveler and microscopist, Dr. Markness, who has passed two summers here; the eminent entomologist and author, the Russian Baron von Osten Sacken, who collected many new and rare insects here last fall; and the veteran botanist and tireless explorer, Dr. Parry, with his noble wife, rendering sacred forever the halls and groves of Webber lake.

The Baron writes this winter: "Please present my profound regards to Dr. Webber and Mrs. Anderson, under whose hospitable roof I spent a delightful fortnight." Dr. Parry writes: "Three bright scenes will ever remain prized memories of our late visit to California: Crafton Retreat, near the base of old San Bernardino, Santa Bar-

The outlet pours a full stream over the cataract now, and presents a new creation. The rising mist congeals and forms an immense oval apron, covering the upper half of the plunging torrent, ornamented on each side by white fluted columns of ice supporting the sides of the apron. The ice being, as stated, so brittle, is often broken up in the stream above and its huge blocks hurled by the current down the cataract, thundering against the resounding apron in front and the jutting rocks in rear, send a roar of sound reverberating down the gorge that is truly sublime.

The four passes are packed deeply with snow and the groves so beautiful and animated in summer are dreary, snow-filled masses of tree tops, tracked only by the mouse-hunting otter, fox or coyote, and, on sunny days toward spring, by the prowling grizzly.

What a change of sounds, too! Instead of the song of gay revelers awaking the echoes of the forest from their boats in the center of the lake, the rattle of passing vehicles, the shout of boys scampering their steeds over the clean gravel, or even the chirp of birds and hum of insects—all is deepest silence, save at times the human-like shriek of the cracking ice, or the angry, fitful howl of the wind in the bending pines. Only occasionally a day-ding spirit, skilled in the use of snow-shoes, ventures up the Sierra Valley pass to carry the mail to the hermit, and to catch a trout through the ice for the capricious taste of an invalid—the wholesale fishing of trout in winter, their spawning season, being justly prohibited by law. Only the glorious sun is a reliable visitor, and he timidly peers over the mountain peaks but a few hours daily, when the rolling clouds permit.

Before closing this brief description of Webber lake and its attractions, with a short biography of its worthy proprietor, the writer desires to make a personal statement. He has no interest whatever in the popularity of Webber lake, his home being in Sierra valley, 10 miles away—or rather, anywhere from end to end of the high Sierra—and he is writing these words entirely without the knowledge of good Dr. Webber. He describes these scenes as he has those of other popular resorts in California, because they are worthy of description and he would add tourists and invalids in enjoying their paramount benefits.

#### Biography of "Good Dr. Webber."

Dr. David Gould Webber was born September 12th, 1809, in Livingston county, New York, of Scotch and Irish parents. At the age of five years his parents moved with their family to Erie county, Penn. At 13 he left home, buying his time of his father, to labor on public works in summer and go to school in winter. At 18 he leased himself to a physician for three years, receiving \$30 the first year, \$50 the second and \$70 for the third years' wages.

During this early period, when but a mere boy and with scanty means, he commenced the exercise of that practical charity and usefulness that has so distinguished him through life. For two years of this service with the physician he maintained 13 orphan children at school, paying all expenses of tuition, school-wood, books, etc. One of these boys is now an eminent lawyer of Ohio.

Starting in the study of medicine with this physician, he soon bought out his patron's drugs, procured books and continued studying until 24. In the meantime commencing the business of merchandising, having an adopted boy for clerk.

At the age of 24 the doctor (for he had been admitted

to practice,) married Margaret Bradish, of Erie county, by whom he had one child, James. He also adopted an orphan girl at this period. After six years of married life Mrs. Webber died. The last adopted girl marrying, he adopted another, also another poor boy. He then sold out and moved to Canada, leaving the girl to be educated four years at an academy, but taking the boy with him. He also left his own son there with his grandmother, for the better continuance of his education. The adopted boy he educated liberally in Canada, and he is now a skillful business man of New York. In Canada he adopted another boy, now a merchant of Illinois. The doctor remained two years in Canada, then removed to Chicago, a small place then, where he engaged in milling and public works. He prospered in business, though always scrupulously honest, and his monthly bank account at Chicago often exceeded \$150,000.

His last Canadian orphan boy had a brother left at home whom he solicited the doctor to adopt also. He did so and brought him to the thriving city. This brother proving very apt in learning, the doctor gave him opportunities, and as he chose the profession of medicine, the doctor entered him in the best colleges of this country, then with his own son, James Webber, supported him among the hospitals and asylums of Europe for two years, where the adopted son acquired such knowledge and skill that on his return he rose suddenly to distinction, removed soon after to San Francisco, where he at once took his place at the head of the profession, and is now (1877,) one of the most distinguished physicians and medical writers in the city. The son James also showed brilliant talents, but died at the early age of 22 at Sacramento. While yet at Chicago Dr. Webber adopted another orphan girl—given him when supposed to be dead, by her pleading mother, who had two other children dead in the house. The doctor saved the child by a daring *dernier resort*, and she became a talented music teacher, married a business man, and last year Mrs. Mary Anderson came out from the East with her family to repay the early gift of life and to nourish the good doctor through his declining years. She proves an excellent lady and housekeeper, presiding at Webber Lake hotel with kindness and efficiency that wins warm encomiums from all.

Doctor Webber is a pioneer Californian, coming to this coast in 1849, fostering, of course, another boy on the way, and locating at first at Downville. He engaged in milling and mining with varied results, and in the meantime built the Sierra county edifices, roads and bridges. In '54 he went to Sacramento valley for five years and raised wild horses. In '59 came up to Sierra valley, engaged in his profession, and in raising sheep, goats and cattle. In '60 built the hotel at the lake which soon after took his name, in '62 established a drug store in Sierra valley and located a ranch in the north end, where he now resides in summer. During this period he fostered several poor boys, assuming also the care of a second cousin, Joseph C. Webber, and educating him to his own profession. The young man graduated at Toland Medical College, S. F., third in his class, came home to Sierra valley and commenced practice with most remarkable success, and with benevolent ways that soon endeared him to the entire population, as evinced by the universal sorrow that was exhibited and still is often expressed, occasioned by the early death of this good, promising young physician in 1877.

#### Dr. Webber at his Lake.

It is at the lake, while sitting on the hotel porch or rowing a skiff and trolling for trout at the close of a delightful summer's day, that the good doctor has time to tell you of his numberless boys and girls and his interesting business adventures, described with deep feeling, anon with inimitable zest. To the improvement of the premises and the comfort of his guests he has devoted the energies of the prime of life. He loves this spot as dearly as ever Swiss loved Alpine home, and during declining years he resorts here annually to meditate upon a life well spent, and to plan still other schemes of good.

As early as '52 Dr. Webber, then building up Downville, hearing of this beautiful lake and valley on the Henness pass, hastened hither, hiring a guide for \$80, who betrayed the doctor and posted a pencilled notice of location in a tree and would not remove it until paid \$50 more. In '60 the hotel was built, and for a few years after immigrant travel continued brisk over the easy pass; besides the discovery in '62 of the Meadow lake gold-bearing quartz and the quick up-building of a large city there made business lively, but after three years of determined labor it was found that sulphurets prevented the Excelsior rock from giving up its gold in paying quantities, and in six months the large town was almost deserted. At the same period the progress of the railroad over the Donner pass began to lessen the travel on the Henness, and gradually the Webber premises assumed the character they are noted for to-day—a health and pleasure summer resort.

There were no trout in the lake when first discovered, manifestly prevented from entering it by reason of the high cataract of 110 feet. In '60 the doctor began introducing trout of two varieties, silver-side and red-fish. Four years after he was enabled to set this delicious fish before his guests as desired. Subsequently other parties proposed to lay claim to stocking the lake, and others still declared that it was always filled with trout, but the doctor proving his claim to the satisfaction of the Fish Commissioners and complying with legal provisions, has acquired possession of the fish, pays taxes upon them, and, assisted by the law, carefully guards against their being caught out during the spawning season, which would diminish one of the most enjoyable pastimes of summer tourists, as well as cut off one of the most appetizing items in the bill of fare.

The wealth of Dr. Webber has been reduced by his benevolent projects, the liberal assistance of relatives, (once giving two-thirds of his property to two brothers,) by mining failures and hard winters, to the value of a few thousands now, but still he has sufficient to prevent reliance for support solely upon the profits of his hotel or the practice of his profession. The poor and unfortunate are entertained gratis, until they can find employment, and the sick either in Sierra valley or those who come to the lake for treatment, if indigent, are cured free of charge.

Dr. Webber has two mortal enemies, against which he is ever on guard, erysipelas and typhoid pneumonia. An attack of erysipelas many years ago destroyed the sight of his left eye, another compelled the amputation of the index finger of his right hand. Pneumonia has recently brought the doctor twice to the verge of the tomb. The people of Sierra valley pray that he may long be spared to them; but whenever Death shall come, he will sooner or later, he will but recall the spirit of a true man which has been sent among us to illustrate the high capabilities, uses and destiny of humanity.

The monument of Dr. Webber is already erected—the noblest of monuments, grateful memories in the hearts of hosts whom he has fostered or cured. His lake, which must always be a resort for naturalists and pleasure-seekers while California is inhabited by a free people, will forever locate the scenes of his later deeds; while two pretty plants of the Sierra, *Tecoma Webberi* and *Astragalus Webberi*, lately distributed to the botanists of the world, have indelibly inscribed his name upon the records of science, to be spoken, written, printed and inquired about by the lovers of nature, of all languages, in all countries, through all time.

Webber Lake, March 4th, 1877.

PERSONAL.—Wm. J. Lawrie (or his alias). Description—American, probably of Irish parentage; age, 25 or 26; height, about five feet six inches; weight, about 130 pounds; complexion dark; hair black and small dark mustache. His agency for this paper expired last December. Was in Marin and Sonoma counties last February. Information of his whereabouts wanted by Dewey & Co., San Francisco.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical houses, Menagerie, Seal Ponds and Skating Rink.



## S. F. MARKET REPORT.

Note.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 6th, 1877.

Trade is still quiet and dull in most lines. The agricultural implement dealers are our busiest tradesmen. Their threshing-supplies trade is now active and will keep them employed for several weeks. In other supplies required for the gathering of the harvest, there is also the reasonable demand and the effort to supply it.

The first new Wheat of the season was exhibited on 'Change this morning, being a sample of two carloads which Starr & Co., of Vallejo, received from Woodland. The sample was pronounced the best of the "first new Wheat" they had seen in the market for a long time. Wheat prices in this market do not improve as yet. There is sympathy no doubt with the European markets, which are stationary, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	12s	5d@12s	8d	12s	10d@13s	6d		
Friday.....	12s	5d@12s	8d	12s	10d@13s	2d		
Saturday.....	12s	5d@12s	8d	12s	10d@13s	2d		
Monday.....	12s	5d@12s	8d	12s	10d@13s	2d		
Tuesday.....	12s	5d@12s	8d	12s	10d@13s	2d		
Wednesday.....	12s	5d@12s	8d	12s	10d@13s	2d		

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	8s	10d@9s	1d	9s	1d@9s	4d		
1876.....	10s	10d@10s	2d	10s	2d@10s	6d		
1877.....	12s	5d@12s	8d	12s	10d@13s	2d		

## The Foreign Review.

LONDON, June 5th.—The *Mark Lane Express*, in its weekly review of the Corn trade, says: Vegetation is very backward, having made little progress under the harsh weather which prevailed in May. It is probable that the acreage under Wheat is larger this year than in 1876, owing to the more favorable seedtime, but the harvest will entirely depend upon the future of the weather, which, up to the present, has not given promise of a large yield. The growth of all cereals has been retarded. The stock of English Wheat in farmers' hands is now very low, as the recent rise in value was too tempting to be resisted, and the majority of holders sold out freely as soon as symptoms of reaction set in. Offerings, both at Mark Lane and in the country, have been very meager, and in spite of the lower tendency of prices, holders of the little remaining Wheat steadfastly refused to sell at less money, feeling confident that the annual scarcity would shortly bring quotations up again. As buyers have not been of the same idea, business is almost at a standstill, and sales could only have been made at a decline of 3d per quarter. After two consecutive weeks of large imports of foreign Wheat, little else but depression could be looked for in the trade at this season of the year. The course of business at Mark Lane until Friday last, when a steadier tone was apparent, has been listless and uncertain, and prices full 10 shillings per quarter below the recent highest points. Considerable uncertainty prevails as to the future course of the Wheat trade. On one hand we have an exceptionally light stock of English in farmers' hands, which would indicate the probability of an increased demand upon foreign, and a consequent enhancement of value. On the other hand, the fact that the large decrease of supply in America seems likely to be counterbalanced by an extensive outward movement from Germany, North Russia and India. Military operations in the East having been much impeded by the long wet season, the war continues without any apparently decisive action on either side, and for the present, the influence of politics has ceased to be felt in the trade. The blockade of the Black sea has tended to increase shipments from the Baltic, but beyond this, business has been little affected. The fall in Maize has been heavy and rapid. Mixed African, which, a few weeks since, easily commanded 32 shillings, has been sold with difficulty at 25s 6d@26s. With fair arrivals at ports of call, floating cargo trade for Wheat was very depressed at the commencement of last week, but towards the close there was a better inquiry. Imports into the Kingdom for the week ending May 26th, were 1,206,909 cwt of Wheat and 256,203 cwt of Flour.

## Eastern Grain Markets.

NEW YORK, June 2d.—The Wheat Market has nearly or quite held its own during the week, but trade has continued dull, prices still being the views of exporters, who have purchased to some extent at Chicago, where the low rates of through freights to Liverpool have given them some advantages over New York. No. 2, Spring here is held at \$1.05@1.10, with some business within the range. Corn has further declined, the sales of merchantable ranging from 52 to 59 cents, and as high as 62c for August delivery. Flour is down to \$6.50@6.75 for Spring Wheat Shipping Extras. The malting season being over, Barley has been neglected.

CHICAGO, June 2d.—The local markets have been generally firmer and less active than last week. Breadstuffs have shown the most activity, and the Wheat supply has diminished until less than 1,000,000 bushels are now in store here. On the contrary, Corn receipts, transactions and shipments continue remarkable, and Oats are plenty. A little reduction in prices would probably leave this market without Wheat, and none in the country to replenish its granaries. However, no growing crop ever gave fairer promise than that of the country of which Chicago is the depot. Prices are not apt to be out of reach, even with empty elevators staring us in the face. The range of prices within the day in the Wheat market has been equal to about four cents. The highest variation was on Monday, when June delivery sold from \$1.43 to \$1.48. The highest price for the week was \$1.54, and the lowest \$1.40. Corn has sold from 52 to 59c, the greatest variation in any day being less than two cents. Oats have been remarkably steady with scarcely any variation. Rye and Barley have weakened decidedly. Pork has not been more than ordinarily active, and Lard has been almost dull and unvariable. Sales of Pork were at \$13.45 to \$13.90 for cash, and of Lard from \$9.20 to \$9.30. Closing quotations are: Cash, Wheat, \$1.51; Corn, 44; Oats, 37; Rye, 70; Barley, 60; Pork, \$13.50; Lard, \$9.22. No particular excitement is anticipated during the planting and cultivating season. Receipts for the week were: Wheat, 36,000 bushels; Corn, 1,026,000; Oats, 35,000. Shipments were: Wheat, 310,000; Corn, 928,000; Oats, 224,000. Receipts in the same time last year were: Wheat, 633,000; Corn, 1,697,000; Oats, 583,000. Shipments were: Wheat, 817,000; Corn, 2,308,000; Oats, 40,000.

## Eastern Wool Markets.

NEW YORK, June 2d.—The wool business of the past week has been rather light, there being an absence of speculative inquiry, the present condition of the goods market not warranting heavy purchases by manufacturers. Prices, however, are somewhat steadier, especially for the finer grades, as stocks are greatly reduced and holders are less urgent to force business. Small parcels of new fleece from some of the near-by States are being received, but no quantities of any magnitude are expected for some months yet. There has been rather more inquiry for new Spring California, and the sales have consumed about all the week's receipts. Holders, however, experience considerable difficulty in obtaining remunerative prices, as manufacturers are close buyers, owing to the low current rates for goods. New Texas is arriving freely, and the quality being generally good, finds a fair sale. This description is crowding Spring California pretty closely, closing as high as 30c for choice lots. Further advices from the London sales state that previous prices are maintained, and that about 10,000 bales have been purchased for 16s.

The sales for the week are: 200,000 lbs new Spring California at 20c for ordinary, and 25c for choice; 20,000 lbs fall do, 18c@22c; 1,500 lbs black, do, 16c@17c; 105,000 lbs Eastern Texas, 26c@35c; 70,000 lbs Western do, 18c@22c; 50,000 lbs new Georgia, 28c; 22,000 lbs burry do, 18c; 10,000 lbs Ohio, 37c@37c; and 51 bales Mesta, 40 do Australia, 800 do Donski, 35 do Rio Grande, 15 do unwashed Creole, 75 bales super pulled, 43 do No. 1 do, 18 do lamb's, 8 do X do, 2,000 lbs washed Ohio combing, 5,000 lbs tub washed do, and 7,000 lbs unwashed do, on private terms.

## Oregon Markets.

PORTLAND (Ogn.), June 4th.—The market for breadstuffs is very inactive. Provisions are dull, and little fruit for export is left in the country. The wool trade is of paramount importance now in business circles. Numerous purchasers can be found, and growers are able to secure the highest market price for the product. The general condition and quality of receipts thus far this season is better than in former years. As to quotations, the range is wide, reaching from 15 to 24c per pound. Large quantities of wool are coming forward, with no indications of weakening. There are no changes to note in quotations of home produce, prices remaining firm for the past fortnight. The weather has been showery and cloudy. The rains have been remarkably warm, and are of incalculable benefit to the rapidly growing grain and fruit crops. The extreme and protracted moisture is having a very damaging effect on the strawberry crop, causing the berries to sour and rot. Salmon are now running in great numbers, and the canning establishments are very busy.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. May 16.	WEEK. May 23.	WEEK. May 30.	WEEK. June 6.
Flour, quarter sacks.....	29,136	19,652	47,536	39,139
Wheat, centals.....	23,009	46,890	41,334	81,089
Barley, centals.....	14,353	12,580	5,014	7,206
Beans, sacks.....	1,712	2,340	1,164	1,094
Corn, centals.....	3,574	4,082	4,164	2,863
Oats, centals.....	6,164	2,611	3,129	8,957
Potatoes, sacks.....	12,957	13,750	9,238	9,653
Onions, sacks.....	563	253	636	1,080
Wool, bales.....	6,786	5,328	3,321	2,406
Hops, bales.....	20	22	.....	13
Hay, bales.....	1,295	991	727	1,362

**Bags**—Dealers report quite an active demand in grain Bags. Prices have been advanced so that the jobbing rates are 9c cash and 10c usual time for 22x36 handsew grain Bags. Rumor is that the concentration movement is now in successful working and that the members of the ring are to put away one-half of their stocks, ostensibly to hold it over. There have also been slight changes in machine-sewed grain Bags and in Hessians.

**Barley**—Some little weakness has been shown in the Barley trade of the week and yet quotations have been maintained, with perhaps a greater preponderance of sales tending toward inside figures. We note sales of 200 sks Bay Feed at \$1.60; 300 do Coast Feed, \$1.57; 200 do good Feed, \$1.57; 100 do ordinary, \$1.50; 100 do choice, \$1.60; 200 do Coast Chevalier, \$1.55; 200 do good Bay Feed, \$1.60; 300 do Coast Feed, \$1.55; 1,800 do choice do \$1.60.

**Beans**—Beans have experienced a slight decline for several sorts, as shown in our price lists below.

**Corn**—Corn is quotable a few points lower. We note sales: 150 sks choice Large Yellow at \$1.92; per cwt, silver.

**Dairy Produce**—Trade has been without unusual features and rates are unchanged from last week.

**Eggs**—The supply of Eggs has been large, the home production having been supplemented by further imports from Utah and Oregon. Nothing but the choicest fresh California reaches our outside quotation.

**Feed**—Millers have advanced their prices for Bran and Middlings. Straw has sold during the week as high as \$1.12 per bale and is firm at \$1.10@1.12 to-day. Hay has sold well. We note sales: cargoes of new Oat at \$15.50; new Cow at \$16; new Wild Oat at \$16.50; old Stable at \$18; good old Wheat at \$21, and choice Wheat and Oat at \$22; 38 tons fair Stable at \$17.50; 44 do ordinary new Wild Oat, \$15.50; 55 tons new Oat and Wheat, \$15.25; 22 do good new Cow, \$16; 56 tons New Oat and Barley, \$15; 8 do choice Cow, \$18; 6 do good new Wheat, \$18.50; 25 tons fair New Barley, \$15; 17 do fair Old Oat, \$17; 46 do ordinary Wheat, \$18.50; 38 do choice Oat, \$20.

**Fruit**—Green Apples and Pears have been freely received and slow of sale. There has been a considerable cheapening of Cherries, Cherry Plums and Currants. Peaches now are plenty enough to quote by the box. Strawberries have ruled a little lower than last week. The novelties of the week have been new Black Figs, from J. K. Wolfskill, of Putah Creek, Solano county, which sold at 75c per lb. Kittatinny Blackberries have been received from San Jose and sold at 25c per lb.

**Hops**—Holders of Hops report little demand and no sales are noted. The market is altogether without notable features.

**Honey**—Prices are reduced a point for the best grades.

**Oats**—The market is quiet and sales have been within former ranges. We note sales: 200 sks Oregon, \$2.02; 100 sks Oregon Surprise, \$2.17; 100 sks ordinary Feed, \$1.85.

**Onions**—All kinds are lower than last week. The standard price for good lots is \$1.25 per cwt.

**Potatoes**—Old Potatoes are released from their nursery. All kinds are now out of the market, excepting lots which are offered by dealers. New Potatoes are plentiful, and are quotable a little lower. Sweet Potatoes are out of the market.

**Poultry and Game**—Ducks and Geese are cheaper. Other kinds are without change from last week.

**Provisions**—Fresh Meats of all kinds are very low and abundant. Our table of prices shows some reductions. Cured Meats are a shade more active, excepting Eastern Hams, which have been imported in large amount, and

are dull. The market is apparently overstocked with Eastern goods.

## Rye—Rye is unchanged.

**Vegetables**—Asparagus, Carrots, Cucumbers, Peas, new Potatoes, Rhubarb, String Beans, Summer Squash and Tomatoes are all lower this week. The receipts of Bay Vegetables are increasing, hence the reduction. The market is now receiving considerable quantities of Wax String Beans, and they are favorites with customers. The first Okra of the season has come in and sold at 50c per pound.

**Wheat**—There is no change in Wheat prices since last week. We note sales of 1,500 sks choice white for Milling, \$2.50; 1,500 do fair do, \$2.32; 2,000 do superfine do, \$2.20@2.25; 12,000 do Shipping, \$2.40@2.45; 500 do fair Milling, \$2.37; 350 tons poor Shipping, \$2.30; 4,000 cwt Oregon Club, \$2.35, to arrive; 10,000 cwt fair Shipping, \$2.35; 4,000 cwt good Shipping, \$2.37; 1,600 cwt good Milling, \$2.40; 1,200 sks good Milling, but a little weevily, \$2.40; 800 cwt good Milling, \$2.50; 3,000 sks Oregon, \$2.45; 1,600 cwt good Shipping, \$2.40, delivered at Vallejo.

**Wool**—The Wool trade has been without change except that the inquiry for good Wools has been better. Our list of quotations covers all sales of which we hear. We note sales of 200,000 lbs at 17c@17c, according to description.

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., June 6, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat, 9s@10		Pacific Glue Co's	
Neville & Co's		Neatsfoot, No. 1, 100 @ 90	
Hand Sewed, 22x36, 9s@10		Castor, No. 1, 105 @ 90	
22x40, 11 @ 10		Baker's A. A., 1.25 @ 30	
Machine Sewed, 22x36, 9s@10		Coast Whales, 1.25 @ 30	
Wool Sacks, 11 @ 10		Olives, Plagniol, 1.25 @ 30	
Flour Sacks, balves, 9s@11		Possel, 1.25 @ 30	
Quarters, 6 @ 7		Palm, lb, 9 @ 9	
Eighths, 4 @ 5		Linseed, Raw, bl, 85 @ 90	
Hessian, 60 inch, 13 @ 15		Boiled, 90 @ 90	
45 inch, 8 @ 8		Cocunut, 80 @ 90	
40 inch, 7 @ 8		China nut, cs, 68 @ 70	
Hand Sewed, 3 lb, 50 @ 50		Super, 1.50 @ 65	
Machine Sewed, 45 @ 50		Coast Whales, 60 @ 65	
Hf Bbls, 3 @ 3		Polar, refined, 60 @ 60	
Standard Gunnies, 13 @ 14		Lard, 10 @ 15	
Bean Bags, 7 @ 8		Oleophene, 35 @ 35	
CANDLES.		Devco's Brill, 34 @ 35	
Crystal Wax, 19 @ 20		Photolite, 33 @ 33	
Eagle, 12 @ 12		Nomargal, 1.50 @ 1.50	
Patent Sperm, 28 @ 30		Eureka, 1.60 @ 25	
CANNED GOODS.		Barrel kerosene, 30 @ 30	
Assorted Pie Fruits, 2.75 @ 3.00		Downer Ker, 47 @ 50	
2 1/2 cans, 2.75 @ 3.00		Elaine, 50 @ 50	
Table do, 3.75 @ 4.25		PAINTS.	
Jams and Jellies, 4 @ 5		Pure White Lead, 9 @ 10	
Pickles, hf gal, 3.50 @ 4		Whiting, 13 @ 13	
Sardines, q box, 1.65 @ 1.90		Putty, 4 @ 5	
Hf Bbls, 3 @ 3		Chalk, 1 @ 1	
COAL—Jobbing.		Paris White, 2 @ 2	
Australian, ton, 9.00 @ 9.25		Ochre, 3 @ 3	
Coos Bay, 8.00 @ 8.00		Venetian Red, 3 @ 3	
Bellingham Bay, 8.00 @ 8.00		Averil Mixed, 3 @ 3	
Seattle, 8.00 @ 9.00		Paint, gal, 2.00 @ 2.40	
Cumberland, 14 @ 17		White & tins, 2.00 @ 2.40	
Mt Diablo, 5.75 @ 7.75		Green, Blue & 1.00 @ 1.50	
Lehigh, 22 @ 20		Yellow, 1.00 @ 1.50	
Liverpool, 8.50 @ 9.00		Light Red, 1.00 @ 1.50	
West Hartley, 14 @ 10		Light Blue, 1.00 @ 1.50	
Scotch, 7.50 @ 8.00		Metallic Roof, 1.30 @ 1.60	
Seranton, 13 @ 16		RICE.	
Vancouver Id., 10 @ 12		China No. 1, lb, 5 @ 5	
Charcoal, sack, 75 @ 75		Hawaiian, 4 @ 5	
Coke, bbl, 60 @ 60		SOAP.	
COFFEES.		Cal. Bay, ton, 13 @ 14	
Sandwich Id, lb, 21 @ 21		Common, 6 @ 8	
Costa Rica, 18 @ 20		Carmen Id., 13 @ 14	
Guatemala, 18 @ 20		Liverpool fine, 20 @ 20	
Java, 24 @ 24		SPICES.	
Manila, 19 @ 19		Castile, lb, 10 @ 10	
Ground, in cs, 25 @ 25		Common brands, 4 @ 6	
FISH.		Fancy brands, 7 @ 8	
Sacto Dry Cod, 5 @ 6		Cloves, lb, 45 @ 50	
Boneless, 8 @ 10		Cassia, 22 @ 25	
Eastern Cod, 7 @ 8		Pepper, 15 @ 17	
Salmon, bbls, 8 @ 9		Pimento, 15 @ 16	
Hf Bbls, 4 @ 5		Mustard, Cal, 1.50 @ 1.50	
2 lb cans, 3.00 @ 3.00		Cal. Cube, lb, 14 @ 14	
Pkld Cod, bbls, 22 @ 20		Circle A crushed, 13 @ 13	
Hf Bbls, 11 @ 10		Powdered, 14 @ 14	
Mackerel, No. 1, 14 @ 14		Fine crushed, 14 @ 14	
In Kits, 3 @ 3		Crushed, 14 @ 14	
Ex Mess, 3 @ 4		Golden C, 11 @ 12	
Pkld Herring, bx 3 @ 3		Hawaiian, 10 @ 11	
Boston Smk Hf gal 40 @ 50		Cal. Syrup, kgs, 75 @ 75	
LIME, ETC.		Hawaiian Molasses, 25 @ 30	
Lime, Sta Cruz, 2 @ 2		TEA.	
Cement, Rosen, 2.75 @ 3.50		Young Hyson, 35 @ 50	
Portland, 4.75 @ 5.50		Country pkd Gu, powder & Imperial, 50 @ 60	
Plaster, Golden, 3 @ 3		Hyson, 30 @ 35	
Gate Mills, 3 @ 3		Foo Chow O, 35 @ 60	
Land Plaster, tn 10 @ 12		Japan, 1st quality, 40 @ 50	
Asst'd sizes, keg 3 25 @ 4 00		2d quality, 25 @ 35	

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., June 6, 1877.

FRUIT MARKET.		VEGETABLES.	
Apples, basket, 1.00 @ 1.25		Asparagus, bx, 1.25 @ 1.75	
Apricots, 1 @ 1		Beets, ct, 60 @ 60	
do, Royal, lb, 8 @ 12		Cabbage, 100 lbs, 50 @ 50	
Bananas, bnch, 2 @ 3		Carrots, 65 @ 75	
Blackberries, 15 @ 25		Cailliflower, doz, 50 @ 60	
Cherries, blk, lb, 8 @ 15		Corn, doz, 12 @ 20	
do, Red, lb, 5 @ 8		Cucumbers, doz, 20 @ 40	
Cherry Plum, bx, 5 @ 5		Garlic, New, lb, 50 @ 50	
Cocunut, 100 @ 1.25		Okra, lb, 50 @ 50	
Currants, Chest, 3 @ 4		Pear, Sweet, 1 @ 2	
Figs, black, 75 @ 75		Lettuce, doz, 10 @ 10	
Gooseberries, 7 @ 9		New Potatoes, 3 @ 11	
Limes, Mex, 8 @ 12		Paranips, lb, 1 @ 1	
Cal, 10 @ 15		Rhubarb, 3 @ 3	
Lemons, Cal M, 10 @ 12		Horseradish, 5 @ 5	
Sicily, bx, 10 @ 12		Hot, in, 35 @ 35	
Oranges, 10 @ 10		Summer, do, 75 @ 90	
Tahiti, 15 @ 20		String Beans, 2 @ 4	
Cal, 15 @ 20		Tomat's, bx 30 lb, 60 @ 75	
Peaches, box, 1 @ 2		Turnips, 50 @ 50	
Pears, box, 75 @ 100		White, 75 @ 75	
Pineapples, doz 6 @ 8		Wax Beans, 4 @ 6	
Raspberries, 10 @ 20			
Strawberries, ct 10 @ 17			
DRIED FRUIT.			
Apples, lb, 5 @ 8			
Apricots, 10 @ 12			
Citron, 28 @ 30			
Figs, Black, 5 @ 7			
White, 6 @ 8			



## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc. Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC AND ABRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA Address  
SEED FOR SALE. L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants, Spring Lists free. F. K. Pugh,  
Six, Bloomington Nursery, Illinois.

## Nurserymen.

SANTA BARBARA NURSERY,  
Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, Proprietor

CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

HENRY SHAW,  
VENTURA, VENTURA COUNTY, CAL.,  
Wholesale Grower of  
ORANGE, LEMON and LIME TREES

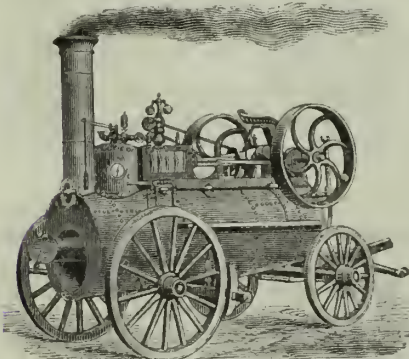
Geo. F. Silvester, Seedsman, 317 Washington Street,  
San Francisco, has samples and will fill orders. Trees  
sacked and boxed so as to be safely transplanted at any  
season. Summer months the best for removal.

## RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote March 7th, 1877,  
that RENNIE'S PRIZE SWEET TURNIP yielded more than  
three times as much as the common seed. Price, per  
pound, (in American currency, pre-paid,) thirty cents.  
WM. RENNIE, Seedsman, TORONTO, CANADA.

## Agricultural Articles.

H. W. RICE,  
MANUFACTURER OF THE RICE PATENT STRAW-BURNING ENGINES.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood Burning Engines changed to Straw Burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

**Fraud! Fraud!!**

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

**COLLINS & CO. HARTFORD.**

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

## Winchester Repeating Rifle.

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts.

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

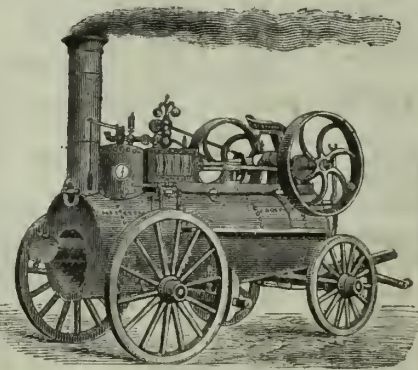
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

MARCUS C. HAWLEY & CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

WINDMILLS,  
Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,

HORTON & KENNEDY,  
Managers for California and Pacific Coast,  
ALSO BEST FEED MILLS FOR SALE.  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.



## TO FRUIT MEN.

LILLIES' FRUIT PITTEP,  
Patented March 7th, 1876.



This machine pits all the different kinds of stoned fruits, (clinging stones included,) both rapidly and well, and without waste, and with entire satisfaction to all who have used it.

It does the work without waste and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully.

For further particulars and terms, address

H. JONES, Sole Agent for California.

419 and 421 Sansome Street, S. F.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,965, 157,124, 157,508, 164,181, 165,061, 172,700, 173,491, 173,667, 180,351, 181,433, 180,389, 187,126, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

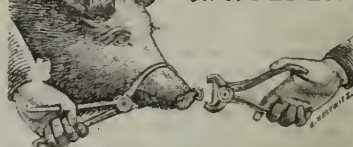
Copies of our claims can be obtained of our attorneys, (CUBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

HILL'S PAT. HOG RINGER,  
RINGS AND TONGS  
OR HOLDER.



A full line of these salable goods at manufacturers' prices. Address,

JAMES E. GORDON,

WHOLESALE HARDWARE,

254 & 256 Market, and 8 & 10 Front Sts. S. F.

## HEAD &amp; SCHEMOITH'S STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,

10 Bush Street, S. F.

## MATTESON &amp; WILLIAMSON'S



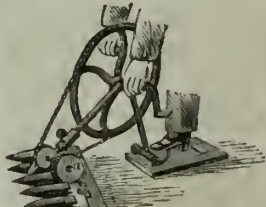
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

## NEW PATENT HARVEST SHARPENER.



This cut represents a new device for sharpening the knives of all kinds of Mowing and Reaping machines. It weighs only a few pounds and is designed to carry with the Reaper for convenient use when required.

The knives can be sharpened without taking them out or unbalancing the team, and in less time than it is possible to sharpen them on the best grindstone. Only one person is required to do the work. The Emery wheel, a, is regulated by a set screw so that in grinding, the exact bevel can be given to each section. When harvesting is over you will find it a very useful machine, for grinding knives, axes, chisels, saws, etc.

Address,  
WHEELER & CO.,  
17 New Montgomery St., San Francisco.

## MUSIC BOOKS

—FOR—

## Schools, Academies &amp; Seminaries

THE HIGH SCHOOL CHOIR, (\$1, or \$9 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1,) by EMERSON & TILDEN, CHOICE TRIOS, (\$1,) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READER, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.



OUR FIELD AND HOUSEHOLD PEST POISON is a safe, sure and cheap destroyer of all insects that infest houses, fields and gardens. Bugs, Rats, Lice, Fleas and all vermin. Unlike Paris Green or Arsenic, it dissolves in water, and is applied by sprinkling or with syringe. Not injurious to plants. Safe to use. Put up in one-quarter pound boxes, free by mail for 30 cents. Circulars sent with testimonials. Kenney & Chemical Works,  
66 Courtlandt Street, New York



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT.

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

### H. H. H. HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callosities, Lumps, Sweeny, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

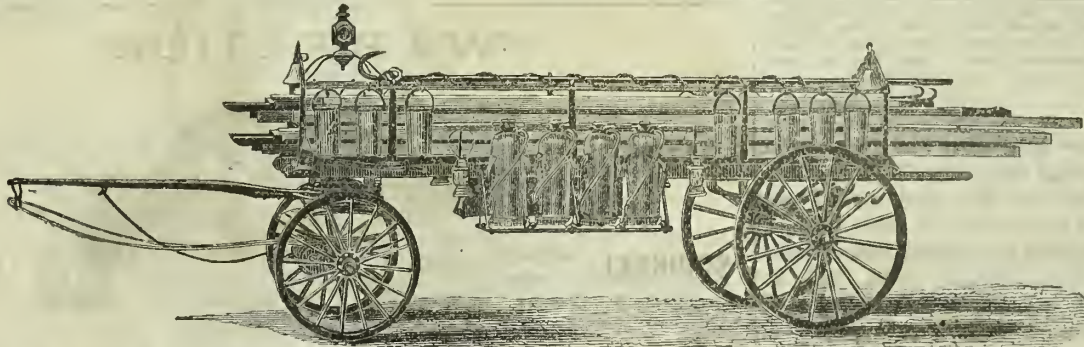


### CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

The BABCOCK.



The BABCOCK.

## Village Hook and Ladder Truck.

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

Address PARKE & LACY, 417 Market Street.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

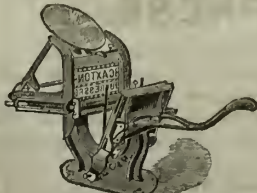
which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

### ROWELL & CHESMAN Advertising Agents, THIRD & CHESTNUT STS., ST. LOUIS, MO.

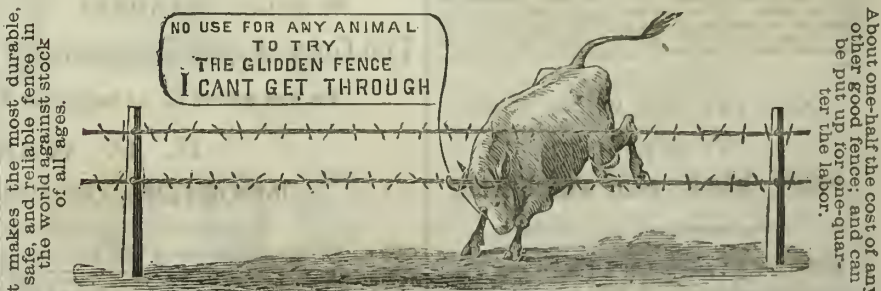
Publish a book on ADVERTISING, AND HOW AND WHERE TO DO IT, that every Advertiser should have before making contracts either with the papers or through Agents. It contains lists of papers, prices, circulations, and much other matter of value which will save time and money to those seeking information about, or making contracts for Newspaper Advertising. Send address on postal card, and this book will be forwarded free of charge.



H. F. ROCKEY,  
Dealer in  
AMATEUR PRINTING  
Presses,  
Small Fonts of Type,  
Printing Materials,  
Plain & Fancy Cards, &c.  
22 Kearny St.  
Bet. Market & Post, S. F.  
(Up Stairs.)  
Send for Illustrated Circular.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.



VER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, - Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

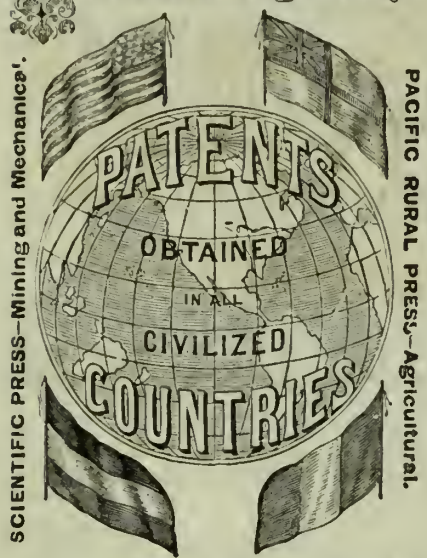
\$55 & \$77 a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine. YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.

50 MIXED CARDS, with name, for 10c. and stamp. One pack (20 styles) Acquaintance Cards, 10c. Samples for 3c. stamp. M. DOWD & CO., Bristol, Ct.

Farmers, write for your paper.



# DEWEY & CO'S SCIENTIFIC PRESS Patent Agency.



Publishers, Patent Agents and Engravers,  
224 SANSOME STREET, SAN FRANCISCO.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—Amador, Placer, Calaveras and Tuolumne counties.  
G. W. MCGREW—United States.  
A. C. KNOX—Plumas, Sierra, Lassen, Placer and Nevada counties.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMPION—Sonoma, Marin and Mendocino counties.  
A. U. STRONG—Lake, Napa and Solano counties.  
ED. T. PLANK—Dakota Territory (Black Hills).  
JOSEPH DIMMICK—Mendocino, Humboldt and Del Norte counties.

Thanks for Prompt Attention.

STOCKTON, June 29th, 1875.

Messrs Dewey & Co., S. F.:—  
I have received the patent for my invention in wagon brakes, which you prosecuted for me; patented May 11th, 1875—No. 163,046. Thanks to you for your prompt attention to the case; you will hereafter be my attorneys in such cases. I recommend all inventors on the Pacific coast to give you a call, which I think they will never have any cause to regret. Very truly yours,  
GEO. G. BUCKLAND,  
Stockton, Cal.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us against the acts and mistakes of others.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

## HARRIS & BRADLEY,

31 and 33 Beale Street, San Francisco,  
Manufacturers of Harris's

## PATENT FRUIT DRIERS.

Patent Combination Heater and Cheese Vat, Patent Heater for Washing Churns, Pails, etc., Patent Heater for Steaming Food for Stock, Patent Heater for washing or the Laundry.

Also, Windmills, which are made of Cast and Galvanized Iron, and warranted to work as well and last as long as those costing three times as much. All of the above machines are fully warranted. All that is asked is a fair trial, and if they do not give satisfaction the money will be refunded. All who wish a cheap, efficient Fruit Drier, should not fail to call and examine Harris's patent before purchasing any other make or style.

DON'T BUY ANY OTHER THAN

Walter's Patent

FRUIT DRIER AND PRESERVER,

Manufactured and for sale by the

Walter Fruit Drying and Preserving Co.,

315 DAVIS STREET, SAN FRANCISCO, CAL.

25 FANCY CARDS, all styles, with name, 10c.; 25 Transparent Cards, all styles, with name, 20c.; 20 Swiss Motto Cards, 15 styles, with name, 20c., prepaid. J. B. HUSTED, Nassau, Reun. Co., N. Y.

ORDERS for the GOLDEN PIANO will be received at this office, where further information can be had concerning their excellent qualities and favorable prices.

# HAY PRESSES

AND

## Excavating Machinery.

Constantly on Hand and for Sale.

The well known PRICE or PETALUMA HAY PRESS, the standard machine of its class and the fastest baling press known; over 500 in use on this Coast. Price....\$450

The IMPROVED ECLIPSE POWER PRESS, the simplest and best press ever made for the price, which is.....\$300

The IMPROVED ECLIPSE HAND-POWER PRESS, very compact and powerful.....\$200

The PRICE PRESS, (extra heavy,) for baling hay for shipment in box ears. Will put from nine to twelve tons in a box ear. A very strong and powerful machine, fully warranted as to strength and capacity.....\$600

## MADE TO ORDER.

Hide Presses for baling dry hides for shipment to the East.....\$500

Presses for Hair, Wool, Rags, Hops, Moss, Broom Corn, etc., at reasonable prices.

PRICE'S BOX EXCAVATOR or SELF-LOADING GRADING CART, the most remarkable labor saving machine that has been invented for years. Will move earth any distance, from 50 to 2,000 feet at one-fourth the cost of the ordinary way. The large size, using four horses and carrying over one and a half yards at a load is worth....\$650

The same machine, carrying three-quarters of a yard and using two horses.....\$500

Price's Draper Excavator, for making ditches from 10 to 20 feet wide.....\$650

There are conditions connected with the sale of excavators which will be explained upon application by letter or otherwise. Address

## PRICE PRESS COMPANY,

I. J. TRUMAN, San Francisco,

J. PRICE, San Leandro.

Office, With BAKER & HAMILTON,

No. 17 Front Street,

San Francisco

## WAKELEE'S

PATENT

AND

SQUIRREL

GOPHER



## Exterminator!!

THIS IS THE ORIGINAL ARTICLE!

ALL OTHERS ARE INFERIOR IMITATIONS.

EDITORS RURAL PRESS: Dear Sirs— I have just made an experiment with prepared poison for killing squirrels, putting out a can each of the following poisons: A can of Barney's, a can of Steele's and a can of the article called Wakelee's Exterminator. One can of Wakelee's kills as many as seven of Barney's Squirrel Poison; and as many as ten cans of Steele's Squirrel Poison. Thinking the result will be interesting to your readers, I send it for their benefit. Yours, very respectfully,  
Haywards, April 8th, 1876. S. P. WOODWARD.

In Purchasing Care Should be Taken to Order WAKELEE'S

Wakelee's SQUIRREL and GOPHER EXTERMINATOR is

The Only Agent Successfully Used to Protect Standing Grain.

The Best Medium for the Destruction of Gophers. Full Directions with Each Can.

H. P. WAKELEE & CO.,

IMPORTERS OF DRUGS AND CHEMICALS.

AGENTS AND MANAGERS GOLDEN CITY CHEMICAL WORKS

Office, Corner Montgomery and Bush Streets,

San Francisco, Cal.

## JOHN H. GOVE'S

## CENTENNIAL HAY PRESS.

Farmers and Hay Pressers will find it to their advantage to examine this Press before buying any other. It is built compact, combining lightness for moving with the greatest power and durability in its working parts, capable of making the average 250 pound bale, more or less, baling 10 to 15 tons per day, with three men and a pair of horses, they traveling only 36 feet to operate it. No excavations required for this press. This is the original Gove Press improved, after an experience of building Presses in the States the past 15 years, where they gave the best of satisfaction. Price, No. 1, \$250.

Manufactured and for sale, or built to order, at the Eureka Grain Storage Warehouse, by

JOHN H. GOVE or ANDREW J. GOVE, Box 1122.

Also, for sale by DAVID N. HAWLEY, Agricultural Warehouse, 211 Market Street.

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth } Sweet Corn.  
Stowell's Evergreen }  
Mexican Sweet, New }  
Early Canada } Yellow Flint Corn.  
Early Dutton }  
Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe }  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST.

NO INFERIOR FOWLS SOLD AT ANY PRICE. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco, Cal.



THOROUGHbred FOWLS, BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

EGGS, \$6.50 per doz.

BRAHMAS } \$5.00.

LEGHORNS }



Eggs Shipped to

Any part of the

Coast to Hatch Af-

ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

50 FINE CARDS, Danask, Repp, Etc., with name on, 43 cents. CLINTON BROS., Clintonville, Conn.

WHEN so many poor watches are being sold, it is not too much for us to say that those who buy the New York Watch Company's movements will be sure of a good article at fair prices.





Volume XIII.]

SAN FRANCISCO, SATURDAY, JUNE 16, 1877.

[Number 24.]

### The Tea Plant.

The culture of the tea plant and the production of first-class sewing circle material may be said to be one of the California problems. We have credit in all the encyclopedias with the ability to produce good plants, but putting the production upon a practical and profitable basis is another question and is, we believe, as far from satisfactory demonstration as it was when our first experiments were made. We chose the tea plant for illustration this week because its cultivation may still be considered as among our far-off possibilities, and because, as the illustration is a good one, the publishing of it may be of interest to our amateur students of botany, and for the information of readers generally. So far as the introduction of the plant as an element of agricultural production is concerned we have again the oft repeated assertion that the Asiatic fields are showing signs of decadence. Whether the report be true or not we have no present means of judging, but it may serve as a stimulus toward the determination of our latent resources. We have no reason to believe, from the present quality and price of labor in this State, that we can produce tea profitably, and yet why is there not the same field for the introduction of labor-saving machinery in production of tea as in other complex operations which have already yielded to the achievements of inventors? It is, however, chiefly with the intention of interesting readers who are not familiar with the appearance of the tea plant that we use it as an illustration.

Our engraving gives an excellent exhibition of the analysis of the plant botanically. As we read the studies of the botanist, it is now generally agreed that there is not sufficient reason to give the tea plant a genus of its own, but it must be classified as a species of the genus *Camellia*, and its name is *Camellia thea*. The tea plant differs from the other species of *Camellia* grown in this country, according to one authority, by having "longer, narrower, thinner, more serrate and less shiny leaves. Its flowers are axillary and nodding, and though only about an inch across, closely resemble those of a single *Camellia*. The sepals and petals are usually five, the stamens numerous, a portion forming by their united bases a cup, within which are numerous separate stamens. The fruit or pod is usually three-celled, with a single large seed in each cell." These points are well shown in the engraving. At the lower left hand corner are shown the tripartite pistil, the cross section of the three-celled ovary, and the three-celled seed-pod, when fully grown. At the right lower corner are sections of the seed, with and without its covering, and one seed split to show the position of the germ.

Such, in brief, is the plant which has given China a name throughout the world. Of the growth of it in China we have the following interesting description in the words of a traveler:

In the black tea districts of China, as in the green, large quantities of young plants are yearly raised from seeds. These seeds are gathered at maturity, in October, mixed immediately after and packed in sand and earth, in which they are kept during the winter months. In this manner they are preserved fresh until spring, when they are thickly sown in some corner of the farm, whence they are afterwards transplanted. Sometimes they are sown in rows where they are destined to grow, and consequently do not require to be removed. When about a year old the plants are usually from nine inches to a foot in height and are ready for transplanting. They are set in rows about four feet apart, in bunches or hills, three or four feet asunder along the rows, with five or six plants to each bunch. In some cases, however, when the soil is poor, as in many parts of Woo-e-shan, they are planted very close in the rows and appear like hedges when fully grown.

The young plantations are always made in the spring and are well watered by the rains which fall at the change of the monsoon in April and May. The damp, moist weather at this season enables the plants to establish themselves in their new quarters, and they afterwards require but little care, except in keeping the ground free from weeds.

When the winters are very severe, the na-

tives tie straw bands round the young tender shrubs to protect them from the cold, and to prevent them from cracking or bursting from frost or snow.

A tea plantation, when seen at a distance, looks like a little shrubbery of evergreens. As the traveler threads his way among the rocky scenery of Woo-e shan, these plantations, which are constantly seen dotting the hillsides, afford a pleasing contrast to the strange and often barren surface by their rich dark-green leaves. When young, they are allowed to grow unmo-

### Wheat in Field and Market.

Bright notes come from the wheat fields of our State. Greater outcomes from the separator than were expected, cheaper price for threshing and labor because of the abundant supply of ready workers, and a prospect of much higher prices for the produce that have, of late, been gained—all these things go to make the farmers glad in the fruitful counties. The *Butte Record* says that many farmers in

### The Earthquake Wave.

Dwellers along our coast who were watching on May 10th the deeds of the Pacific were interested in the coming of waves quite different from the ordinary tide waves. This was apparent as well to the casual observer as to the scientific men who are watching the waters with tide gauges and other appliances. It was plain that something unusual was going on in the depths of the sea. News which has just come to hand shows that a commotion of waters which was little more than a curiosity on our coast was very destructive of life and property among our neighbors on the bosom of the ocean and others along the South American coast. In the Hawaiian islands, according to the *Gazette*, it appears to have occurred simultaneously all over the group, but, as its incipience was at early dawn, it was not observed except in a very few places. At Kahului, on the island of Maui, as stated by a correspondent, the first unusual subsidence of the sea was noticed about a quarter before five in the morning, by parties who were out in the bay fishing. An observer in Honolulu, who was near the harbor and who had his attention attracted by the shouting of the natives, and saw the exposed reefs, places the occurrence at exactly the same time, viz.: fifteen minutes before five. Mr. J. J. Porter, of Hilo, Hawaii, fixes the moment of the wave which overwhelmed the village of Waiskea, at precisely the same time, and the statement of Capt. Smithers, of the whaling bark *Pacific*, which was lying at the time in Hilo bay, corroborates this. According to Mr. Severance, the oscillation of the sea was first remarked about four o'clock in the morning, nearly an hour previous to the great wave. The difference between the highest and lowest water mark at various localities we ascertain to be as follows: Hilo, on the east side of Hawaii, 36 feet; Kealekua bay, on the west side of Hawaii, 30 feet; Kawaihae, west side of Hawaii, 5 feet; Kahului, north side of Maui, 22 feet; Lahaina, south side of Maui, 12 feet; Honolulu, south side of Oahu, 4 feet, 10 inches; Nawiliwili, southeast side of Kauai, 3 feet.

The details of the disaster at Walakea, which was overwhelmed by the wave, are five people drowned, seven people badly injured, 37 dwelling houses entirely destroyed, 17 dwelling houses badly injured, 163 people left destitute without houses. There has been nothing like this wave at the Islands since 1837, when many houses were destroyed.

Advices received via Panama say that Callao was visited by a wave, and considerable damage done. The devastation was known to have extended as far south as the northern boundary of Chile, but how much further is not known, as communication is interrupted. The *Elder* reports the almost complete destruction of Antofagasta, Iquique, Arica, Tambo, Demora, Pabillon de Pica and Ilo. The destruction of life and property was owing entirely to the frightful upheaval and ingress of the sea. A gentleman who arrived by the *Trujillo* states that the flourishing town of Iquique, the principal port for nitrate shipments, is left as complete a ruin now as it was after the frightful earthquake and inundation in 1868. At Arica the sea washed over the town to the lights back of the church, and destroyed much valuable property. The wreck of the United States steamer *Watercree*, which was carried inland a couple of miles by the tidal wave in 1868, was again floated and carried a mile or two further up the coast. The lower part of Antofagasta, which is a part of the celebrated Caracoles mining district in Bolivia, is reported as completely destroyed. The smelting and other works near the shore are reported as all swept away. The shipping at Pabillon de Pica and the guano deposits suffered severely, and some half a dozen fine vessels are reported ashore and completely wrecked. The sea in some places is stated to have risen over sixty feet.

According to information derived from the Health Office, 873 deaths occurred in San Francisco from diphtheria during the past 12 months, and it is estimated that 15% of the cases have proved fatal. This would indicate nearly 6,000 cases within that time.



THE CHINESE TEA PLANT.

lest for two or three years, or until they are well established and producing strong and vigorous shoots. The practice of plucking the leaves is very prejudicial to this shrub, and the natives always take care that the plant shall be in a vigorous and healthy condition before this operation is commenced. Even when the plantations are in full bearing they never take many leaves from the weaker plants, in order that their growth may not be checked. For, under the best mode of treatment and on the most congenial soil, they ultimately become stunted and unhealthy and are never profitable when old. Hence, in well managed tea districts, the natives annually remove old plantations and supply their places with fresh ones.

that county "will receive one, two, three and four thousand dollars more than some of them expected at sowing time." Although there may not be such an improvement over sowing anticipations in most places there will doubtless be fully as great advance over anticipations which prevailed two months ago.

The market, too, promises well. The imports into Great Britain, during the four months ending June 1st, were 2,200,000 cwts less than during the same period of 1876. The latest from England by cable, as printed in our market review, shows that the British will need a million quarters more than the visible supply before their now very doubtful harvest can give them anything from home fields.



## CORRESPONDENCE.

## Lake County.

EDITORS PRESS:—Perhaps it might be of interest to hear of the prospects of Lake county. The grain crop will exceed that of last year. In Big valley the yield will be much greater. In this valley the frost injured some of the wheat, but not extensively. Some of the farmers near the lake shore say the smutis appearing in some of their fields. (Bluestone your wheat well before sowing). In Coyote valley barley is mostly raised. The crop is excellent and about ready for harvesting. In Scott's valley and Upper Lake vicinity quite a number of acres are planted in corn, all of which looks well. The wool clip is not only better in quality, but its yield in quantity is greater than in former years. The hills are covered with good feed, and stock-raisers are careful not to keep too much stock for their range.

Big valley is the first worthy of mention. The valley is seven miles long and six miles wide, with two towns, Lakeport and Kelseyville. The first mentioned is the county seat of Lake county, situated upon the western shore of Clear lake. The valley is very fertile. The farms are generally small and thoroughly cultivated. Improvements generally upon the farms are substantial looking and pleasing in appearance. Mr. H. J. Cooper, near Kelseyville, has a farm of 500 acres, all susceptible of cultivation, 300 acres of which were sown in wheat this year and will give an average yield of 25 bushels to the acre. I next visited Scott's valley, which lies three miles west of Lakeport. The farms are small and soil very fertile. Fruit and vegetables are raised in great quantities. Bachelor valley was next visited. This valley lies 10 miles northwest of Lakeport and three miles west of Upper Lake. The valley has a lively appearance and the appearance of all improvements indicate that it is a favored region for farming. Upper Lake is a thriving little village at the head of Clear lake.

After visiting the farmers in this vicinity and passing over the cultivated fields, learning of their resources and the wonderful fertility of the soil, I can say it is a very desirable place to make a home.

I next passed down on the north side of the lake, and after traveling about 10 miles I came to the fine home farm of Mr. Morrison. Mr. Morrison has a large range for stock, also a number of acres of good land for cultivation. All surroundings give an impression of thrift and convenience, which is by no means lessened by a close examination. I shall defer the rest of my Lake county notes to another time.

A. U. S.

Lakeport, June 2d, 1877.

## Farming and Irrigation in Kern County.

EDITORS PRESS:—Bakersfield, the county seat of Kern county, is a lively little town of 500 inhabitants, has a new appearance, supports two sprightly newspapers, a good school, has a water power of great value, a flouring mill, a well-built court-house, a small and poorly-attended M. E. church and a large number of well-patronized whisky mills. It is a center for an extensive farming region, and a place from which heavy freight wagons go to distant points. The stores are large and well-filled with goods.

Kern river is a wonder in itself. Its source is in the eternal snows of the Sierras. It bursts forth from the mountains east of Bakersfield, and in ordinary seasons, during April, May and June pours forth 2,000,000,000 of square feet of water each day. This year the river is very low, and yet there is abundance. In former years the flood water spread over more than 100 square miles of land, forming a vast marsh, which extended from Tulare to Kern lakes and bred mosquitoes, chills and fever. The traveler was told, "if you venture within you will be a dead man," and the old settlers even now say it was once quite sickly in the fall.

Within a few years 21 canals, ranging from 30 to 125 feet wide, have been taken out from the river and extended from three to 30 miles in various directions over the level plain. The result has been that many of the tule swamps have become dry and are now irrigated and sown in grass and grain.

When the canals now projected shall have been constructed, the lakes will be surrounded by bold dry shores, with fields up to the deep water, the river be drawn off into canals and spread out over the sandy plain, and the country be healthy as other regions.

Even now a great change is observed. The air has been tempered down by evaporation and a more delightful climate can nowhere be found than I felt during the days I spent there. The people look healthy, yet they said it would be quite warm, and there might be "some chills" later in the season.

Beal's ranch occupies a belt about 30 miles long on the southeast side of the valley, well watered and rich. Northwest of this is Kern lake, six miles long and four wide. A slough 100 feet wide and 12 feet deep connects this

with Buena Vista lake, which is a little larger than Kern. An extensive tule swamp surrounds both these and reaches to Tulare lake, a distance of 33 miles.

Lux & Miller and Livermore & Souther are building a canal 150 feet wide, and eight feet deep on one side and one 40 feet wide on the other side of this swamp land north of Buena Vista lake, and expect to reclaim 60,000 acres. Others will extend these canals to Tulare lake and open up a vast body of rich land. One of these canals is constructed so as to be navigated that a line of boats may be run from the south end of Kern lake to the north end of Tulare and connect with the West Side canal.

## Souther's Ranch.

This term is applied to a tract of 11 square miles of land owned and occupied by Messrs. Livermore & Souther. Mr. Souther has lived and worked here for three years. During that time he has built 125 miles of canal and now has 3,500 acres under cultivation. There is alfalfa which is cut four times each year and wheat which will yield 100 bushels per acre, strawberries an inch in diameter, blackberries with a yield equal to the wheat, 150 swarms of bees, and a large dairy. Miles of fences, large barns and a world of machines; blacksmith shop with three furnaces, hogs fat and lazy, fine cattle and 10,000 sheep, and long ricks of hay in all directions, which makes a man this dry year wish he had some.

Good land can be bought on the line of canals for \$10 to \$25 per acre. Nearly all the available land has been taken under some one or other of the land laws of Congress.

A few men own most of the good land and claim the water. This entire county would be worthless without irrigation. With the river judiciously handled, hundreds of square miles may be changed from desert to garden.

W. W. BRIER.

Centerville, Cal., June 9th, 1877.

## Indigenous Verbenas in Arizona.

EDITORS PRESS:—It is generally believed that the verberna, one of our most desirable bedding plants, so justly prized for the abundance of, and for the great variety in, the color of its flowers, is a native only of South America; but I find that it is indigenous to this portion of country. There is a white flowering variety growing at Rock Springs, San Bernardino county, Cal., but I did not find it in bloom.

There are two purple varieties growing in abundance in Arizona. The first variety is found growing from west side of Union pass, near Hardyville, eastward to Anvil Rock, a distance of about 100 miles. It has lilac-colored flowers, thyrsi large, long, many-flowered. The seeds on the lower part are ripe while the flowers on the points are fresh. Flowers rather small and quite fragrant. Plant bush-like, often 18 inches high, with "fine-cut" leaves; blooms profusely.

The second variety is found from Fort Rock eastward to near Verde river, a distance of about 120 miles. It is a low growing plant, spreading like to the purslain. Joints short, leaves profuse, more finely divided than No. 1, thyrsi small, flowers small, inodorous, darker than No. 1, blooms profusely; no seed found.

Inclosed you will find specimens of plants in flower, with seeds from No. 1. I believe that these plants grow over a more extensive region than has been mentioned in this; but have not had an opportunity to prove that such is the fact, by observation. J. A. CULBERTSON.

Prescott, Arizona, June 2d, 1877.

[We thank our correspondent for his note and for the specimens which he describes. We may refer to this subject again at another time.—EDS. PRESS.]

## ARBORICULTURE.

## The Osage Orange as a Timber Tree.

We have already demonstrated in this State the value of the timber of the Osage orange. A year ago the wood was used with success by a Stockton carriage maker, we believe, and the subject is one which may be considered farther. L. J. Templin, writing in the *Practical Farmer*, says: "This tree is a native of Texas, Arkansas and the Indian Territory, where it grows 60 or more feet high, and 16 to 20 inches in diameter. The timber is very strong, elastic and durable. It has long been very popular as a material for bows among the Indians of the South, hence called by the French bois d'arc or bow wood. From this it is shortened in Texas to bodock. This tree, though often injured by severe freezing when used as a hedge plant, will probably be found quite hardy in most parts of this country when grown in a tree form; the continual pruning to which it is necessarily subjected to keep it within proper limits as a hedge plant tends to weaken its vitality, and renders it more liable to injury from frost. As a shade tree it has decided merits. When grown alone it becomes quite bushy, its branches somewhat drooping; its leaves are quite glossy and shining and it has the good quality of not being much subject to the attacks of insects. For many purposes in the arts the timber of this tree is well adapted, having the

qualities of toughness, hardness, durability, and of scarcely being affected at all by the hygro-metric condition of the atmosphere. It has been employed largely in shipbuilding, being, on account of the above qualities, well adapted to many purposes in that art. As a material for making wagons the Osage orange is said to have no equal. Its solidity, elasticity and durability are equal to the best of oak, while its ability to resist the effects of the changes of the weather without shrinking or swelling, makes it superior to all other kinds, especially for wheels. It is found that while wheels made of oak or hickory require the tires to be shrunk on once a year, those made of the *Maclura* will run on almost indefinitely without resetting or getting loose. Being a fine grained wood and capable of receiving a high polish, the timber of this tree is found well adapted to the manufacture of furniture and cabinet ware. The Osage orange is easily propagated from seed, and can be transplanted with almost invariable success. In making a plantation of it for timber it is best to raise the seedlings to one or two years in a nursery, as they can be cared for much more cheaply in that way than when planted where they are to remain. The nursery should be planted where a grove of the trees is wanted, as the mutilated roots that will be left in digging will send up a heavy growth of suckers. When set for a permanent grove they should be placed rather closely, say four or five feet apart each way, as they are inclined to grow spreading and drooping where they have plenty of room. The close planting will compel them to run up for light and air, and when they begin to become crowded every alternate one may be taken up and destroyed or transplanted to other ground. Should any of the plants fail to grow, their place should be supplied with good strong plants at the next setting season; and if they make a weak or straggling growth they may be cut back to the ground during the winter or early spring, when they will send up one or more vigorous shoots, only one of which should be allowed to grow and make good trees. A little care in pruning off side branches will aid in keeping the tree in a proper upright form and throw the vigor of the tree into upward growth. If a heavy mulch of straw, hay or similar material can be given, it is the best treatment they can have. In its absence they should have thorough culture, similar to corn, till they shade the ground quite well. Plants can be had of almost any tree dealer or nurseryman. Every farmer would do well to plant out a grove of this timber, as, even though he may be advanced in life, still it may prove to be a source of profit, even in his lifetime, in the way of stakes, posts, etc."

## Why Trees and Plants Drop their Fruit.

EDITORS PRESS:—In answer to a query in a late number of your paper, why almond trees drop their fruit, Mr. Clough, of Niles station, has given a reason and a proper one, too. I supplied Mr. C. with several varieties of his original stock some 12 or 15 years ago, and as I then had the largest almond orchard in this part of the State, I had observed their habits carefully; and the same may be said of certain kinds of tree fruits, as well as currants and gooseberries, especially. A superabundance of water in the soil shortly after the fruit is formed and when in blossom, will cause the fruit to drop. But there are other causes. I have frequently observed that when a tree sets too many blossoms they will be shed, and in such cases the tree will generally make an unusual growth of wood. This may be said to be a rule, excepting in cases where the roots are injured from any cause. And even in these cases the fruit is apt to cling to the tree and be very small, while the tree will have but little foliage.

I have frequently lost a large share of a gooseberry crop on my Fruit Vale place, in Alameda county, after a late rain, while the plants were stimulated to an unusual growth of wood.

On my place in Santa Clara county, where I irrigate wholly, I have more than once had a partial failure of the last-named berries, of which I have had 14 acres on different portions of my place, and could observe them well. By applying water while they were in bloom they would almost always get too much of it, as the rows were one-quarter of a mile long, through which the water ran; and still the rows were ridged up. My land is retentive of water; with loose, leaching land there would be no injury. This very season my men have materially injured the crop of an eight-acre piece of currants by applying water while the plants were in bloom. The first setting of fruit did not drop off, while the last setting did.

This whole subject of the tree and plant below ground, as well as the tree and plant above the surface has been to me one of much interest. The largest cherry trees in the State, like many other varieties of fruit trees, have a spongy bark to their roots, and are bearing a light crop of fruit this year, while some are dying outright from the effects of the last long wet season. And we have yet to apply the underdrain to save these best orchards from total destruction.

I. A. WILCOX.

Santa Clara, June 9th, 1877.

[Thanks. We should be pleased to hear from Mr. Wilcox on the other abnormal phenomena which are being noted in our orchards this year, some points of which are described by correspondents in Santa Barbara, Los Angeles and other counties.—EDS. PRESS.]

## THE APIARY.

## Honey Bees and Fruits.

EDITORS PRESS:—To those persons who regard the presence of the honey bee as injuring their crops of fruit or fields of flowers, I would say a word in defense of this industrious, harmless insect. It is no new thing, the belief, with some tillers of the soil in fruit and clover, that injury is done by the bee. Many persons can testify to bees extracting juice from pounce lying around mills, and from peaches, pears or grapes, that have been maimed, crushed, eaten into or broken open by some other agencies, but no reliable, observing soul has seen, with his eyes, the honey bee at any time pounce upon a bunch of sound grapes, or other perfect fruit, eat through the skin or rind, and open up its contents, and remove it away.

It has been tried time and again. Sound bunches of grapes have been put on hives, directly over bees, and watched, and not a single berry was punctured. There has been a discussion in France, in wine districts, upon this subject, where the richest varieties of grapes have been exposed, and it is a settled fact, in Burgundy, that the bees are unable to cut the skins of the grapes. In this country some of the most careful apiarians have examined the bee and find that their mouths are not constructed to bite through the rinds. Black and yellow hornets are experts in cutting into peaches, grapes, etc. They eat through ripe fruits. Birds and hornets are rarely noticed in their mischief. The honest bees tarry long, and are seen by the thousands, and condemned as thieves and burglars. When the fruit is once broken they are ready to pitch in, and invite others to come.

Upon close observation it has become a settled fact that bees are a necessity in transmitting the pollen from one blossom or plant to another in order to fructify them. Many plants without bees would remain constantly infertile, and many green-house plants remain sterile where the insects of the country have not been imported along with them from their nativity. It has been proved that clover and many other flowering plants protected from the visits of bees and other insects proved infertile, while of those in open culture the seed was perfect. Even with peaches grown in pots the gardener attributes his success to the agency of bees in fertilizing the blossoms. Bees are placed in the gardener's house as the flowers begin to open, to effect this result.

Most honey undergoes a change, after being gathered, before it is sealed in the hive. Our white and Alsace clovers produce a pure, rich flavored honey, the basswood a high flavored honey. The oak and the willow produce good, and the orange, in blossom, produces a delicious honey. Most all leguminous plants produce honey of an excellent quality. Some plants produce a poisonous honey, such as mountain laurel and the tobacco plant. For commercial purposes the mint family produces the finest honey of all. The wild sage, which grows so plentiful in southern California, produces large quantities of good honey, rivaling the honey of any other country. Buckwheat flowers produce largely, but a poor quality of honey.

And now, after all, the question arises, "Is honey a vegetable?" Not a drop of honey, that is honey, is found growing on this planet that I have ever learned. Sweets are gathered by bees, and they pass through their chemical laboratory while on the wing and before it is passed into the cells these various saccharine substances are converted, through the animal digestion, into honey of various shades and quality. The writer is very confident that the honey bee is innocent of injury to fruit or flowers, but an indispensable necessity to its fruitage, growth and productivity.

SOLOMON W. JEWETT.

Shepherd Home, Vermont.

[Our correspondent takes firm stand in favor of a manufacturing process by the bee in his honey storing. It is but fair to say that the matter is one of controversy, and some observers and writers assert just as strongly that the bee is only a gatherer, and not a manufacturer. We are not aware that the matter has been scientifically demonstrated.—EDS. PRESS.]

MOND BUILDERS.—At the last meeting of the Philadelphia Academy of Sciences, Mr. John Ford described a group of eight burial mounds opened by him near Comp's creek, Macoupin county, Ill. Each of the graves was lined with stone slabs, and after the bodies were placed in position within, earth had been packed around them so as to fill the inclosure. All the skeletons found in these graves faced the east. In one of the graves four skeletons were found, seated in two pairs, the knees of one pair pressing against the backs of the other. The arms were crossed. In the right hand of each individual thus interred, a large marine shell (*Buccinum perversum*, Linn.) had been so placed that the small end of the shell rested in the hand and the large end in the hollow above the left hip. Within each shell what appeared to be the bones of a child were found, whose skull had been crushed before burial, the skull protruding beyond the aperture of the shell. It is thought that these infants were sacrificed to the dead.



## HORTICULTURE.

## Behavior of Fruit Trees in Santa Barbara.

EDITORS PRESS:—You ask readers to write concerning the behavior of fruit trees this year. Our trees are having a time of resting, as some of them have not started yet, and on the most that have we see but few or no leaves at the top. Our best varieties of peaches are a failure, also plums, and some varieties of pears. There will be some apples and pears; as many as the trees should have such a dry season.

Grapes started finely, but grow slowly, and where we get the best fruit in ordinary seasons the vines will fail, this year, to give us a fair crop; but vines on low moist land will have a chance to show what they can do.

Fig trees came out promptly, as they do every year. Almonds started out very well, but will have very little fruit; perhaps enough, as the trees could not mature a large crop. Our apple trees will continue to start and bloom until July.

Most of the plum trees, I think, will wait for rain next year. That is the way they did in 1871, and most of the fruit trees were just about as slow getting to work.

Some say that trees never before made such work, but our fruit trees never come out so promptly as in the northern part of the State. Last year being very wet the fore part of the season, trees came out more promptly, and dormant buds started well; but this year we will fail to start dormant buds, and we may expect to see them coming along for four or five years.

Some contend that it is not for want of moisture that the trees are so backward, as some trees that have been standing where they had all the water needed have not grown much better; but I notice my trees on the moistest land have the most leaves and blossoms, but they are not growing as trees should. We have had only about four inches of rain for the season, so it is plain to see that trees cannot grow well without plenty of rain. We have very few or no facilities for irrigation; and if we had, trees would start slowly with so little moisture in the atmosphere. The trees need wetting as well as the roots, or the buds and bark will be too dry to permit the sap to flow freely.

Every season our peach and uectarine trees lose many of their fruit buds by drying and falling off, but usually enough remain. When we get plenty of leaves and blossoms, we have an abundance of fruit. If we could have as many rainy days as some of our more northern neighbors, our trees would have no excuse for being slow. As it is, we can do no better than let them have their own way; and as they have done well heretofore, we will patiently await the result.

Crops of all kinds will be light on the average. Corn and beans look very well in places, and, as our summers are more or less foggy, we cannot fail altogether. Some fine hay is cut, but there is very little grain to be threshed.

O. N. CADWELL.

Carpinteria, Cal., June 4th, 1877.

## The Santa Ana Trees.

EDITORS PRESS:—Can you or any of your readers give the cause of the extraordinary condition of our fruit trees. Nearly all are affected more or less, but especially the peach, no difference whether irrigated or not. Now, on this 8th day of June, you can see peach orchards as dormant as they are in the East in December. The fruit buds are dead and the leaf buds and wood appear all right, but not a sign of a leaf. There are a few exceptions and these are seedlings, which are all right, full of leaves and fruit. In some instances they blossomed some and have a few peaches on and not a single leaf. My neighbor has 12 nice nectarines on a year-old tree and no leaves.

The newly planted trees have put out at or near the root instead of at the top. As I have seen no notice of this state of things in your paper, I hope it may be confined to this locality alone, but would like to have an explanation of the cause.

Santa Ana, Los Angeles county.

## Similar Phenomena in San Bernardino.

EDITORS PRESS.—We of San Bernardino valley witness a very singular phenomenon in our fruit trees. A great many of our fruit trees, notably peach and plum, are completely bare of leaves and fruit, and look like trees in the dead of winter in a cold climate—an odd sight, to be sure, in this warm climate. Will some one of your readers be kind enough to answer these questions:—What is the cause of this? Will it injure the trees?

San Bernardino.

[Our correspondent asks questions which are in many men's minds at this time, and we trust that light may be let fall upon the subject from some one's experience or observation. We have considered the phenomena not a little, but reach no satisfactory conclusion as to the cause, except the very general one which will occur to every one, that the secret lies in the unusual natural conditions which have prevailed this year. But just what one or more of the unus-

al conditions, or in just what way they have operated to cause the abnormal growths, we cannot decide to our own satisfaction, and we refrain from stating our surmises. Let us have more facts concerning the condition of the trees and the conditions of the soil and air which have prevailed; also what difference there is in location and surrounding between those trees which have grown well and those which have failed. We hear that there exist these differences in localities not wide apart. Let us hear from all readers who have facts and inductions from facts.

The probable future of the affected trees is also in much doubt. Many have grave apprehensions that they will lose their trees, because they have lost trees before after behavior much like the present; others claim the evil but temporary, and that the trees will survive the inflection.—EDS. PRESS.]

## A Fruit Ripening House.

The Baltimore *American* says: Just at this time the banana trade is the feature of the fruit business, and dealers are handling large quantities of the West India product, of which several cargoes have lately been received. The fruit is not always ripe when brought here, and, to hasten what would otherwise be left to time to accomplish, a firm on Pratt street have adopted the West India plan of using a ripening house, which they have just constructed and which is the only one in the city. It has been found that fruit ripened in this way is really superior to that which arrives at maturity in the usual manner, and that it retains a freshness and flavor not found in time-ripened bananas. The process used by the firm named is an interesting one and merits a description. Two large rooms were partitioned off in their warehouse, in the construction of which the main object was that they should be perfectly dark and as near air-tight as possible. Stringers, with hooks to hang the bunches on, were placed across the room, and gas attachments made to heating pipes which give out no light. Thermometers were then placed in different parts of the room, and the green fruit having been hung inside and the proper temperature obtained, the rooms are closed tightly, only to be opened to inspect the condition of the fruit. In a short time the green banana begins to turn white at the stem, and in a few days the entire bunch assumes the same color, retaining its firmness, and is then ripe and ready for market. The operation is a very neat one, and requires care to prevent the fruit being subjected to too much or too little heat. The firm have about two thousand bunches of fruit undergoing the process now, one bunch of which is over five feet long and holds about two hundred and thirty bananas, the shortest of which is five and a half and the longest eleven and a quarter inches in length.

## THE STOCK YARD.

## More About Horn Ail.

The report of a lecture of Dr. Cressy, of the Massachusetts Agricultural College, on the subject of "hollow horn, etc.," has brought out considerable criticism from those who think their experience teaches differently. To meet these objections Dr. Cressy gives the following supplementary statements. He remarked that from time immemorial almost all the diseases which bovine animals are subject to have been ascribed to "horn ail." This is an imaginary disease. The lecturer exhibited a horn with a portion of the skull attached. This was taken from a creature he had known from a calf, slaughtered at two and a half years old, which never was sick a day in its life. He had shown this specimen in many places, and the believers in horn ail would at once say that it was an excellent specimen of that disease. In this specimen the horny envelope, or powder horn, had been removed, leaving the bone, which was sawn lengthwise, exhibiting a hollow at the base, extending up two-thirds of its length.

This bone, commonly called the "pith" of the horn, is an off-shoot from the frontal bone, and is protected by the dermal envelope or "powder horn" which covers the bony portion.

The hollow in the bone extends down into the frontal bone of the skull, and is simply an air cavity which extends from the nostrils up through the head and into the horns. It is possible that insects may, and they sometimes do, pass through the nose into the sinuses in the skull, and they may even pass up into the cavity in the horn.

The horn is kept warm by the blood passing around it in a set of blood vessels lying between the dermal or horny layer and the bone and covering the latter, as may be seen where the horn has been slipped off. When the animal is

young and growing rapidly, plenty of healthy blood flows to the horn as to the other extremities and the horn is warm. As the animal grows older and the horn has more surface, it becomes cooler, because comparatively less blood circulates there: In the process of growth a portion of the center of the bone becomes absorbed, leaving a cavity. Into this the cold air from the nostrils passes, helping to cool the horn. The older the animal, the larger will be the hollow in the bone and the colder will be the horn. Ignorant of these facts, many a farmer, when his cow is sick from any cause, first feels of the horns to see if they are cold. If they are found so, they are assumed to be hollow, in consequence of disease; and the next thing is to bore the horn and put in vinegar and pepper and salt, and what not, to cure a disease which does not exist; even now, half the farmers in New England will deride as a "scientific new fangled notion" the statement that there is no such disease as "horn ail." But the hollow horn is a natural and physiological condition of the cow, and the difference in structure forms a well known basis of classification.

The ruminants, or cud-chewing animals, are divided into two classes—the solid and the hollow horns. Of the first class the deer is an example; of the second our domestic cattle are an illustration.

In cattle having short horns the hollow is smaller than in those with long horns; bulls have a more solid horn than cows. Animals having pastures poor in phosphates will show the lack of bone-forming material in the system, and will be more hollow horned than those having a pasture rich in phosphates. In such cases nature will endeavor to supply the lack of phosphates in the food by reabsorbing portions of the lime from the more useless parts of the system, such as is the inner part of these bones of the horn.

The "Chocorna plague," or "cripple ail," which prevails in New Hampshire near the foot of the White mountains, arises from this cause. While somewhat similar to the human disease known as rickets, it differs from rickets in this, that the osseous or bony matter has become more or less absorbed away from the system, while in rickets it is not deposited at all. These bone troubles will be found in localities lacking phosphates, which will be indicated by the cattle seeking and chewing bones, and such cattle turned into good clover pastures or fed with bone meal will recover every time.

Matter in the horn has been considered to be another unailing symptom of "horn ail" in its worst type. This is the consequence of a catarrhal trouble, affecting the cavities in the head, and extending sometimes up into the cavities of the horn, and it should be treated as a catarrh.

We are told by the quacks, as a curious circumstance, that horn ail commences at the end of the tail. When the skin becomes loose over the bone of the tail, they say the animal has, or will soon have, horn ail. The tail bone ends in a cartilage like the snapper on a whip lash; if this gets hurt and inflammation takes place, absorption is likely to follow, and if there is a lack of phosphates in the food, it will go on till a large amount of the bone of the tail is taken up.

The professor related a case, where he was called to see a sick cow; the local cow doctor had also been called, and they arrived at the same time. They went to the stable. Being nearly dark, there was hardly light enough to see the cow; but the cow doctor rushed in and seized her tail, and after a short examination said: "Just as I expected—a very bad case of horn ail," then going forward to feel whether her horns were not cold, he found she was a "mooley," having no horns! But even this did not floor him. "Well," said he, "she would have had horn ail, if she had had any horns!" The remedy for the "Chocorna plague," and for all troubles arising from deficiency of bone-making material in the food, is to feed bone meal. Wheat bran contains a good deal of the needed material; but bone meal is better.

## Oregon Cattle to Kansas.

The *Willamette Farmer* has the following interesting paragraph: Mr. W. S. Newbury, of Portland, has just returned from an extensive business excursion through the Upper Columbia farming country, and furnishes us interesting facts as to the progress of the country and the increase of prosperity. For one thing, a regular trade is established between Kansas ranchers and stock men and the cattle men of Eastern Oregon, and already this spring several parties of cattle buyers have gone through the Upper Country from The Dalles to Pelouse, purchasing beef cattle to drive East. One firm had purchased 2,700 head and was still buying, and others were in the field making large purchases. These cattle are started Eastward by way of Boise and Snake river, through Utah, and are driven all the way to Kansas by easy stages, reaching there, some of them, early in the fall. Later in the season those that are in good order are shipped East by rail and the rest wintered in Kansas ready for shipment next spring, as soon as they are in good condition. Some of these buyers have purchased stock in Oregon for three years past, and it is becoming an old settled business, one that will grow and increase and that calls for the improvement of stock to make it as profitable as it should be to the ranchmen of Oregon and Washington.

## SHEEP AND WOOL.

## A New Type of Merino Sheep.

It appears from recent publications that the Merino sheep is either showing disposition to revert to the type from which it sprang or else is putting forth a higher development. We commend the following, which we find in the *American Cultivator*, to the attention of our sheep herders. We should like to know if they have discovered in their herds any tendency like that described. The *Cultivator* says: The new breed of sheep, Mauchamp, or Silky Merino, is exciting much interest throughout the country, and causing considerable inquiry concerning its origin and history.

Mr. George William Bond, a wool merchant of this city, some 12 months since called the attention of the Boston Society of Natural History to the discovery of a similarity of the wool of the French Mauchamp race and that of the Arabian stump-tailed, fat-rumped race or Mecca sheep.

Dr. L. Fitzinger, at the Imperial Academy of Vienna, described the Mecca sheep as having its whole body covered with short, smooth, closely lying straight and stiff shining hairs, which are shorter on the face, ears and legs, and beneath these there is found a short, peculiarly fine, wavy and elastic wool, which is finer than that of most known races of sheep.

Mr. Bond obtained a skin of this last-named race and found that the covering exactly agreed with Dr. Fitzinger's description, and a microphotograph of the wool, magnified about 200 times, showed that the fiber measures only about 1-2000th of an inch in diameter, which is as fine as the finest Silesian wool. Comparing this wool with a sample of another lot sent from New York, and also with that of the Mauchamp sheep, an exact correspondence was discovered. Mr. Bond urges that the Mauchamp sheep might be simply a case of atavism or reversion to an ancient type—the old Arabian sheep.

The Merino sheep is undoubtedly an animal that either from mode of culture, or some accidental cause, has lost the hairy part of its covering, and the wool has been furnished with a liberal supply of "yolk" or grease to meet the exigencies resulting from this change. If descended from the Arabian sheep, may not the fat deposit of the tail have been diverted to produce the greater amount of "yolk" required to make this wool covering adequate for the protection of the sheep from the external influences to which it was subjected?

The following letter, kindly handed us by Mr. Bond for publication, contains a strong confirmation of this theory of reversion, and it is to be hoped, should the sheep breeders of this country discover among their Merino flocks any marked specimens developed according to our description of the Mauchamp sheep, that they will inform us of the facts, that we may aggregate a mass of testimony on this important subject leading to valuable results. It was written by J. L. Currie, of Australia:

With regard to the first appearance of the silky type, I must go back to the historical introduction of the Merino sheep into the Australian colonies.

Briefly, this occurred towards the end of the last century, and the source from which they were derived was a small flock, presented by the king of Spain to George III, of England—I believe the highest type of the breed.

A few of both sexes were procured, by a Captain McArthur, and introduced into Australia, and from that source all the best flocks now in existence in the colonies are sprung.

About 30 years ago, I was fortunate enough to procure 10 rams, of very high class, from this flock. After this I occasionally observed cropping out a peculiar sheep, with a bright, silvery, delicate-looking, lustrous fleece, straight and long in the fiber, showing a most marked peculiarity—the wool being more like delicate, fine, lustrously white, silky hair. In classing the ewes for breeding purposes, these were generally rejected, on account of their delicate appearance and supposed delicate constitution. At last it occurred to me that it might be worth while to see if anything could be made of them, and, about 10 years since, on the appearance of a ram with this characteristic very decidedly marked, I collected a few ewes and put him with them. The samples sent are from the progeny of this coupling.

The result, so far, has been the establishment of a breed with very marked characteristics, viz.: a long, lustrous, straight wool, a heavier fleece, and a larger, more symmetrical and more vigorous sheep. It has not been followed out by any one but myself, but, on inquiry, I find that among all flocks sprung from the same source (the Spanish Merino), animals having the same characteristics have been observed. The fair inference, therefore, is that it is to the Spanish Merino it is due; whether reversion to a lost type, or nature under different conditions developing a different and higher type, must, I think, be matter of conjecture. Since seeing the samples of Mauchamp Merino wool, which you so kindly sent, I have no doubt that the sheep from which that breed was produced, and those to which I refer, are essentially of the same character, from the similarity of their wool and from being procured by or from the same influence, which, from its frequent repetition, I cannot regard as a freak of nature, but must be sought for from other causes, either reversion or a higher development.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons of this department.

**THE HEADQUARTERS** of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Worthy Lecturer's Visits.

**EDITORS PRESS:**—Again addressing ourselves to our work in the lecturer's field, we left San Francisco Friday morning, June 1st, at 8 A. M., for Stockton by C. P. R.R., in company with Brother Wright, Past State Lecturer, who was also on his way to Grass Valley to do Grange work at that place. Arriving at Stockton at 12 M., and inquiring for the Copperopolis R. R. depot, and the time of leaving for Milton, found that it did not leave till 7:45 next morning, and as our appointment was for

#### Sonora,

At 10 A. M. of Saturday, this precluded all possibility of meeting our appointment by that route. So upon further inquiry, finding that a train left Stockton for Oakdale at 4 P. M., we determined to go as far as our way toward Sonora as possible that day, and trust to what we could find to continue our journey, nothing daunted but that some way would be found to make the trip. At Oakdale we found a most comfortable and cheap private conveyance to Sonora, which would not only convey us there, but await our pleasure while there and return us to Oakdale in time for our meeting at that place on Tuesday. Thus provided for, we telegraphed our Sonora friends that we would be with them by 10 o'clock Saturday morning, and to accomplish this started from Oakdale for Sonora, 40 miles distant, at 3 A. M., reaching our appointment as agreed upon.

On the plains from Stockton to Oakdale, we found the dire effects of the dry season, with only an occasional piece of grain on second plowed summer fallow ground, except on the Stanislaus bottoms, where moisture was sufficient to insure good crops. As we approached and reached the mountains it was very different, for in the mountains there had been a fair sufficiency of rain, and most excellent crops secured, gladdening all the mountain portion of Tuolumne county. On our arrival at Sonora we found that preparations were in full tide at the picnic grounds, one and one-half miles from the town, where all that could be done to make the meeting a success was being done, including music, both vocal and instrumental. The uncertainty of our arrival being no longer a question, as we put in our appearance *persona propria*, we were at once recognized by Brother Taylor, Worthy Lecturer of Sonora Grange, and by him duly introduced to the Worthy Master, Brother Williams, and so on to all the brothers and sisters upon the picnic ground. The day was all that could be desired and the annual harvest feast was a complete success, not only in numbers, as the whole town manifested an interest therein, but in the arrangements made for all to enjoy themselves.

At 12 M., or soon thereafter, all were invited, not to a basket picnic, but to tables loaded with the weight of a barbecued ox and other animals, with every abundance of turkeys, chickens and those numerous good things that make up a Grange harvest feast. So ample was the provision for so large a concourse that all were accommodated, and in the most comfortable manner, truly representative of the abundance and genuine Grange hospitality of the only Tuolumne county Grange.

After two hours or more being spent in genial cheer, interspersed with suitable toasts for the occasion, order was called and the time for the public address announced to have arrived and all invited to surround the speaker's stand, whereupon, and surrounding the dancing floor, seats were provided for the greater part of the audience. We were introduced to the Grangers, farmers and citizens of Tuolumne county, as the Worthy State Lecturer of the State Grange of California, (by Worthy Master Brother Williams), and told that we would address them on topics not only of interest to Grangers, but of vital interest to all present.

The topics discussed by us for about one hour were: What the Grange has done; what it proposes to do; by whom and for whom; its work a necessity, but being successfully accomplished, and in its accomplishment the whole people to be benefited. The hits made on unequal taxation and class legislation, as well as the plans proposed for changing the same, were all responded to with an enthusiasm that showed not only the Grange as interested in the great work, but every class of citizens present endorsed the same. After the lecture at the picnic grounds, being earnestly solicited, we consented to address them further, on the great change so much needed in our State legislation, at the Court house, at 2 o'clock P. M., on the day following (Sabbath day as it was). The meeting was very largely attended, and our views as fully endorsed as at the picnic grounds. Our visit to Sonora Grange and Tuolumne

county will ever be remembered with grateful pleasure, and we leave with the satisfactory assurance that, so far as Sonora Grange is concerned, as well as the citizens generally in and around Sonora, that the Grange work is safe in their hands, and that it will be heard from in the right direction.

Reluctantly breaking away from this gem of a city in the mountains, to fill our next appointment, 40 miles distant, we again take to our pleasant conveyance, and place ourselves 12 miles on our way towards Oakdale, where, at the kind solicitation of Bro. Taylor, we halt to enjoy for the night his hospitality and friendly interchange of thought, making the place of our next appointment, the following day, in time for rest, before being called upon to perform here our labor officially.

On Tuesday, the 5th inst., according to published announcement, a Grange picnic was again in full blast at

#### Oakdale,

And after the enjoyment of a Grange feast, with all its attendant pleasures, at 3 P. M. an adjournment was had to the school-house to listen to the promised lecture upon Grange matters. A very full attendance manifested the interest still felt in our Order in this place, for more rapt attention and enthusiastic responses were nowhere met with. For one and a half hours we spoke, as long as we felt we had strength to hold out, and we were fully paid by the determination manifested to second all our efforts for the accomplishment of all our glorious objects. Thus the work goes prosperously on.

After our meeting at Oakdale we were taken care of by the Worthy Lecturer of Oakdale Grange, Bro. Monroe, and carried to his home, eight miles on our way towards our next appointment, and there most hospitably entertained by him and his kind family for the night. Next morning we were conveyed behind two noble roadsters in a most comfortable buggy in three hours 20 miles farther, to Lathrop, where we were announced to

#### Lathrop

Grange, in time to meet with them in open meeting, Bro. Moore, full of his Grange zeal, assisting at the same. Here met by Bro. Moore, Master of Rustic Grange, and visiting Bros. Overhiser, Phelps, Burge and their wives from Stockton, with Bro. Kerlinger and wife, from Ellis, and other visiting brothers. We met at 2 o'clock P. M., in the spacious Grange hall, to repeat our work as State Lecturer in an address of more than an hour, which address called forth a genuine experience meeting, and subjects especially local to San Joaquin county, in which the farmers were especially interested, were fully discussed by Bros. Overhiser, Monroe, Burge, Phelps, Kerlinger and others, assuring and greatly encouraging us that the Grange work was going gloriously onward, and meant practical business on all questions that affected the farmers' interests in California.

After leave taking, we accompanied Brother Moore to his well appointed Grange home and partook of his kind hospitalities, so well administered by his good Grange wife. At eight o'clock, P. M., we left by train for

#### Modesto,

Our next place of appointment. Arriving at this beautiful county seat of Stanislaus county, we were met by Bro. Turner and others and properly cared for, to await our official duties on the following day, June 7th. The picnic was held in the large Grange warehouse, where, considering the terrible gale of wind blowing, full of sand and very oppressively hot, there was a large turnout, showing a genuine Grange interest, and many visitors from other Granges were present. The order of exercises was: First, Music from the Grange choir, (vocal and instrumental). Second, Prayer by the Chaplain. Third, Music by the choir. Fourth, Address from the State Lecturer. Fifth, Music. Sixth, Picnic.

A more attentive audience never was seen and the address often applauded. The subjects treated were new to all and wholly unexpected. We received many congratulations, with invitations from all visiting brothers to meet with their Granges and they would give us a grand reception. Many expressed themselves as receiving new life, while many, not Grangers, joined in their congratulations. We were taken in charge by Bro. Bangs, W. M., during the picnic and most hospitably served, also made acquainted with all brothers and sisters, by introduction. Nothing does or can discourage this Stanislaus people, but determined as ever are they preparing for another crop. Truly they deserve our commendation, aid and encouragement.

In our ride by private conveyance over the San Joaquin and Stanislaus plains, we were pleased to find that not all of their crops were blighted, but in favored localities or where the cultivation had been more thorough or on the adobe summer-fallow and double-plowed lands crops varied from fair to sufficient to pay for harvesting. Most certainly the farmers of this portion of the State have this year learned that one of two courses must be followed hereafter to secure a crop in dry seasons. Either some system or plan of irrigation or summer-fallowing and very deep cultivation, to hold and secure the moisture. Also seeding before the fall or winter rains set in, so as to utilize all the moisture kind nature may bestow upon this (if favorable,) most desirable country for grain growing farmers, and if unfavorable, as in such a season as the present, they must be able to utilize every drop of moisture given them. We feel

also that these lessons of observation may not be lost on other portions of the State, for conclusions arrived at here will profit all. Notwithstanding all these reverses, the farmers are not discouraged but, feeling the present year to be an exceptional one, are even more anxious to try it again and make up in the near future what they will lose this year. We observe also that the partial legislation for the past ten years, practiced by politicians seeking personal advantages at the expense and disadvantage of the producing and laboring classes, is creating a great call upon the nominating conventions of both parties to put in a different class of men and to the pledging of these men to the repeal of several, to farmers, very obnoxious laws: For instance, the assessment of growing crops, the mortgage law, and the passage of other laws relieving farmers from such oppressive taxation, by carrying out more truly and practically the section of the State Constitution that says, "Taxation shall be equal." Also, seeing to it that the coming Legislature provides fair and equitable rates of fare and freight between the railroads as common carriers and the producers and travelers as their patrons and supporters. In these and many other questions the farmers and labor element of the State will demand suitable legislation. They also demand no more foolish squirrel laws, leaving it optional with the supervisors of each county to carry out, but an efficient, active and positive law, compelling each and every land owner to take care of his own squirrels. Such a law promptly carried out would more than save to each and every farmer more than his taxes yearly. Let our present squirrel law be a sufficient lesson for the future, to no longer trust anything to be carried out by our several county supervisors, that is for the practical good of the farmer. But we must close and speed on our way to meet our next appointment and make not only progressive but successful our good Grange work.

B. PILKINGTON, State Lecturer.

Modesto, June 8th.

### Election of Officers.

**DIXON GRANGE, No. 19, DIXON, SOLANO COUNTY.**—C. C. Agee, M.; J. C. Merryfield, O.; S. McBride, L.; W. H. Wells, S.; John Mayes, T.; Miss Mattie McBride, Sec'y; G. Schmeiser, G. K.; Mrs. John Mayes, Pomona; Mrs. Jas. Ellis, Ceres; Miss Annie Kline, Flora; Mrs. L. E. McMahon, L. A. S.

**EVENING STAR GRANGE, No. 194, BIGGS, BUTTE COUNTY.**—A. M. Woodruff, M.; A. D. Nelson, O.; George Launder, L.; A. K. Baker, S.; C. H. Morrow, T.; F. C. Willard, Sec'y.

**GALT GRANGE, No. 180, SACRAMENTO CO.**—G. N. Gray, M.; S. E. Wriston, O.; Wm. Brewster, L.; L. H. Frank, C.; A. B. Bryant, Sec'y; A. W. Wright, T.; Hiram Wiser, S.; E. Ray, A. S.; J. C. Wright, G. K.; Mrs. A. B. Bryant, Ceres; Mrs. G. N. Gray, Pomona; Mrs. J. B. Gates, Flora; Mrs. H. Chase, L. A. S.

### Open Grange Meetings

For Stanislaus, Merced, Fresno, Tulare, Kern, Los Angeles, San Bernardino and San Diego Counties.

Bro. Pilkington, Worthy Lecturer of the State Grange, will hold open meetings at the places and time indicated below:

Grangeville, Tulare County.....	Monday, June 18th.
Hanford, Tulare County.....	Tuesday, June 19th.
Visalia, Tulare County.....	Wednesday, June 20th.
Farmersville, Tulare County.....	Thursday, June 21st.
Soda Springs, Tulare County.....	Friday, June 22d.
Tulare City, Tulare County.....	Saturday, June 23d.
Glennville, Kern County.....	Tuesday, June 26th.
Bakersfield, Kern County.....	Thursday, June 28th.
Teichipia, Kern County.....	Saturday, June 30th.
Los Angeles, Los Angeles County.....	Monday, July 2d.
Compton, Los Angeles County.....	Tuesday, July 3d.
Anaheim, Los Angeles County.....	Wednesday, July 4th.
Westminster, Los Angeles County.....	Thursday, July 5th.
Azusa, Los Angeles County.....	Saturday, July 7th.
Rincon, San Bernardino County.....	Tuesday, July 10th.
Riverside, San Bernardino County.....	Thursday, July 12th.
San Bernardino, San Bernardino Co.....	Saturday, July 14th.
San Luis Rey, San Diego County.....	Tuesday, July 17th.
Poway, San Diego County.....	Thursday, July 19th.
San Pasqual, San Diego County.....	Saturday, July 21st.
Bear Valley, San Diego County.....	Monday, July 23d.
National City, San Diego County.....	Thursday, July 26th.

Appointments for Santa Barbara, Ventura, San Luis Obispo and Monterey will be made in a few days.

Bro. Pilkington is an able and interesting speaker and no farmer, or friend of the farmers, should fail to attend his meetings.

AMOS ADAMS, Sec'y State Grange.

June 6th, 1877.

**THE DIGEST.**—The Executive Committee of the National Grange, pursuant to instructions, has prepared a hand-book of reference for the use of members of our Order. This volume includes the Act of Incorporation of the National Grange; the Declaration of Purposes; the Constitution and By-Laws; the Rules for Co-operative Associations, with directions for organizing such associations; By-Laws for County and District Granges; the Parliamentary Guide; the Installation, Dedication and Funeral Ceremonies, together with a full digest of all the laws, enactments and decisions now in force. Price, 25 cents, post-paid, from the Secretary of the National Grange at Louisville, Ky.

**NATIONAL GRANGE.**—The Executive Committee have selected Cincinnati as the place of holding the next session of the National Grange, which meets Nov. 21st, 1877.

### Taxing Growing Crops.

**EDITORS PRESS:**—By direction of the Walnut Creek Grange, No. 119, P. of H., I send you herewith preamble and resolutions adopted by Walnut Creek Grange, June 2nd, as a substitute for the resolutions adopted by this Grange and published in the RURAL PRESS of May 12th, 1877. These resolutions were reconsidered, and after discussion and deliberation the Grange adopted the accompanying resolutions (the same being offered as a substitute) as the conclusion of this Grange upon the subject of taxing growing crops. It is very desirable that the preamble and resolutions be published in the next issue of the PRESS, so much appreciated in this Grange.

WHEREAS, 1st, The Constitution of this State provides, Article XI, Section 13, That taxation shall be equal and uniform throughout the State, and that all property in the State shall be taxed in proportion to its value.

2d, Section 3,807 of the Political Code reads as follows: All property within this State, except the property of the United States, of the State, and of municipal corporations, is subject to taxation.

3d, Section 3,817 of the Political Code reads as follows: Whenever the terms mentioned in this Section are employed in this title, they are employed in the senses hereafter affixed to them. First, the term real estate includes, 1st, ownership of claim to, possession of, or right to the possession of land. 2d, all mines, minerals, and quarries in and under the land, and all rights and privileges pertaining thereto. Improvements.—Second, The term improvements includes, 1st, all buildings, structures, fixtures, fences, and improvements erected upon or affixed to the land. 2d, all fruit, nut bearing, or ornamental trees and vines, not of natural growth. Third, The term personal property includes everything which is the subject of ownership not included within the meaning of the term real estate.

4th, Section 3,887 of the Political Code reads as follows: Personal property mortgaged or pledged is deemed the property of the person in possession, and the mortgagor or lessee of real estate is liable for the taxes thereon.

5th, Section 2,955 of the Civil Code specifies what personal property may be mortgaged. The 6th clause names growing crops as one of the things subject to mortgage.

In view of these provisions of the Constitution and of the Code, there is no question but that growing crops are subject to taxation as personal property.

There are many reasons why growing crops should not be taxed, among which are, 1st, it is property only inchoate, not marketable, the value of which is in the soil; a good soil and favorable weather gives a prospective value to the growing crop, and that cannot be ascertained by the Assessor. 2d, If one kind of growing crop is taxed, all kinds should be, which is impracticable under our system of taxation, for the reason that such as corn, potatoes and other valuable crops are only planted after the assessment is made. 3d, Growing crops extract their principal value from the soil, and if this value is taxed to the growing crop, the same value should be deducted from the land for taxation. Of what value is land that has been cropped until it will produce no more? A remedy might be had by an amendment to the Constitution, but we think that would be impolitic.

The greatest hardship in taxing growing crops under the present law lies in the fact that the poor man that rents land is compelled to pay the tax at a time when he is least able to pay.

We therefore think that growing crops should not be in theory separated from the reality for the special purpose of taxation, until it can be done in fact without destroying the value thereof. Therefore be it

Resolved, That we do recommend the following amendments to the Codes: 1st, That Sec. 3,817 of the Political Code be so amended that the sense of the term real estate shall include growing crops. 2d, That Sec. 2,955 of the Civil Code be so amended as to exclude growing crops.

Ordered, That this preamble and resolutions be given to the RURAL PRESS for publication, as a substitute for resolutions from this Grange published in the RURAL PRESS of May 12th, 1877.

MRS. M. L. HUSTON, Sec'y.

Walnut Creek Grange, June 9th, 1877.

### In Memoriam.

**SUISUN VALLEY AND ROCKVILLE GRANGE, No. 9, Solano county.**

WHEREAS, It hath pleased Almighty God in his inscrutable providence to remove from our midst our Worthy Brother CHAS. W. HASSER, by the inexorable decree that all shall die, therefore be it

Resolved, That by the death of Chas. W. Hasser, Suisun Valley and Rockville Grange, No. 9, P. of H., is deprived of a very worthy member and sincerely regret the loss.

Resolved, That we deeply sympathize with his family in their affliction and tender the heartfelt sympathy of the Grange.

Resolved, That a copy be sent to the bereaved family and to the RURAL PRESS for publication.—Committee: Allen C. Miller, R. C. Haile, John McMullen.

**OREGON STATE GRANGE MEETING.**—Past Master Daniel Clarke writes: Our State Grange has closed its fourth annual session. The meeting was an interesting and I think profitable one. Among the business done was providing for bringing our Business Agency to a close. Financially it was not a success, though it would have been had it not been for contracting bad debts. The co-operative plan suggested by the National Grange is generally preferred here, and it is hoped that by next fall we will be able to put a joint stock company, on the co-operative principle, into operation in this jurisdiction for the benefit of Patrons. I believe it to be the only true plan upon which Patrons can do business or hold a check on trade. Our State Grange was composed of representatives from almost every extremity of this jurisdiction, with a large number of honorary and fourth degree members in attendance, all of whom appeared to take deep interest in the meeting; the Order in this jurisdiction is not as strong, numerically, as it has been in the past, but, in my opinion, it has simply sloughed off some of its dead weight and stands firmer than ever before. We have organized a few Pomona Granges in this jurisdiction, all of which report very favorably of the result of their labors.

**THE GRANGE RECORD.**—We have received a copy of the *Grange Record*, published at Louisville, Kentucky, by order of the National Grange under the supervision of the Executive Committee. It is a very bright, neat sheet, just what the National Grange needs for the dispensation of official information throughout the Order, and will serve its useful purpose better than any ostentatious organ would do. It is a praiseworthy publication.



## AGRICULTURAL NOTES.

## California.

## COLUSA.

**WHEAT ON TULE LANDS.**—*Sun*, June 9: In an interview with Mr. R. Cosner, the agent of the Sacramento Valley Reclamation Company, we learned that there are about 5,000 acres of tule land in wheat on Grand island, in this county, the present season, and all of it is looking remarkably well. J. C. Frazer sowed earlier than the rest, and will have the best grain. He has some 800 acres, estimated at between 50 and 60 bushels to the acre. A. H. Rose has about 2,000 acres, all looking remarkably well. Mr. Rose has been cutting for some time with a reaper. He commences on it in this way, because he could get into it earlier than with the header, and he thus gets so much the start on the winds, that are apt to thresh out a great deal of grain at this season of the year, and then he thinks the straw will be worth the extra cost of running it through the machine. He will try several experiments in this way. There is no doubt of the fact that farmers ought to get their grain cut as early as possible, because every day is liable to bring a destructive wind. Mr. Cosner brings also another evidence of the value of bluestone in preventing smut. A gentleman on the island washed most of his wheat in bluestone water, but sowed a strip through his field without the bluestone, and this is thick with smut, while the other is free from it. There has been a great deal of theorizing about smut, its cure and remedy, but one fact is worth a dozen theories.

**WIND.**—The north wind commenced Wednesday night, and blew very hard yesterday, but not so hard to-day. It threshed out some of the heavy wheat, but as even the good wheat is not so high as last year, the damage was not so great as that caused by our last year's wind. A great deal of wheat has been cut, and most of our farmers have planted club wheat, which does not shell out so badly as other varieties.

**GRAIN BURNED.**—Last Monday about one o'clock a fire was discovered in J. S. Gibson's wheat field, on Freshwater. The men there began to prepare to save the dwelling and other buildings, but the neighbors came in so fast with wet sacks and other weapons for fire fighting, that the effort was made to extinguish the fire in the heavy grain. By plowing around, and by the united effort of over 100 men, who got there in a remarkably short time, the fire was extinguished with the loss of about 120 acres of very fine wheat and about one-quarter of a mile of plank fence. The loss is between \$3,000 and \$4,000. It is supposed to have been the work of an incendiary.

## CONTRA COSTA.

**FINE WHEAT.**—*Gazette*, June 9: Mr. R. O. Baldwin, of San Ramon valley, left with us on Wednesday a cluster of wheat heads of the "Proper" variety, from a field of 12 acres, which it is thought will yield at the rate of full 60 bushels. From the size, weight and fullness of the sample heads, we should infer that the calculation on a yield of 60 bushels, with an ordinary stand on the ground, is quite within moderation, as the heads count from 60 to 90 large, plump grains each, and so near maturity as to be nearly beyond danger of any shrinkage. The "Proper" has an established reputation as one of the very best varieties of wheat raised in the State. It has not yet been generally cultivated in this county, and we have not proved its yield and hardiness as compared with the better-known varieties.

## LOS ANGELES.

**USE FOR HONEY.**—*Herald*, June 9: Honey balsam for coughs, colds, sore throats and lung diseases is fast rising in popularity among the afflicted, so much so that it has become necessary to extend its manufacture. For this purpose a company was organized this week, a part of which has already left for the States, to select some suitable point to manufacture this valuable medicine, and also the California honey lozenge, while the remaining members of the company will remain in Los Angeles to manufacture for the demand on this coast. It will not be long until this new enterprise will contribute to the demand for honey. These new uses of honey must be to the interest of apicultural pursuits.

## MONTEREY.

**MUNICIPAL TREE PLANTING.**—*Index*, June 7: Pursuant to notice a goodly number of citizens met at the City hall on Saturday last, to discuss the advisability of planting trees on both sides of the road leading from this city to Hilltown. W. Vanderhurst was elected Chairman, and S. Cassidy, Secretary. A very practical communication was received from Victor Bidache giving his views upon the subject. There was perfect unanimity of expression from all persons present favoring the planting of trees. On motion the Chair appointed Wm. Robson, Ira Tucker and Victor Bidache a committee to draw up articles of agreement to present to owners of frontage along the road in question for their signatures. The meeting then adjourned to Saturday, the 16th of June, at which time the committee will report.

## NAPA.

**HARVEST.**—Pine Station correspondent *St. Helena Star*, June 9: Harvesting has at last commenced. The cold, damp weather kept off our barley harvest several days, but it is now in full blast—some heading, some reaping, some

mowing, etc. Wheat is out of danger as regards rust and north winds. The kernels are well filled, and except the late sown it has a golden shade. Hay is nearly all cut, and a good portion of that in our section in bale. The north wind is blowing fearfully to-day, thus drying up the wheat, but will only ripen it quicker, as the most of it is well filled.

## SAN JOAQUIN.

**A BEAUTIFUL COUNTRY.**—*Independent*, June 9: A gentleman who recently returned from a trip up the Mokelumne river into the foothills, informs us that the country presents a picture of marvelous beauty. From near Stockton all the way into the foothills, as far as he went, it appears to be one continuous field of waving grain. The cool weather of the past few weeks has been invaluable to the grain, and the prospect is promising for an enormous yield. Farmers along the Mokelumne are calculating on 35 and 40 bushels of wheat to the acre. The barley is also looking remarkably fine, particularly in the foothills, and the fruit trees and vineyards are loaded with fruit. Looking down into the Mokelumne river bottom from any point on the low bluffs bordering the valley, a refreshing sight is presented. The corn and hop fields alternate with rich bodies of wheat, barley and alfalfa, making a dark green belt of luxuriant vegetation a mile wide and as far as the eye can reach.

**A TERRIBLE DAY.**—Yesterday was a remarkable day. From early in the morning until 10 o'clock at night a hot sirocco-like wind blew like a hurricane from the northwest, licking up every particle of accessible moisture from the earth, while the thermometer reached 90° in the shade. Its effects were very prostrating, as it seemed to dry up all the juices of the body, leaving one feeling like an animated Egyptian mummy. It was very damaging to the wheat fields, as it shelled out the grain and scattered it over the ground. One farmer, who came in from the southeastern part of the county, estimated that at least 150 pounds of wheat to the acre had been beaten out and was lying on the ground, and he thought that at least 15,000 bushels had been scattered on the farms along the line of the Sonora road. It was such a wind as has not been experienced here for years.

**GRASSHOPPERS.**—We have been informed that grasshoppers have made their appearance in formidable numbers in the southern part of this county, and are eating up every green thing in their path. Our informant who saw them states they appear to be in a belt about a mile wide, a few miles south of French Camp. They came too late to do the wheat any harm, but they have stripped the stalks of all the leaves, leaving the head standing on a naked stem. Their work is no disadvantage to the wheat.

## SANTA BARBARA.

**THE SANTA ROSA MATANZA.**—*Press*, June 2: The slaughter of sheep for their pelts and tallow on Santa Rosa island is still going on, and will continue for some time. Twenty-five thousand sheep are to be killed, which will leave from 15,000 to 20,000 on the island. The matanza works erected by the firm are said to be among the largest and most complete on the coast. The kettles are of enormous size—large enough to take in several hundred sheep at a time. The number of carcasses boiled daily averages about 1,200. The fires are kept burning from Monday morning to Saturday evening. The sheep are skinned, the intestines taken out and the carcasses thrown into the kettles. After going through the kettles the carcasses are thoroughly mashed up, the bones being softened so that they will pulverize under the pressure of the hand. The offal is fed to hogs. In consequence of the sheep not being very fat in this year of short feed, the amount of tallow from each sheep is comparatively small; still, under this systematic mode of treatment a fair price, for this year, can be realized per head. The skins are salted and dried, and packed for market. All these operations involve a vast amount of labor, requiring a large force of men.

**A MONSTER BEE-HIVE.**—In the second canyon west of the Mission creek is a huge rock almost perpendicular and standing about one hundred and fifty feet high. The face is marked with three or four deep crevices, two of which stop at about one hundred feet from the base. In these crevices bees have swarmed for years and have their nests. This monster hive was discovered some seventeen years ago by some Mexicans and has never been disturbed. It is calculated that the rock must contain several tons of honey, but it is almost impossible to get at it. Mr. Hayes and party were in that neighborhood yesterday and felled a bee-tree, procuring several fine swarms of bees, which they brought into town and hived.

## SANTA CLARA.

**CATTLE FOR JAPAN.**—*Call*, June 9: The following Short Horns have been bought by the Japanese Commissioners from Colonel Younger, of San Jose: Royal Hope, 27,799, red-roan, two years old. Lord Oxford, 27,102, red, little white; calved July 1st, 1875; got by J. D. Cavis's Sixth Lord Oxford, out of Hester Ryan. David Thorndale, red, with star; calved December 25th, 1876, by Red Thorndale, 20,802, out of Rosa Nell. Harvey Thorndale, red, little white in face; calved January 18th, 1877, by Red Thorndale, 20,802, out of Lady of the Lake. Gem's Rose, golden-red; calved November 7th, 1876, by Red Thorndale, 20,802, out of Gem. Rosalie, red, with star; calved November 18th, 1876; got by Red Thorndale,

20,802, out of Hester Ryan. The price paid by the Commissioners for the two bulls and four calves was \$2,100. The Commissioners are lavish in their praises of Colonel Younger's stock.

## SOLANO.

**HIGH WIND.**—Dixon, June 8: A fearful north wind has prevailed for the past two days, and at 12 M. there is no indication of an abatement in the violence of the storm. The wheat crop has already sustained considerable damage. The Club is not seriously affected, but Proper, Sonora and other varieties are threshing badly. The wind is so high that the headers are all at a standstill. Several farmers report that the wheat liable to injury from the north wind has already been headed and stacked, and is therefore safe. A few threshers have been in operation in the vicinity, and the report is much more favorable than was at first anticipated. Winter sowing is short and difficult to reap, but the heads are well filled and the grains plump. The yield of summer fallow will not fall much below the average.

**HARVEST FIRES.**—There was a fire this afternoon southeast of Vacaville, burning about 50 acres of wheat, owned by Mrs. Wilson, and 200 acres of William Butcher's, besides fences and other damage. Loss, \$15,000. It is said the fire originated by a spark from a passing locomotive of the Vaca Valley railroad. About 300 men turned out and kept it under control, or much more damage would have been done. A wheat field of between 200 and 300 acres, belonging to E. McGarry, near Bridgeport, was kindled by a locomotive spark yesterday afternoon and consumed. The field would have averaged about 30 bushels an acre.

## SONOMA.

**WASTEFUL THRESHING.**—*Flag*, June 7: It is becoming evident to farmers that it would be as well for them to keep their threshers a little longer and have them thresh that much slower. We are assured that a prominent farmer in this section lost enough last year, by too rapid threshing, and consequent waste of grain, to pay the entire cost of threshing. Another farmer in the same locality lost almost as much. This ought to open the eyes of men who own and run threshing machines. From it they will know that it will soon be impossible for any machine to get threshing to do, if it performs in this way.

**WHAT CULTURE WILL DO.**—*Democrat*, June 9: Mr. A. G. Lesieur, who is cultivating the old McPeak ranch, about four and a half miles west of Santa Rosa, brought to the *Democrat* office Friday afternoon a sample of wheat and white English oats grown on that place, each of which, he says, will average 40 bushels to the acre. This wheat and oats were grown on what is known as red land, which ordinarily produces eight to ten bushels to the acre. Mr. Lesieur tried an experiment on 26 or 27 acres of this land. He plowed it thoroughly twice last fall before sowing. He sowed six or seven acres in wheat about the first week in November and harrowed it each way. He afterwards sowed 20 acres in oats. About six weeks ago both wheat and oats were badly rusted and he thought they would make no grain. They continued to grow, however, and are now five or six feet high and full-headed, and will yield as above stated. This is the result of thorough culture.

**HEAVY YIELD OF HAY.**—Isaac Gregg, four miles east of Santa Rosa, last fall sowed three acres of Touzell wheat on corn land. He cut last week two-fifths of an acre which had been knocked down by the rain, for hay, and had 28 shocks of hay, averaging 195 pounds each, which would, at a like yield for the three acres, give seven and a half tons to the acre in hay. Mr. Gregg says the Touzell wheat makes the best wheat hay he ever saw. He thinks the rest of the field will yield 60 bushels of wheat to the acre. He got the seed last fall from Supervisor Weatherington. The crop this year Mr. Gregg says is the best he ever raised.

**FARM NOTES.**—J. R. Myers says that the wheat and barley crop is looking remarkably well around Windsor. He holds that the excellent condition of the crop can be attributed to an improved system of culture and summer fallowing which was this year practiced, rather than to the reported cause, a retention of moisture by the hard clay found beneath the soil on what is known as Poor Man's flat. Julius Ort says that grain lodged by the late rain is filling well. He expects a big yield. At present prices it will all be cut, whether it is down or standing.

**POTATO PLANTING.**—*Petaluma Argus*, June 9: A. P. Whitney expresses the opinion that the area planted with potatoes in this section is not more than half as large as last year, and with corn much larger than ever before. He believes the yield of early sown grain will be about up to the average. There has been a great improvement in late sown grain in the last three weeks.

## STANISLAUS.

**THE WEST SIDE CELEBRATION.**—*News*, June 8: Last Tuesday will ever stand in the history of our neighboring town of Grayson as an important day. It was the day, time and place that the friends of West Side district proposed to celebrate. Music had been secured, and a large commodious warehouse refitted and beautifully decorated for the occasion. A large platform had been erected in one end of the hall for officers of the day, speakers and invited guests. Emblems and mottoes of various devices draped the walls and ceiling of the building, whilst the floor was carpeted with clean white canvas,

giving to all a cheerful appearance. The gathering was large, especially at the hall during the evening. Among the invited guests present on the occasion were Hon. Wm. Irwin, Governor of the State, Hon. Romualdo Pacheco, and Hon. J. M. Montgomery, State Senator from this district. There was a great number of visitors from other counties and localities. Modesto, especially was well represented, as were all parts of the West Side Irrigation District. At half past six the crowd began to assemble at the large hall. The meeting was called to order by Col. Henry de Veve, one of the retiring Commissioners. With but few preliminary remarks he introduced J. R. McDonald, of Grayson, as President of the Day, and A. C. Lander, Secretary. The platform was well filled by the new officers of the district and invited guests. After music by Woodman's band, of Stockton, Rev. Mr. Hubbard, Chaplain of the day, offered up a brief and appropriate prayer. Governor Irwin was then introduced by Mr. McDonald. The Governor spoke with more than his accustomed earnestness and warmth, at times completely winning the cheers and applause of his hearers.

Ex-Governor Pacheco was then introduced as a native of the soil. Speeches were also made by Hon. J. M. Montgomery, J. L. Crittenden, Wm. B. Hay, J. D. Spencer and Col. de Veve. The meeting then adjourned, and the hall cleared for dancing. At 9 o'clock dancing commenced. We counted as many as 15 sets on the floor at once. The music was by Woodman's band, and was excellent. Many of the ladies were handsomely dressed, showing both cost and style. Governors Irwin and Pacheco both participated in the dance, and when our reporter left the scene of action with his notes, appeared to be enjoying themselves. The supper was served at 1 o'clock, in the school house, and was furnished by the enterprising landlord of the Grayson hotel. The whole affair may safely be called a success. It was evidently the greatest event ever seen in Grayson. Too much credit cannot be given to the various committees for their politeness to visitors, energy and taste displayed in making arrangements for the occasion.

## TULARE.

**EDITORS PRESS:**—As I have not noticed anything in the *PRESS* about our flourishing county, I thought I would give you a few notes. The weather of the past few months has been very unfavorable. We have no crops here this year except on irrigated land. Some land that was irrigated last year will make some wheat, but the greater part will be cut for hay. We cannot speak of our grass here, as we have none but salt grass at the present time. We find it very hard to keep a few head of stock for necessary use at home on salt grass. We have two flourishing little towns in our vicinity, Visalia and Tulare. At the present time in Visalia the chills are very much felt, with the hot weather and the wind and sand storms. We are all looking forward and we trust that in the future the sand will not have such chances to rise in the air, as we intend to have water down through the county to give it a thorough wetting. We are now at work at this and will have water on some parts of the land this season, I think. It will be the making of this county, as without it nothing can be expected. N. B. SLITH, Tulare, Cal.

## VENTURA.

**SHEEP MOVING.**—*Signal*, June 9: We are informed that out of 10,000 sheep Mr. F. Perkins has reached good range with 5,000 head; that Mr. Stebbins has saved half of his band of 5,000; that Mr. Cheever is in the Lockwood mining district with his sheep; that Mr. Ray has Daly & Ray's sheep in the Soledad mountains, where they are doing well. When the band of 20,000 sheep en route for Texas were last heard from they were doing well, with but few losses so far.

## YUBA.

**CROPS.**—Marysville cor. Woodland *Democrat*, June 9: There will be a great deal of grain harvested in this county, although the yield will be far below an average; but while it lacks in quantity it may be made up in price; so the farmers will be but little if any behind the result of last year. There are some fields of wheat on the Feather river which put one in remembrance of the grain fields of the State when in its palmy days. It will go close to sixty bushels per acre, stands thick, with long, large heads, and the whole about four feet high. There is quite a demand for hay, and a great quantity of it was cured, but still the price keeps steadily increasing, which now ranges from \$10 to \$13 per ton; this for loose hay. A great many sheep have passed through this vicinity bound for the better pastures of the north where drouth is not known, at least not so often. A band of 15,000 left this neighborhood for Idaho. Emigrants have been passing along the road, seeking places to better their condition. It looked like a panorama of the days of old, when men, women and children were huddled into a wagon and "lit out" for the land of gold.

## Washington.

**CHANCE FOR DAIRYING.**—Seattle *Dispatch*: From six to ten tons of butter per month are brought here by the San Francisco steamers. Yet at our very doors we have good woodland pastures and abundance of beautiful water. Some of these days the value of Puget sound as a dairying region will be better appreciated. It is a better investment than buying lots in these little towns and waiting for them to be enhanced in value by location of railroads.





## One and Two.

If you to me be cold,  
Or I be false to you,  
The world will go on,  
Just as it used to do;  
The clouds will flit with the moon,  
The sun will kiss the sea,  
The wind to the trees will whisper,  
And laugh at you and me;  
But the sun will not shine so bright,  
The clouds will not seem so white,  
To one, as they will to two;  
So I think you had better be kind,  
And I had best be true,  
And let the old love go on,  
Just as it used to do.

If the whole of a page he read,  
If a book be finished through,  
Still the world may read on, I think,  
Just as it used to do;  
For other lovers will con-  
The pages that we have passed,  
And the treacherous gold of the binding  
Will glitter unto the last.  
But lids have a lonely look,  
And one may not read the book  
It opens only to two;  
So I think you had better be kind,  
And I had best be true,  
And let the reading go on,  
Just as it used to do.

If we who have sailed together  
Flit out of each other's view,  
The world will sail on, I think,  
Just as it used to do;  
And we may reckon by stars  
That flash from different skies,  
And another of love's pirates  
May capture my lost prize;  
But ships long time together  
Can better the tempest weather  
Than any other two;  
So I think you had better be kind,  
And I had best be true,  
That we together may sail,  
Just as we used to do.

—W. H. Carleton.

## Honor Your Calling.

[Written for the RURAL PRESS by EDWARD BERWICK.]

Rubens, the world-honored painter, once being sent to the English court as ambassador, took the occasion to copy a Venus of Titian's, that was in the possession of an Englishman. Some noble peer, discovering him in the act of taking the copy, expressed his surprise at "seeing an ambassador amusing himself as an artist."

"I sometimes amuse myself with being an ambassador," was Rubens's noteworthy reply.

There was no shrinking from any contempt that the noble peer might be supposed to entertain towards what would be considered the inferior calling of artist. Rubens honored his profession, and the honor was, and is, fully reflected on himself. For one person who reads of Rubens, the ambassador, a myriad are familiar with Rubens, the great master in art.

Now there is much talk of the need of inducing our boys to disregard the supposed attractions of city life and to

## Stick to the Farm.

As one means to this end, let us honor our profession, not use it merely as a means of money-grubbing, but make a pleasure of our toil and take an artistic pride in our products and our fields.

One day, conversing with a lawyer, I had occasion to speak of the action of a mutual acquaintance. The attorney excused some apparent want of courtesy on the part of the man in question by classing him as "only an ignorant farmer."

Of course there may be ignorant men in any profession, even among those "called to the bar," but it struck me the words were spoken as though the lawyer applied the attribute of ignorance to farmers as a class. Now I entirely object to the assumption that

## Ignorance and Agriculture

Should be in any way coupled together. There was a time when a man who was too infirm to continue the onerous duties of swineherd was considered "the right man in the right place" as schoolmaster. Some folks in the vicinity of San Jose appear to hold to this opinion still, and consider the ordinary pay of a good mechanic a remuneration far too high for one to whom the highest interests of their children are much too entirely confided.

Similarly, there are many dwellers in cities who consider that brains are of little value outside of such work as "putting" and "calling" and "bulling" and "bearing."

Now, having had considerable experience of office life in one of the largest banks in the largest city in the world, anterior to my agricultural experience, I feel qualified to express the decided opinion that a farmer has use for just three times the brains that would furnish an ordinary clerk. So let no young man deceive himself that in choosing the ordinary city life of shop-keeper or clerk, he is entering on a vocation worthy of his extraordinary capacity of brain.

The veriest ignoramus, whitewashed with a smattering of ciphering and book-keeping at some business college, can soon acquire the abstruse art of flourishing pen or yardstick in a passable manner; but, in my experience, a Farmer's Apprenticeship Is Never Ended.

I find almost daily some addition being made to my store of facts and inductions. A habit of continual observation is the *sine qua non* of a successful farmer's career. After 12 years' practical farming I find myself still far from "knowing it all." The "all" comprises so much. The old list of "tinker, tailor, etc., etc.," does not include half the trades of which a farmer is required to understand more or less.

Not only does a farmer's life afford scope for the exercise of any young man's energies and abilities, it affords facilities for that constant observation and communion with Nature, upon which as a foundation all true art is based.

The artist becomes great only as he observes and imitates nature. The farmer can only be successful in so far as he bases his operations on a knowledge of nature. The decadence in the works of a genius so unique as Michael Angelo's is noted from the time at which he began to trust to his memory to guide his brush or chisel, instead of working face to face with nature.

It is the old, old story: God's laws, which are the laws of nature, are self-enforcing, and foolhardy man, be he artist or farmer, venturing to transgress, venturing to think his own wisdom wiser than God's wisdom, ends by failing so utterly as to become a byword and laughing-stock to his fellows.

Book-learning is by no means the one thing needful to make a man. The practice of "commercial morality" and the "tricks of trade" will hardly nourish the stamina of the "coming man."

Honesty of heart and determination of purpose are, thank God, the monopoly of no class; but it seems to me that the farm furnishes a soil more suited to their nurture than the hot-bed of city life affords. The farm, moreover, may be so managed as to turn out members of society more profoundly cultivated and less superficially polished than the average produce of cities. And let me here leave a subject so general to write for a minute on one more special. I want to plead for

## More Music.

Both in town and country. A farm-house with a piano is quite a rarity. A farm-house with a family that can pass a pleasant evening round a piano, all taking parts in anthem, glee, or madrigal, is a still greater rarity.

Now there are few pleasures more attractive, more innocent, or better adapted to make family life enjoyable, than the practice of vocal and instrumental music;

"Music, that gentler on the spirit lies,  
Than tired eyelids upon tired eyes."

Now I know we cannot all afford to buy pianos, (no, not even the "Golden," Messrs. D., at least I can't at present figures); but we can all do our best to foster a musical taste among our own families, and to encourage school-teachers who can and will instruct our little ones. The spread of the love of music would be another influence antagonistic to hoodlumism. A stranger to the charms of music has no idea how all-absorbing those charms are to real lovers of the art.

Then, farmers of San Jose and elsewhere, don't require less of your school teachers; require more, and don't grudge paying more. You can't spend money better than in giving your children all the home enjoyment and all the best education, both of suitable kinds, that your means will allow. Don't bring up your children to think that farming means "all work and no play," or, of course, they'll hanker after the distance-enchanted pleasures of the city.

P. S.—I must thank friend Olden for his invitation to me in last week's issue. I am glad that Anaheim has proved so effectual a cure for him, as I know he was set down as a "gone coon" in Monterey, some 14 years ago. But wet land on a hard-pan of pipe clay, under a Los Angeles sun, does not sound healthy to ears accustomed to hear health and good drainage coupled. One great charm of Carmel to me is its salubrious climate. The links in my family chain are getting numerous, friend O., and health comes before dollars; but I hope to visit you about this time next year—meanwhile I invite you to "rise to explain" in the RURAL PRESS.

E. B.

WOMAN'S HEADGEAR.—Joseph Addison says of woman's headgear: "I would desire the fair sex to consider how impossible it is for them to add anything that can be ornamental to what is already the masterpiece of nature. The head has the most beautiful appearance as well as the highest station in the human figure. Nature has laid out all her art in beautifying the face. She has touched it with vermilion, planted in it a double row of ivory, made it the seat of smiles and blushes, lighted it up and enlivened it with the brightness of the eyes, hung it on each side with curious organs of sense, given it airs and graces that cannot be described, and surrounded it with such a flowing shade of hair as sets all its beauties in the most agreeable light. In short, she seems to have designed the head as the cupola to the most glorious of her works, and when we load it with such a pile of supernumerary ornaments, we destroy the symmetry of the human figure, and foolishly contrive to call off the eye from great and real beauties to childish gewgaws, ribbons and bone lace."

## Who Educates a Woman Educates a Race.

EDITORS PRESS:—Your note concerning my address before the normal class of the San Francisco Girls' High School came in my absence and was not forwarded, otherwise your request for a copy would have been complied with most cheerfully. The address was quite fully reported in *Fitzgerald's Home Newspaper* of last week, from which you can clip, if it is not already too late for your purposes. —JEANNE C. CARR, Sacramento, June 5th.

## Mrs. Carr's Address.

Young Ladies of the Normal Class:—I did not at all realize when I promised your principal to say a parting word to you here in your own school-room, that it involved uncovering my head in the presence of the elders, and if I venture to keep my promise at all it is because the habit of obedience to school authority is apt to linger beyond the period of school life.

It is not easy to say anything new on these occasions, nor is it expected. The glow of pride and pleasure I see in the countenances of these parents and friends, your own delight in having reached the goal after much self-denial, much patience and sacrifice, tell me that even commonplace remarks will borrow interest from the occasion.

The theme for the shortest of sermons is an old line, borrowed to-day from Anna Brackett's excellent book on the education of American girls—"Who Educates a Woman Educates a Race." I wish to magnify as much as possible the work of this special school, begun as an experiment by this man of faith and works (John Swett), with the never-to-be-forgotten help of these fathers (the Board of Education), who builded better than they knew. The normal school trains the educators of the educators, a hierarchy of three orders, with a base as broad as humanity, the universal motherhood.

Were it possible to secure enlarged opportunities for what is essentially normal instruction with the means now at command, if public opinion was yet sufficiently enlightened to demand it, I should ask that the finishing year of every girl might be one of instruction and practice in the best ways of putting her acquired knowledge into actual use. We have training schools for nearly every calling except the most elevated and important—that of maternity—and are now beginning to ask whether a young person can be considered qualified to take a woman's place at the head of a family or a school who does not know how to instruct, without having been herself instructed in the philosophy of the orderly development of the faculties during infancy and childhood.

For lack of this there is a want of accord between home and school education, whereas each should be the complement of the other. If mothers and teachers stood in a true relation to each other, they would form a co-operative association for every school and effect a saving of the power now wasted in the correction of mistakes. I have often thought that mothers' institutes might be made as profitable as teachers' institutes if we had any means of compelling attendance, an idea already wrought out to some extent in the kindergarten associations springing up in some of our cities. In such associations conscientious mothers learn how to "live for their children," in the joyous exercise rather than the sacrifice of all that is pleasurable in their own lives.

It is a great mistake to think that the normal school will only benefit those who expect to make teaching a profession. However indispensable it is to them, all that relates to primary instruction would prove equally useful to all young women. In every city, therefore, as well as in specially endowed State institutions, there should be ample provision for such training. The normal schools of some of our Eastern cities are models worthy of imitation here whenever the demands of our growing population indicate that our greatest need lies in that direction. At present, the facilities afforded by a class like yours meet the emergency, but we should have associated with this, provision for a model public kindergarten and a training school for kindergartners.

Special interest attaches to the graduation of this pioneer class of normal scholars. I congratulate you, young ladies, not more heartily than I do your parents that you have had that great blessing in study, a definite aim, a distinct purpose, which is now so far attained that you are accredited as fully prepared for the work of instruction in the home or in the school. During this finishing year you have often had occasion to notice how differently knowledge comes to us which is to be put to immediate use—facts and principles appearing as links in a chain, with which we are to do our heavy work, which must be strong in every part. This is quite different from the pursuit of general culture. Remember this experience when you go out to teach.

The practical basis of Froebel's method is found in the words "We learn through doing." Some of your professional knowledge has come in doing your work as scholars in the best way, but most of it will come in your experience in teaching. You will invent, adapt, vary the methods with which you have been made familiar, according to the new and different circumstances in which you are placed.

Education is not a fixed quantity to be measured; the circumstances of each generation of children change with the changes in social conditions. The teacher should be in full accord with the movements of her own time, in sympathy with the impelling ideas which create these movements.

One of these new ideas of education, as distinguished from anything heard by teachers of

the last century, is education by play, or in other words, the organization of the spontaneous activity of childhood into a means of education, which the child gains for himself. The teacher who understands this, turns the activity, the boundless, restless energy of childhood, into discipline gained in the happy exercise of its physical, social and moral nature, by paternal guidance instead of arbitrary rules. Limbs, senses, all the organs of body and mind, move under an impulse of a higher will, communicated by the teacher who is at the same time friend and play-fellow. Froebel's methods call for peculiar qualities in the teacher—for originality, inventiveness, sympathy, and above all, insight into individual peculiarities and dispositions.

I rejoice to see that the interest in kindergartens is spreading on this coast. San Francisco cannot long maintain her educational reputation without introducing it—the first step is costly, but elsewhere has proved the highest economy, as in St. Louis, where the private kindergarten, established by Miss Blow, has developed 18 public kindergarten schools, supported from the city treasury.

Education by play should gradually be developed into education by work—an educational idea by no means as new as the other. Our common and public schools being established for the masses, should be made directly serviceable in the elevation of the masses of laboring men and women. As we live where the wheel of fortune turns swiftly and with notoriously erratic movements, work may be considered as the universal fate, nor is it an adverse fate, either, if we believe that the Great Teacher taught wisely in saying: "He that would be greatest among you, let him be your servant!" This great doctrine of human serviceableness should underlie every scheme of education; should be the spring of every teacher's efforts.

The certificate you gain to-day enrolls you in the noble army of workers, and marks your transition from the receptive to the responsible and active period of your lives. Dr. Chalmers would have said to-day from his pulpit: "Short of the question which touches the good of their immortality, none are more interesting than those which bear upon the temporal well-being of the people, and there cannot be a more deeply important inquiry relative to any interest this side of death, than how to elevate by means of well paid industry, the general platform of humble life, so that the ground floor of the social and political edifice shall be overspread with a well conditioned population." Social improvement is one of the ends of public education.

Dr. Channing would have said to you, "Manual labor is a school in which men are placed to get energy of purpose and character, a vastly more important acquirement than the learning of all the schools."

The elevation of labor, its intrinsic dignity and worth, should not be lost sight of by the teacher. "An endless significance lies in work. Man perfects himself in working." There are many ways in which this doctrine can be taught outside of technical schools. You will lay the foundation for the proper training of workers in such schools.

Mr. Greeley said, and we have his words daily brought to mind: "Not while the world waits for a more thorough enforcement of the principle that every child should, in youth, be trained to skill and efficiency in some department of useful, productive industry, can we hope to banish able-bodied pauperism, with its attendant train of evils, vices and sufferings, from the civilized world."

As you take the precious and costly materials of your work into your hands, to be molded and shaped into the men and women who will take our places in society, I hope you will write these principles upon the sensitive tablets of childish hearts. The end of your work is not scholarship—that is only a means—it is better lives, social improvement, the abolition of vice and crime, increase of comfort, increase of culture, improvement of morals, manners and tastes.

Without these objects in view, the product of your labors will be cold, hard, merely intellectual. Knowledge by itself fertilizes nothing, unless its reservoirs are warmed by the affections. Then acquisition becomes synonymous with growth. Direct the growth of your pupils—of their roots toward principles, their tops toward high ideals, their branches toward uses; and you will need to grow continually this way yourselves, if you ever feed with living truth the Lord's little ones.

I rejoice that your training in this school has been so exceptionally practical. I have used your papers on domestic science and art, as illustrations of the way in which this important knowledge may be introduced in all our schools. You are welcome recruits to that noble army of teachers who are educating not one but many races, in many lands and climes. Mary Carpenter in India, Elise Lemonnier in France, Madame Loretzky in Russia, like our own Mary Lyon and Emma Willard, have heard echoing down the centuries the immortal motto:

"Whoever educates a woman educates a race."

Dr. JOHNSON was observed by a musical friend of his to be extremely inattentive at a concert whilst a celebrated solo player was running up the divisions and sub-divisions of notes upon his violin. His friend, to induce him to take greater notice of what was going on, told him the performance was very difficult. "Difficult, sir," replied the doctor, "I wish it were impossible."



## The Horrors of War.

Now that the Russians and Turks are engaged in deadly strife, thus renewing an old feud, it may be worth the thought to recall the horrors which their former wars have brought upon them. In 1811 the opposing Russian and Turkish armies stood facing each other on opposite banks of the Danube. During the night between the 8th and 9th of September, the Turks succeeded, by making a feint, and so attracting the Russians to a spot some three miles below the real point of passage, in throwing a force of 2,000 men and four guns across the river, a short distance above Giurgevo. The first attempts of the Russians to drive this small body back into the river were successfully withstood; reinforcements were rapidly brought over from the right to the left bank, until finally 30,000 men and 50 guns were assembled on the northern shore. Every effort to advance further and drive back the Russian army, which had fallen back to an entrenched position, was, however, repulsed; the Turks themselves were obliged after a time to construct entrenchments to withstand the counter-attacks against them. Unable to drive back the invading force, the Russians desisted from any further active measures against it, but, bringing a strong flotilla of gunboats up the Danube, to prevent supplies being carried across the river into the Turkish camp on the left bank, they quietly awaited events. The provisions of the Turkish force, thus completely isolated, unable to advance because of the Russian force in front of it, unable to retreat because of the flotilla which effectually prevented any bridge being thrown across the river, soon began to run short. The weather became cold; but there was no fuel with which to kindle fires. Under these circumstances the sufferings of the men were very great. For some time there was horseflesh, but it had to be eaten raw, as even the tent-poles had been cut up and burned. Hundreds died daily, and their comrades had not strength to bury them. Disease was consequently soon added to famine, so that when finally, on the 8th of December, peace was concluded, but 4,000 men, who are described as being but living skeletons with scarce strength to stand upright, were left out of the 30,000 who three months before had crossed the river.

**BARTHOLOMEW'S COLOSSAL "LIBERTY."**—In an article entitled "France to America," in *Scribner* for June, occurs the following description of Bartholdi's colossal "Liberty," which is to stand in the harbor of New York: Allowing twenty feet for the height of the island above the water, the pedestal is to be one hundred and ten feet high, and the statue, to the flame of the torch, one hundred and forty-five. This makes the torch at least two hundred and seventy-five feet above the level of the bay. It will equal in height the column in the Place Vendôme at Paris, and will be larger than the colossus of Rhodes, so much celebrated by antiquity. Like that statue, it will have to be cast in pieces of manageable size, and built up after the manner of an armored frigate. The construction will be a curious specimen of engineering skill, for which the sculptor and Mr. de Stuckle will be responsible. At night it is proposed that a halo of jets of light shall radiate from the temples of the enormous goddess, and perhaps the flame of the torch may be fashioned in crystal, in order that it may catch the light of the sun by day, and at night form a glowing object illuminated by electricity.

**WEBSTER AND THE STAGE DRIVER.**—On one occasion Webster was on his way to his duties at Washington. He was compelled to proceed at night by stage from Baltimore. He had no traveling companion, and the driver had a sort of felon look which produced no inconsiderable alarm in the Senator. "I endeavored to tranquilize myself," said Webster, "and had partly succeeded, when we reached the dark woods between Bladensburg and Washington—a proper scene for murder or outrage—and here, I confess, my courage again deserted me. Just then the driver turned to me, and, with a gruff voice, inquired my name. I gave it to him. 'Where are you going?' said he. The reply was, 'To Washington. I am a Senator.' Upon this the driver seized me fervently by the hand, and exclaimed, 'How glad I am! I have been trembling in my seat for the last hour; for when I looked at you, I took you to be a highwayman.'"—*Boston Evening Transcript*.

**DRESS REFORM IN TURKEY.**—The Turkish authorities at Constantinople are devoting the leisure moments of war-time to the cause of millinery and dress reform. The women are dressing in an unseemly and scandalous fashion, and, according to the *Pall Mall Gazette*, the head of police has put spies on their track in the streets and bazars. "Their beredjes," saith the edict, "instead of being of a somber and uniform tint, are dyed with the most varied and fantastic colors. Their yashmaks, instead of forming a veil of thick material, are made of light gauze. Their feet, instead of being shod in the ancient and simple yellow slippers, are confined in ridiculous and uncomfortable boots of Frankish origin. All this must at once disappear." Any Turkish lady found wearing either of the articles of attire prohibited will not be allowed to go out in future unless she is properly dressed. In the event of her transgressing a second time, she will be fined.



THE THREE KINGDOMS

## Young Folks' Column.

## The Three Kingdoms.

King Frederick William of Prussia walked in the fair green fields one day,  
When trees and flowers were fresh with the life that wakes  
in the month of May,  
And as he walked, 'twas with joy he saw the violet's shady bed,  
The primrose pale, and the wind-flower fair, and the birch-tassels overhead.

Well pleased was he to have left awhile Berlin's gay and crowded street,  
And forget for a time his kingly cares 'mid the blossoming hedgerows sweet,  
And laying aside his royal robes, unnoticed to walk abroad,  
To learn, from the beauty of fields and flowers, new lessons of Nature's God.

Spring sunshine flickered across his path, as he strode through the leafy glade,  
Till he came to a glen where a joyous group of village children played,  
Gathering cowslips with eager haste, as happy as happy could be,  
And the King looked on till his heart grew gay their gayety to see.

He called them at last all round him there, in the mossy, flower-strewn dell,  
And soon they came clustering about him, for they knew his kind face well,  
Then, smiling, he held up an orange that there chanced in his hand to be:  
"To which of the three kingdoms does this belong, my little folks?" said he.

There was silence awhile to the question, till a bright little fellow said,  
"To the vegetable kingdom, your Majesty." The King he nodded his head;  
"Well said! Quite right! Now the orange shall be your own, my brave little man!"  
So saying, he tossed it to him, crying out, "Catch my cowslip ball if you can!"

Then gaily the King in the sunshine a crown-piece held up to view:  
"Now to which of the kingdoms does this belong? Who guesses shall have this too?"  
"To the mineral kingdom, your Highness," a little lad quickly replied;  
As the silver coin in the sunlight shone, so sparkled his eager eyes.

"Well answered, so here's your crown," said the King, and placed the crown in his hand,  
While around him the other children delighted and wondering stand.  
"One question more I will ask," said the King, "and 'tis neither hard nor long;  
Now tell me, my little people all, to which kingdom do I belong?"

In the group of little ones gathered there stood a tiny blue-eyed child;  
Full of thoughtful grace was her childish face, like a starry primrose mild;  
Wistfully gazing into his face, with an earnestness sweet to see,  
Simply she answered the King, "I think to the kingdom of Heaven," said she.  
King Frederick stooped down, and in his arms took the little maiden then,  
And kissing her brow, he softly said, "Amen, dear child, Amen."  
—J. E. Bendall.

WHAT is so rare as a day in June? The birds have sung it every summer since the world began; so it is doubly true and doubly now—for the very truest and newest thing in the universe is the glad note of a bird when summer comes. So laugh out, my children—laugh and be happy, in these sweet, warm days; and when the flowers nod brightly to you, as they will, and the grass whispers softly, then be glad, glad, glad—and keep your hearts in tune.—*St. Nicholas*.

## GOOD HEALTH.

## Sugar as Food.

Harm has been done by propagating the notion that sugar is injurious to the teeth, by diverting attention from real causes of destruction or decay. The eating of any amount of pure sugar cannot injure the teeth directly, because it has no residue, it is wholly dissolved and passes into the stomach.

But let it be remembered that the practice of eating sugars or candies or any other sweets largely, will inevitably cause a disorder of the stomach and generate gases there, which will speedily undermine the health of the teeth.

By insisting too much on the fact that sugars and candies destroy the teeth, an impression will grow that if these are mainly avoided, the person so doing will have good teeth, and this leads the mind away from the necessity of keeping the mouth clean and the stomach healthful. If these things are well done, and the teeth are kept plugged in a finished style, teeth naturally or hereditarily "poor," may be kept in a good state of preservation for many years.

All forms of dyspepsia have a direct tendency to destroy the teeth. Whatever causes acidity of the stomach is ruinous to the teeth. A tablespoonful of the purest syrup of loaf-sugar, taken three times a day before meals, will destroy the tone of the healthiest stomach in a very short time. And when it is remembered how many patent medicines are made up in the form of syrups and sweet lozenges, and how common the use of them has become, it need not be wondered at that every second or third person met on the street knows the meaning of "sour stomach" or dyspepsia.

So far from sugars and pure candies injuring the teeth or the health, they would, if used wisely and in moderation, as sole desserts, be actual preventatives of both; especially if alternated, as desserts, with fruits and berries in their natural, raw, ripe, fresh, perfect state, by banishing from our tables the pestiferous pie, the leaden pudding, and pastries and cakes of every name, which, as desserts, always tempt to excesses which lay the foundation for diseases which torture for a lifetime, or bring speedily to the grave.

Let the spirit of this article be distinctly understood. Pure sugars and candies do not injure the teeth, except indirectly, by their injudicious use in exciting acidity of stomach or dyspepsia, as will any other kind of food, or drink, or beverage, if extravagantly used.

At seasons of the year when fruits and berries may not be had, ripe, fresh, and perfect, as desserts, pure sugars and candies may be used as such in their stead to great advantage, because they are healthful, being warming, nutritious, and agreeable; hence, as a table article, they are very valuable, while the almost universal love of them shows that they were intended to be eaten. If a child is not allowed to eat anything containing sugar it will sicken and die in a very short time. Children need the carbon, the fuel contained in sugar to keep them warm; without it they would perish from cold; hence the love of sweet things is an instinct, implanted by the kind and wise Maker of us all for the child's preservation.—*Hall's Journal of Health*.

## DOMESTIC ECONOMY.

## Plain Preparations of Food.

A housewife writes to the *Farm Journal* some recipes for the preparation of plain, wholesome dishes for making up a variety in food from the common staple articles to be found on the farm. She says: Any housekeeper will find, by experimenting, that much can be done to make such a variety without adding much to the usual grocery bill. Let me suggest a few ideas:

First, a great variety of bread may be made. Everybody bakes white bread, but usually in each family it is all of one kind, and the task becomes tiresome. Good hop yeast bread is probably the most generally acceptable as a standby, but there are but few who occasionally would not relish a loaf of salt or milk rising bread, nicely made, or if in the habit of using the latter kinds, a loaf of hop yeast.

To make salt rising: At night stir in a quart bowl a thin batter of lukewarm water and corn meal to half fill the bowl; keep where it will retain warmth through the night. In the morning, early, make a sponge in the center of a pan of warm flour (made so by stirring it on the stove a few minutes), with warm sweet milk and water, half of each, or less milk if you have not so much to use, with salt to suit. Keep warm, and by the time you can attend to it after breakfast, it will be foamy light; mix, make into loaves, when light bake. The secret of success is in not allowing the bread in any stage to chill, and in good baking. The oven should not be hot enough to scorch, nor cool enough to allow the dough to run. A moderately quick heat at first is best, decreasing from the time the loaf is crusted over. It does not require as long baking as yeast bread.

Graham bread can be made the same way; is made better with a little sugar or molasses and shortening added.

Steamed brown bread is excellent. To make, 1 quart sour milk or butter-milk, 1 teacup molasses, tablespoonful shortening, 1 teaspoonful salt, 1 cup white flour, and corn meal to make a pretty stiff batter. Last, a teaspoonful of soda. Put in a basin, which set in your steamer, and steam one and one-half hours; then set in the stove oven for half an hour. If more convenient it may be put into a deeper vessel and set in a kettle of boiling water, instead of steaming.

The same process and proportions, except making thinner, makes a nice pudding, to be eaten with syrup or butter, or a boiled sauce, or cream and sugar, and this may be varied by the use of ginger in the pudding, by different fruits, soaked or chopped up or stewed. Suet added makes a suet pudding. Everybody makes Johnny cake. At the risk of telling what all know already, I give my rule: 1 pint sour milk; 3 eggs (less will do); one tablespoonful butter or other good shortening; teaspoonful salt; corn meal to make a thin batter; half a teaspoonful soda. Then comes the secret of its goodness—bake quick, and eat as soon as baked.

**A SCHOOL OF COOKERY IN NEW YORK.**—Down stairs, in an ordinary kitchen, I found a group of ladies, in street costume, sitting around a common kitchen table. At one end stood a pleasant-looking young man in a cap, jacket, apron, and wristbands of the whitest linen. The lesson for the day had already commenced, and savory odors, as well as the saucapans and bowls, in which were a variety of ingredients in different stages of combination, testified that the work was really going on. The chief, while using knives and spoons with a marvelous deftness, was giving clear and explicit explanations, which the ladies were taking down with pencil and paper. A fowl was dressed, eggs were beaten, fat was heated, and fish was fried, and not a spot nor a spatter touched the apron or the jacket, no, nor even the wristbands. There was no "muss" on table or floor, and everything about the place and the person was appetizingly neat. It would be well if every housekeeper could be present at one such kitchen meeting to see how cooking can be done tidily, and it would be worth a great many more dollars to us than the course of cooking lessons cost if sending our cooks there would inspire in them any appreciation of the positively delightful way in which a kitchen might be managed.—*Christian Union*.

**SUCCOTASH.**—For succotash, Lima beans are the best; the Agricultural stand second on the list. But any good variety of bush beans, which come earlier than these, makes an article by no means inferior. Shell the green beans, and boil them slowly in an abundance of water for one or two hours, being careful to keep them covered with water while boiling. Cut well-grown corn from the cob, as in the previous directions; place it in a pan or basin to steam, over the beans—if not provided with suitable steam apparatus. Add a little water to the corn, and stir it occasionally. Steam from twenty to thirty minutes, then add the corn to the beans, and simmer for half an hour. Stir often, and watch carefully that it does not burn. Season to suit the taste.

**A NICE STRAWBERRY DESSERT.**—Thicken sweet boiling milk to a consistency which is thin enough to fill the interstices between the berries, and yet thick enough to be firm when cool. Turn out and serve up with cream and sugar.





A. T. DEWEY, W. B. EWER,  
Publishers.  
Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4; six months, \$2.25; three months, \$1.25. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week, 1 month, 3 mos, 12 mos.  
Per line..... 25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00  
Four insertions are rated in a month.

#### DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

#### SAN FRANCISCO:

Saturday, June 16, 1877.

#### TABLE OF CONTENTS.

ILLUSTRATIONS.—The Chinese Tea Plant, 369. The Three Kingdoms, 375. Ground Plan of Dairy Barn on Jersey Farm; Jersey Farm Milk Coolers, 377. GENERAL EDITORIALS.—The Tea Plant; Wheat in Field and Market; The Earthquake Wave, 369. The Week; Thoroughbred Seed Wheat; The Tax on Growing Crops, 376. A Visit to Jersey Farm, 377. Field Fires; Pipes for Irrigation and Sewers; Concrete Pavements; Free Reading Room in Oakland; The Cost of Pianos, 380.

QUERIES AND REPLIES.—Insects on Olive Trees; Inquiry for Government Land; Pure China Hogs, 376.

CORRESPONDENCE.—Lake County; Farming and Irrigation in Kern County; Indigenous Verbenas in Arizona, 370.

ARBORICULTURE.—The Osage Orange as a Timber Tree; Why Trees and Plants Drop Their Fruit, 370. THE APBARY.—Honey Bees and Fruits, 370.

HORTICULTURE.—Behavior of Fruit Trees in Santa Barbara; A Fruit Ripening House, 371.

THE STOCK YARD.—More About Horn Ail; Oregon Cattle to Kansas, 371.

SHEEP AND WOOL.—A New Type of Merino Sheep, 371.

PATRONS OF HUSBANDRY.—Worthy Lecturer's Visits; Election of Officers; Open Grange Meetings; The Digest; National Grange; Taxing Growing Crops; In Memoriam; The Grange Record; Oregon State Grange Meeting, 372.

AGRICULTURAL NOTES from the various counties in California and Washington Territory, 373.

HOME CIRCLE.—One and Two, (Poetry); Honor Your Calling; Woman's Headgear; Who Educates a Woman Educates a Race, 374. The Horrors of War; Bartholdi's Colossal "Liberty"; Webster and the Stage Driver; Dress Reform in Turkey, 375.

YOUNG FOLKS' COLUMN.—The Three Kingdoms, (Poetry), 375.

GOOD HEALTH.—Sugar as Food, 375.

DOMESTIC ECONOMY.—Plain Preparations of Food; A School of Cookery in New York; Succotash; A Nice Strawberry Dessert, 375.

GENERAL NEWS ITEMS on page 380 and other pages.

MISCELLANEOUS.—Hints to Flour Millers; Sleeping Rooms; Making Cracked Wheat; Steel Grain Cars; A New Process in Sugar Making; The Effect of Tobacco on the Human System; Stopping Advertising, 378.

#### NEW ADVERTISEMENTS.

Tarrant's Seltzer Aperient; Fancy Cards, J. B. Husted, Napa, Cal.; R. H. Co., N. Y.; For Sale, Alfalfa Ranch, Ira Carpenter, Los Angeles; Webber Lake Hotel, David G. Webber, Proprietor; Poland China Pigs, A. J. Two-good, Riverside, Cal.

#### The Week.

The air is cool again. Again the ocean fogs fresco the crests of the Coast range at nightfall. Once more the cool trade winds rush through the Golden Gate, and seek the inner plains. If one had slept a week and should now be waking, he would have no idea but that the summer climate of the coast had pursued its usual course since his lying down. Far different has been the fact. The days have brought another unusual experience to put upon the record of this unusual year. Never before, within easy memory, has the spirit thermometer exhibited such unwonted high-larity; never before, since Mercury carried war news to Old Jove, has he fled so far from the terrestrial bulb; never before have the cool breezes so far permitted the glowing orb to spill his heat in such an unbroken stream upon our heads. The whole State has had a broil. The hottest coal was at Soledad, where Fahrenheit said 120°. Throughout the interior there were varying heats from 106° to 113°. In the city the highest point was 99°; but this comparatively moderate heat is greater than we have had in June for the last five years. The most notable fact of the heating was its long duration. Instead of yielding at the end of a three-days' lease of power, the burning sun clung to us for full five days; but now the spell is past, and the city breathes again.

In the country the supreme heat made its presence grivous. In some localities, noted for concentrating the sunlight into the earliest vegetables, the burning was so strong that it killed the plants by its excess of fervor. In others, the days were marked by the coming of a most severe north wind, which parched the growing crops and threshed out the ripe grain. Amid heat and wind has come the blight of field and forest fires. Thus the week has brought loss and discomfort to many, though fortunately not in such amount as to affect the general welfare.

#### Thoroughbred Seed Wheat.

Many of our practical dairymen have greatly improved their milk herds by constant and careful rearing of calves from their best cows. Thus they have improved their animals by the employment of that subtle potency in the animals to transmit their characteristics to their offspring. Other dairymen have introduced thoroughbred sires for the improvement of common stock. By thus doing, if they have introduced the right strains of blood, they have simply called to their aid the same potency which they employ in their own selections, but they have availed themselves of a true and constant potency which has been concentrated in the thoroughbred animal by perhaps a century of conservation of this valuable energy.

It has been fully demonstrated that this power, which the dairyman and stockbreeder use so profitably in their treatment of their animals, exists as well in the vegetable kingdom. Gardeners will not take seed from a poor vegetable. The handsome seed ears of corn, which fresco Eastern carriage-houses, are the very best that the huskers throw out of the shocks. In fact, there is no end of evidence in the improvement which has been attained in the size and qualities of our garden and field products, that there is a power in the vegetable which, taken at its flood, leads on to fortunate increase in all good qualities. We apply this truth, as we have said in our garden operations and sometimes in the field, but not to the extent which the success which lies in the practice would warrant.

Take for example our great wheat product. The time is now at hand when our wheat growers will lay aside seed for the next year's sowing. How many will exercise precaution to get the best which comes from the separator. How many will avail themselves of simply one selection. Many will do so we hope. And yet there will be many who will set apart so many sacks just as it runs, and clean or unclean, will throw it in the fall's harrowing. Others will be content with a volunteer from a very poor growth, and still others will let stand, for next year's seeding, a growth which will not pay for reaping—leaving a thin and sickly growth to perpetuate itself and yield according to its kind at the next harvest. This is not wise. It is not in accordance with good practice in any other branch of agricultural production. It is not a progressive step.

In this connection we propose to state a few facts of experience in the treatment of wheat, according to a method similar to that pursued in the breeding of animals. Major Hallet, an English gentleman who has had abundant time and opportunity for experiment, has been "breeding" wheat for more than 20 years and has reached results which show some of the possibilities which the grain possesses for improvement. At a meeting of the Tunbridge Wells Farmers' Club last January, Major Hallet was invited to describe his methods and his results and he did so at length. We take from his paper such leading points as may serve to give our readers hints in directions which they may pursue for themselves, if they wish to increase their wheat yields without plowing more acres. Of the general principles involved in his results Major Hallet says:

Very close observation during many years has led me to the discovery that the variations in the cereals which nature presents to us are not only hereditary, but that they proceed upon a fixed principle, and from them I have deduced the following law of development of cereals: 1. Every fully developed plant, whether of wheat, oats or barley, presents an ear superior in productive power to any of the rest on that plant. 2. Every such plant contains one grain, which, upon trial, proves more productive than any other. 3. The best grain in a given plant is found in the best ear. 4. The superior vigor of this grain is transmissible in different degrees to its progeny. 5. By repeated careful selection the superiority is accumulated. 6. The improvement, which is at first rapid, gradually, after a long series of years, is diminished in amount and eventually so far arrested that, practically speaking, a limit to improvement in the desired quality is reached. 7. By still continuing to select, the improvement is maintained and practically a fixed type is the result. The transmissibility of the superiority of an individual to its progeny must be evident to even the most superficial observer. In the human race itself, not to speak of general family likenesses, even the peculiarity of features, voice and of the very gait, are, as I have myself frequently observed, transmitted, and are, even after the interval of generations, reproduced in descendants.

In illustration of the principle of selection, I now give the following results, due to its influence alone, as the kind of seed, the land and the system of culture employed were precisely the same for every plant for four consecutive years; neither was any manure used, nor any artificial means of fostering the plants resorted to. Table showing the importance of each additional generation of selection:

Year.	Length of ear, inches.	Contain- ing Grains.	No. ears on finest stool.
1857..Original ear.....	4 1/2	47	10
1858..Finest ear.....	6 1/2	79	22
1859..Finest ear.....	7 1/2	91	39
1860..Ears imperfect from wet season.....	8 1/2	123	52
1861..Finest ear.....	8 1/2	123	52

Thus by means of repeated selection alone, the

length of the ears has been doubled, their contents nearly trebled, and the "tillering" power of the seed increased five-fold. I will now give a tabular statement of the results obtained over a very extended period, in which I shall show clearly that notwithstanding the unfavorable series of years which we have lately gone through, the effect of the repeated annual selection of the actual best plants for breeding purposes has been to so raise the normal standard of productiveness that the contents of the original ears of each variety (those ears the very best, be it always remembered, which could be found anywhere) have practically been doubled.

The following table gives the increased contents of ear obtained in four varieties of wheat during selections extending over 20 years:

Year.	The Original Red.	Hunter's.	Victoria.	Golden Drop.
1857.....	47	60	53	32
1858.....	79	90	60	39
1859.....	91	91	69	32
1860.....	87	81	76	39
1861.....	123	110	86	75
1862.....	93	90	87	61
1863.....	97	90	60	32
1864.....	59	91	69	32
1865.....	92	81	76	39
1866.....	88	110	86	75
1867.....	76	90	87	61
1868.....	98	121	106	82
1869.....	111	124	113	74
1870.....	106	111	98	81
1871.....	91	89	114	77
1872.....	71	117	101	96
1873.....	83	100	78	74
1874.....	92	98	104	81
1875.....	90	92	97	80
1876.....	86	93	103	84

\* Supposed, ears imperfect from wet season.

Contents of the original ear of each variety at starting.	47	60	53	Total Grains.
				32-192
Average contents of best ear annually of each variety throughout last nine years of series.	92	105	102	81-380

The average productive power of each kind of wheat is here clearly doubled by my principle of continued selection.

This improvement of wheat by selection of the best from year to year is, as we have said, in full accordance with what all of us believe on general principles and proof of which we have all seen around. The application of Major Hallet's results to practice is simple, if one have the disposition to experiment. It is but necessary to make a small selection at first. The best heads can be selected best as the wheat stands ready for the header. Take the largest, being careful that the grain is plump and fully ripe. Sow the selection by itself but give it no better culture than you are prepared to give all the grain you raise, unless you wish to test the question of better cultivation also when the same wheat comes into the field for business. The increase from a comparatively small experimental piece will give seed enough to put down a large area the following year with better seed than you can get from your old seeding. Pursue the selection year after year, each year taking but the best, and the result will be as apparent in wheat as in the garden and the stock yard, where you have never thought of propagating anything but the best.

THE TAX ON GROWING CROPS.—We noted recently the discussions of wrongs on producers by farmers' meetings at Stockton. At the last meeting a legal opinion on the subject of taxation of growing crops was read by a lawyer whom the committee appointed by the meeting consulted. The lawyer was W. L. Dudley, Esq., and he submitted a communication reviewing the Codes and Supreme Court decisions. He summed up by saying: "If I am correct in this, then the growing crop is a part of the realty itself, and if the land upon which it stands, and is growing, is taxed, each tax must necessarily include the growing crop, and if it does, then a separate tax upon the crop is clearly double taxation and void." Now it must not be forgotten that we admit a species of property in a growing crop, and that it is subject to taxation, but it cannot be taxed as such; it is reached by taxing the land on which it is growing. The assessment of the land carries with it an assessment of the crop, and to assess the latter after the former has been assessed is double taxation, and, in my opinion, void." This opinion agrees with what the RURAL PRESS said, some time since, concerning the impossibility of separating an immature crop from the land upon which it is growing, but in assessment it must go with the land. We read that the meeting decided that it would not be prudent at this time to enter into litigation as to the constitutionality of the law.

SUN STROKES.—Several cases of sunstroke are reported. In San Francisco several people were prostrated, but we hear of no deaths. In Petaluma one lady died, and Santa Rosa reports six cases. The thermometer marked 120° in the shade in Santa Rosa on Tuesday.

DURING May 9,665 passengers arrived by sea and land in San Francisco, and 4,913 departed. This is a considerable increase on the travel of the preceding months this year.

ON FILE.—"Double Tax, Etc.," C. M.; "Woodside Papers, Etc.," J. E. J.

#### QUERIES AND REPLIES.

##### Insects on Olive Trees.

Mr. G. P. Rixford brought to us from his Sonoma county ranch on Monday some olive twigs and branches which had been attacked by a small borer. He also brought a small coleopterous insect which was found dead clinging to the mouth of one of the holes. This insect was dry and brittle when found, and being wrapped in a piece of paper and placed loosely in the finder's pocket, was crushed and broken beyond recognition when we received it. Being unable to make out clearly the features of the insect, we could not certainly determine whether it was the borer or not, but from the close resemblance of some of its parts to the well known "twig borers," we think it was the author of the mischief. Mr. Rixford promises to secure us better specimens as soon as possible.

The work on the olive twigs was closely analogous to the work of the twig borer, which we have often seen on the apple, pear and other trees at the East. The insects which do work at the East are mainly two, the *Amphicerus bicaudatus* and the *Elaphidium parallelum*. Both are small, dark-brown beetles, but quite different in form if closely examined. They have also different methods of working. The former does the twig boring in its perfect state, that is as a beetle; the other lays its eggs on the surface and the grub starts into the wood as soon as hatched. As nearly as we can determine, the holes in Mr. Rixford's olive twigs were bored by an insect in the beetle state and not by the larvæ, but this may seem otherwise when we get better specimens.

The manner of the work is thus: the insect begins at the axil of the leaf and bores into the twig downward, about an inch or a little more. The hole is about as large as a thick knitting needle. In the case of the beetle boring, the hole is made simply for food and protection, but when the hole is made by a grub it is for quiet during its transformation. The effect upon the twig is the same in either case. The strength is eaten out of the twig, and when the winds blow briskly, as they did last week, the twigs are broken off and fall to the ground. The only known means to prevent the spread of these insects is to watch the trees closely and cut off all punctured twigs and burn them. This, of course, must be done at the time when the insects are at work in the holes, and examination must be had to determine when this occurs. The twigs Mr. Rixford brought us were wholly deserted. It is, apparently, too late to destroy the insects this year, although in the East this is just the time when the holes are generally occupied. Mr. Rixford tells us that he has found these borings in the orange, lemon and date palm trees. We hope our readers will look through their trees for these marks of insect work, and send us specimens that we may have data for more definite conclusions.

Mr. Rixford's olive twigs were also infested with a scale insect which we have not yet had time to carefully examine, but which is different in leading points from other scale insects which we have seen in this State.

##### Inquiry for Government Land.

EDITORS PRESS:—As I have been a subscriber to your valuable paper, the RURAL PRESS, for two years, and as I am in need of some information and advice, and being satisfied that I could rely on all of your statements, is the cause of my intruding on your valuable time. I have two honorable discharges for six years' service during the late rebellion and being desirous of trying my chances at farming, and as I am entitled to a quarter section of land under the homestead law, please inform me where is the best place to go to locate such a quarter section in California? If there is any book on such matters as regards the soil and climate of California, please state any information that you can impart, that would be of service to me; I would consider myself very thankful for it.—RICHARD C. HAWKE, Gold Hill, Nevada.

We are sorry that we cannot point our querist to a splendid homestead to which he has claim, but we have not the knowledge needful. There is nothing published which will give it. We cannot do better than print his request so that all may read it, and any one who desires our querist as a neighbor may, perhaps, call him to unoccupied Government land near them. It might be well also for our readers who have knowledge of good land that may be entered, to give note of it in the PRESS, so that all who have claim upon Government bounty may secure homes. We have only the public interest to serve in this matter. Now that wide schemes are laid for getting possession of limitless tracts of Uncle Sam's domain, it is for the interest of all that deserving and *bona fide* settlers should secure their rights and do their work in building up the State by actual work and settlement, rather than the acres should pass into the hands of speculators and grabbers. Whoever wants a neighbor on Government land, let him write to Mr. Hawke as above.

##### Pure China Hogs.

EDITORS PRESS:—If there are any readers of the RURAL PRESS who are breeders in thoroughbred big-bone China hogs, they would do well to advertise in the PRESS. I often hear inquiries made for them.—A. U. STRONG, Capell, June 8th, 1877.

The suggestion is a good one. We had a call recently from Dr. H. Kimball, of Napa, who desired some pure Chinas. There are quite a number for sale which are not pure. If any one has the pure bred hogs there is a demand for them.



### A Visit to Jersey Farm.

We lately had the pleasure of a visit to one of the most complete private milk dairy establishments we ever saw. We have seen larger ones, of course, among the co-operative dairy concerns of the East, and there are still milk factories in this State which keep more cows, but we never saw a dairy producing milk for city consumption, which combined size and liberal expenditure for buildings and appurtenances, with the most exact and scientific system in care and management, and scrupulous cleanliness in all details, like the establishment at Jersey farm, near San Bruno station in San Mateo county. The dairy is the property of R. G. Sneath, Esq., manager of the Merchants' Exchange Bank in this city. Mr. Sneath achieved agricultural fame as a breeder of thoroughbred Jersey cattle at Menlo Park. The thought there came to him to utilize the milking qualities of his Jerseys in a larger milk-producing enterprise, and at the same time make his venture profitable by producing a uniformly excellent quality of milk, which would give him the cream of the milk trade in this city. To give form to this idea he purchased the fine property near San Bruno, containing 2,300 acres, and extending from the shores of the bay westward over the summits of the Coast range to the beautiful little valleys on the sea coast. Upon this peerless dairy ranch Mr. Sneath moved his band of thoroughbred Jerseys and increased his herd by breeding and purchase until he has now something like 600 head of grass-gatherers on his fields. His whole enterprise is so charged with the spirit of dairy progress and liberal investment in the direction of improvement that we can, in the space of this review, but hint at the outlines of his endeavors.

#### The Milk Trade of San Francisco.

Our observation in different cities in the East convinces us that no city of its size in the country is furnished with a better quality of milk, generally, than San Francisco. California conditions are exceedingly favorable for the production of good milk. This is evident in the quality of our State butter, which averages better than any we ever saw elsewhere. It is the universal verdict of cheese-makers who have come to this State from the East, that they never worked such uniformly good milk for cheese as that they find in California vats. This being our natural advantage in the production of milk, it is not to be wondered at that the number of men engaged in furnishing the city supplies is very large. When Mr. Sneath decided to begin his enterprise of producing milk on a large scale for city consumers, he was warned that the supply was already so ample that the production offered but little profit and that his venture was hazardous. He nevertheless believed that, notwithstanding the general good quality of the city milk, he could improve upon it and thus win customers in the face of the sharp competition among milk producers. How well he has succeeded can be briefly stated. He sent his first milk to the city in January, 1876. At the time of our visit, about a month ago, he was putting on the cans about 750 gallons a day. This we believe is the largest amount sent to the city from any single private producer. To this extent has the trade grown upon the quality of the milk alone. This surety has had free course to achieve its own progress, from the fact that the milk is delivered to customers just as it is produced on the ranch. Many of our readers are producing good milk for the city trade, but they sell it at wholesale to the distributors, and good milk, like a good story, never loses anything in amount as it passes from hand to hand among the city retailers. Mr. Sneath saw that his success must lie in doing his own distributing, and so he established a milk depot of his own on Tehama street. Here he keeps his own wagons and delivers the milk directly to his customers. By keeping guard upon the delivery of pure and undiluted milk, he has secured the best trade and the largest and best paying customers. This is the secret of his success in a business point of view. If he had confined his efforts to the production of good milk alone, it would have found its way under the pump of the retailer and would have drowned itself in the common flood of customary dilution.

#### Improvements on Jersey Farm.

We can but note briefly the general improvements which are in progress on the San Mateo ranch, under the care of the efficient superintendent, Mr. Smith, who we believe carries out Mr. Sneath's directions with intelligent and wise effort on his own part. The improvements embrace many particulars. One of the chief is the building of a large reservoir in a favoring canyon about a mile from the farm buildings. The site is several hundred feet above the buildings and the adjacent pastures. The present capacity of the reservoir is about 50,000,000 gallons, and by increasing the height of the dam and breastworks, this amount can be doubled. This generous supply of water is not only intended for free use in the stock barns for drinking and flushing, but several miles of pipes are already laid by which underground and hydrant irrigation are to be practiced upon about 1,000 acres of the lower meadows, and thus an abundant supply of fresh feed is to be ensured in the driest seasons.

Coupled with the efforts for irrigation are measures for the improvement of the pastures by the introduction of perennial grasses. Mr. Sneath has made large importations of New Zealand rye grass, and is so well satisfied with its growth that he is about to make much wider seedings with it. He is also making great improvements in grubbing out the bush growth from the hillsides which are covered with it and is opening new roads by which the uplands of the coast can be more easily reached. It is his intention to greatly increase the supporting power of the ranch so that the dairy may be enlarged. The soil is so good that it welcomes the improvement, and it is quite probable that milking stations will soon be a necessity on the back fields, so numerous will be the four-footed tenantry on Jersey farm.

#### The Dairy Herd.

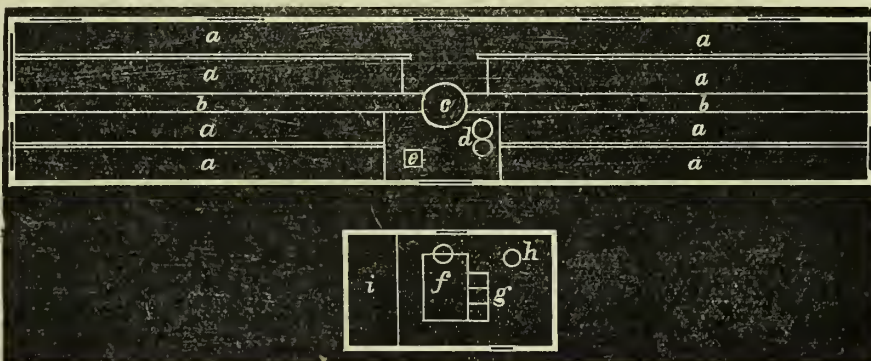
As we have said, Mr. Sneath laid the foundation of his milk herd with his thoroughbred Jerseys. Some of his thoroughbred cows are splendid mothers and their progeny are kept along in their good qualities. The pure Jersey element gives its characteristic richness of color to the milk and thus improves its market qualities. We shall show farther on how this Jersey milk is handled so that its color may be distributed equally throughout the whole milking. Mr. Sneath brings the Jersey element to bear upon his herd by the use of thoroughbred Jersey bulls, of which he has five noticeably good animals. The grades from the bulls are very handsome and very good at the pail. The weight of the milk-producing material in the herd is at present composed of the best cows, culled from dairies which Mr. Sneath purchased to stock the ranch. He makes it a point to buy out whole dairies, to keep the best cows and fat the poor ones. Thus he gets possession of the

the cows must give way for better ones. He finds that, on an average, if he buys 400 milk cows, only about one in four of them will meet his ideas in milk. We have an idea that many of our dairymen can take a hint from what Mr. Sneath has found out by his systematic weighings of milk; and if they should test their cows by the scales, they would find that they were keeping some cows which ought to go to the butcher.

#### The Dairy Barn.

The dairy barn on Jersey farm is one of the most gratifying features of the establishment, in its convenience of design and completeness in furnishing. The diagram which appears on this page will give an idea of the ground plan of the building. It is 248 feet in length and 48 feet in width. In it there are three floors; the first laid out as shown in the diagram. The spaces marked *a*, are standing places for cows; two rows facing each other through the narrow parallel lines, which represent the lines of stanchions. Thus it may be seen that there are four rows of cows lengthwise of the barn. The cattle are brought head to head with feeding room between them. Up and down the length of the barn there is a wide avenue, marked *b*, along which a car moves on a tramway and in it the cooked feed is carried for distribution to the cows at milking time.

The car is in the form of a huge, shallow tank on wheels, and holds enough for one meal for 300 cows. The circle, marked *c*, shows the position where the large boiler-iron cooking apparatus overhangs the tramway. This cooking boiler is filled from the floor above and its bottom rests about one-half way down from the ceiling of the ground floor of the barn, so that the contents can be drawn off through a spout into the car before described. Its capacity is



GROUND PLAN OF DAIRY BARN ON JERSEY FARM.

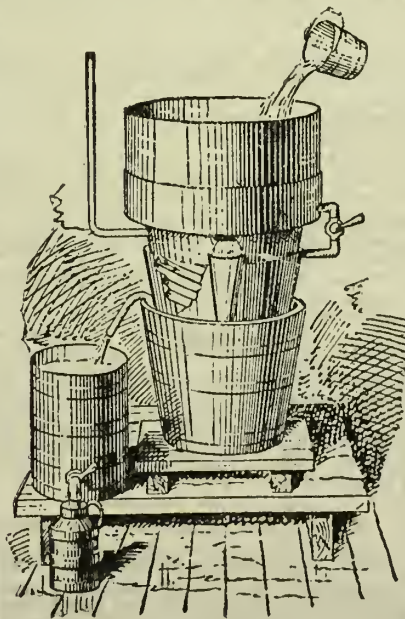
best animals and not simply those which are offered for sale and are presumably not the best which the seller has. The principle upon which Mr. Sneath is building up the productivity of his dairy is one which has been found good in the practice of other dairymen, namely, putting the cows upon a test of milking and thus ascertaining the best for use and breeding. Although this system of natural selection prevails with many of our best dairymen, we know no one who has put it upon such a basis of scientific accuracy as Mr. Sneath has done. Many are content with simple and occasional observation of the milkings. Too often they judge of a cow by her great deeds in flush times without due recognition of staying qualities, and pronounce in favor of a cow who has a short flush season when one with moderate climaxes and longer milking season will make the better figures for the whole season. Mr. Sneath's method gives him certain knowledge of the capacity and endurance of his cows. He has each cow numbered by a brand upon her hip and this number corresponds with her entry on the milk book. Each Saturday afternoon the milk of each is weighed as it is drawn and entered on the book. Thus when Mr. Sneath comes to look over his herd he has the deeds of each cow recorded and her comparative milk value is easily seen. We cannot better describe his practice than to print a few lines from the milk record which we copied out during our visit. The following are the entries of a single milking of some of the best cows for a period of seven weeks:

Number of brand.	Mar. 21.	April 7.	April 14.	April 21.	April 28.	May 5.	May 12.
502.....	24	30	30	25	25	26	24
551.....	16	18	16	17	17	17	17
488.....	.....	.....	17	19	19	18	20
477.....	15	15	17	15	15	13	15
Pure Jersey.....	16	16	15	17	16	14	16
Pure Jersey.....	17	18	19	19	19	17	18

Of course there are many cows in the herd which do not come up to these figures, and there are many cows which Mr. Sneath will keep only until he can fill their places with better ones. He proposes to bring his cows to about 16 pounds as an average single milking for the first three months of their season. But few of his cows will now do this. He is working now on a 12-pound limit, but will improve his cows until they average 16 pounds. We were in the barn during one milking. Two hundred and ninety cows were milked, and they yielded 260 three-gallon cans. This would be equal to two and seven-tenths gallons per day per cow for two milkings. As Mr. Sneath's ideal is four gallons per day, it is apparent that he is now much below his mark, and many of

about 450 bushels. Steam is admitted to the cooker from a stationary boiler in the small building adjacent. The little square, *e*, marks the place of the small, upright engine which furnishes power for the hay-cutter in the floor above. It will be noticed that there are in all nine large doors on three sides of the barn. These give the large herd of cows easy entrance and exit from the barn into the corrals without jostling each other.

We went to the second floor of the barn and



Jersey Farm Milk Cooler.

saw a large space, 248 by 48 feet, which gives storage for a vast amount of baled hay and countless sacks of bran, oilcake, middlings and other ground feeds which are freely used in milk-making.

One floor higher we find four large bins, each as large as a small house, which contain ground feed and cut hay, and these bins surround a circular space, which serves as a mixing floor, to which the components of the day's rations are shoveled and thoroughly mixed before they are slid down a large spout into the cooking boiler. Just in the mouth of the boiler there is a wheel, which is kept revolving as the feed comes down, and thus it is given another mixing before steam is turned into it.

This barn, like the other buildings of the ranch, is based upon a foundation of concrete, of which Mr. Sneath has a very high opinion for

such uses. The floors are of plank, and are firm and solid. Behind each row of animals there is a gutter, and from the gutters there are frequent openings into pipes, which convey the liquid excrements to a large tank, at some distance from the barn, where they are taken in sprinkling carts for application to the fields. This system of pipes allows the floor of the barn to be thoroughly flushed without waste of water or manure, for the liquid resulting finds its uses in irrigating and manuring the fields. The barn contains other points which the dairyman would find commendable, but we have not space to particularize further at this time.

Near the barn is the engine house, as shown in the diagram. In this, *f* is the boiler, bricked in securely. At *g* are stationary wash-tubs for can-cleaning. This can-cleaning is no small item where the number of cans reaches the hundreds daily. Mr. Sneath found that the soap-suds, in which they are scoured, was fatal to a man's hands when he had to labor in it day after day, and besides it was a slow process to cleanse the cans by hand brushing. His inventive genius came to the rescue, and we saw in operation a revolving brush, of form calculated to reach all parts of the interior of the can. This is revolved by steam power. A man snatches up a can, fills it with hot suds and then pushes it against the revolving brush, which scours out the interior in a twinkling. The can is then rinsed and set in a caldron of boiling water, marked *h*, until the next can comes along from the brush and takes its place. There is another curious little revolving brush which scours the cover, inside and outside, at a single motion. Thus speed and perfect cleanliness are insured in can-washing.

#### Cooling the Milk.

There is no simple thing which contributes so much to the keeping qualities of milk as cooling it before it is put into closed vessels. For this purpose, smaller dairymen practice setting the filled cans in a tank of running water. Mr. Sneath had so many cans to handle he could not well practice this method, and he found it burdened with other disadvantages. It is impossible to insure a uniform quality of milk through the whole milking when each cow's mess is emptied by itself into small cans. Cans will vary in richness according to the individual characteristics of the cows. More than this, the milk from his Jerseys, which he relied upon to give their fine colors to the whole milking, would be put into separate cans, and the desired ends would not be gained. To meet these difficulties, he devised a cooling and mixing apparatus, which is so novel and so effective in its working that we made a sketch of it, and the engraving therefrom appears on this page. With the aid of the engraving we hope to make our description quite clear to all. The apparatus stands about seven feet high. Beginning at the top, there is, first, a tin cylinder made in two parts. It is about three feet in diameter. Where the top part fits into the lower, there is a muslin strainer, held all around by the joint. The lower cylinder has a tight bottom. Just below this tin cylinder is a tin cone, which is filled with water from a pipe which is seen coming down from the left. This first tin cone sets in another tin cone a little larger, and this lower cone stands in a cask of water, as shown in the engraving. Around the outside of the inner cone there is a wire soldered spirally from top to bottom. The course of this spiral is shown in the engraving, by breaking away a part of the outer cone. The wire is three-sixteenths of an inch thick, and the distance between the turns of the spiral is one and one-half inches. This gives a passage way for the milk, between the inner and outer cones, three-sixteenths of an inch by one and one-half inches, and as the wire makes 30 circuits before it reaches the bottom, it follows that the thin stream of milk has to run about 150 feet between two bodies of cold water before it reaches the point of discharge at the bottom of the cone. From the bottom of the cone the milk comes up in a pipe through the water, and runs over into the large tin tub at the left, from which it is drawn out into the cans for shipment. We notice that we have got the milk into the can without taking it out of the top cylinder. This would not work well in practice, so we will go back and draw the milk out of the top cylinder by the faucet which is seen at the right of the engraving, and let it run down the short tube into the space between the cones. As noted before, the water, after turning around inside the inner cone, comes out through the opening shown in the engraving, and runs down the side of the outer cone into the cask below. Thus it may be seen that there is a stream of cool water and warm milk running into this apparatus at the same time, and yet they never mix, strong as is the tendency to mingle; but the milk runs into the can and starts for the cans cooled by the water, but not having a drop of it to drink.

Mr. Sneath arranges the mixing of the Jersey with the other milk by having the milkers empty their pails at intervals, and thus the mixture is complete before it goes through the several strainers which the machine contains.

We have touched but lightly upon our notes and recollections of the Jersey farm, but we cannot do more at this time. We have seen no dairy lately which had so many suggestive points. We think Mr. Sneath is doing a good thing, not alone for the citizens whom he supplies with pure milk, but in his liberal investment and scientific investigation of milk producing and handling, will reach conclusions which it will be of interest and value to all.



## Hints to Flour Millers.

Our milling readers will be interested in what John M. Truax, a prominent and practical New England miller, in a recent communication to the *Millstone* has to say upon the subject of fast and slow grinding:

To my mind, the reasons given for fast or slow grinding have not been shown. The quantity to be ground must depend upon the texture or density of the stone, the draft, the number and depth of furrows, and the grinding without heating. No more grinding should be done than can be done without heating. The heating is the stopping spot. The quantity that every mill ought to grind is that quantity that can be ground and not heat, whether it is five, 10, or 20 bushels per hour. If every miller will observe this as his guide, he will do the best work that he is able to do.

In speaking of heating, I mean to say that the grain should not be so heated by pressure or rubbing, as will start the juice or essential oils of the grain. If the grain oil is started by friction, that friction produces heat, and that heat dries and evaporates the grain juice, and the virtue of the flour is impaired. Any amount of cooling will not repair the damage done by heating. The steam that rises from the hot running mill is the vapor from out of the essential oils of the grain, and is lost in the bread. To recommend the grinding of 10, 15, or 25 bushels of wheat per hour is bad advice, imprudent. Millers differ in the selection of stones, and differ about their dress, and the motion of their mill. One will have one kind and way, and another another kind and way; but whatever way they select, when they go to grinding, their quantity per hour should be that which they can grind and not heat, whether it is three, five, 10, or 20 bushels per hour. Do not impair the substance for the bulk per hour. Blood heat is as high as can be warranted without impairing the product. It may be an ambition to grind fast, but an old adage is "haste makes waste." If millers are ambitious, let that ambition be applied to the making of a perfect running mill. Select the very best buhrs, and put in a thoroughly common sense dress; a dress that will granulate the whole kernel as nearly as possible. Keep the stones as far apart as possible, and keep the texture or grain of the stones clean. Let this be the miller's ambition. But stop adding to quantity when the mill is at blood heat, and as much less heat as they are able to, and let the bread makers and caters have in the flour all the virtue that Mother Earth has produced.

**SLEEPING ROOMS.**—The air which passes out of the lungs is wholly innutritious. If re-breathed without any admixture of other air, it would induce instant suffocation. It contains a large amount of carbonic acid gas. This gas is condensed by cold, and falls to the floor; heat carries it to the ceiling; hence the practical fact, that in warm weather those who sleep on the floor breathe the purest air; while in very cold weather the higher one sleeps above the floor, the better is the atmosphere. Hence, in a warm room, sleep as near the floor as possible; in a cold room, the higher the bed is, the better. A striking illustration of one branch of the statement is found in Dr. Hall's new book on "Sleep." When the jail-fever was raging in England, it was the custom to hand the food and water to the prisoners through a hole in the floor above them. A case is mentioned where the jailer and his wife died in one night in consequence of the effluvia of the prisoners' cell below; while the prisoners themselves continued to live, showing conclusively the concentrated malignity of the air at the ceiling, as compared with that on the floor. The same principle has an illustration in the narration in the same pages, of the terrible incidents in connection with the "Black Hole of Calcutta," where it was speedily noticed that relief was given by sitting down on the floor. From these statements, it is clear that it is better to have a fire in the fireplace in a close room in winter than to have no fire; and for two philosophical reasons—the fire rarefies the carbonic acid gas, and compels it to seek the ceiling; besides, it creates a draft up the chimney, thus causing cold air to come in more copiously.

**MAKING CRACKED WHEAT.**—*Millstone* replies to a query as follows: "Cracked wheat is usually made on small buhrs, portable mills, of sharp porous French stone, being best adapted for the purpose. The mills most generally used will crack about 10 to 15 bushels per hour, and the cracked wheat is then passed through a reel, or series of reels, covered with different numbers of wire to grade it. The apparatus required, of the capacity referred to, will cost about \$400, including the mill; or it can be furnished of a less capacity for less price."

**GENERALS Sheridan and Crook** are fitting out a small expedition to start from Green river, on the Union Pacific, and march north through Camp Brown and around the Big Horn river to the Yellowstone. After locating two military stations north of the Big Horn country, for which Congress has appropriated \$200,000, the expedition will return by steamer down the Yellowstone and Missouri rivers.

**STEEL GRAIN CARS.**—A statement is going the rounds of the papers that the Grand Trunk Company is having a number of grain cars built which are largely composed of steel. These cars, it is said, weigh six tons only and are to have a carrying capacity of 18 tons.

## A New Process in Sugar Making.

It is stated that a new process for clarifying cane juice without the use of lime has been successfully tried by Mr. Eastes, the inventor, at the mill of Mr. Dart, of Indooroopilly, in Queensland. The principles of the process have not yet been divulged. The canes are, however, ground in the usual manner, and the juice allowed to run in the clarifiers; here Mr. Eastes' operations commence, the invention consisting in the treatment of the cane juice with certain chemicals which materially alter the color and viscosity of the liquor, the increase in the quantity of molasses attendant upon the use of lime being avoided. At the trials the freedom of the liquor from glutinous matter was particularly noticed, the liquor feeling quite warm to the hand. When the liquor ran from the clarifying box to the cleaning battery, it boiled with a clear white foam upon it, and scarcely any skimming took place. Less steam was needed for boiling in the vacuum pan. In a report given by the *Queenslander* it is stated that a perfect crystal of large size was formed, and that had there been sufficient liquor to fill the pan the crystals would have been of an unusually large size. The curing was soon disposed of, the liquor—not molasses—running away to the tank after leaving a basket of 1,788 pounds of beautiful clear white sugar perfectly dry in three minutes. It is also stated that the green tinge of the sugar as ordinarily made from the same cane is entirely removed. The density of the liquor was 10° Beaume. It has been suggested that the clarifying agent is hypochlorite of sulphur, but Mr. Eastes asserts it to be perfectly innocuous, and that it might be partaken of in the form in which it is employed; it is also stated that there is no probability of the sugar deliquescing. One of the most important points is that the liquor running from the vacuum pans as a vehicle for the sugar is not molasses, but purely crystallizable liquor, which requires no further clarification, and can be returned, after heating, to the pan, where it is entirely converted into sugar equal to the first, and not, according to the *Queenslander*, a particle of molasses made. If the reports upon this process are true—and at present we have no reason to doubt them—Mr. Eastes' invention is one which will largely revolutionize the manufacture of sugar.

## The Effect of Tobacco on the Human System.

In the fourth annual report of the Michigan State Board of Health, Dr. Scott relates something new in the influence of tobacco on the human system, as follows: "There has come under my notice for several years, but more particularly during the last two years, a kind of rheumatic condition of the walls of the chest. The patient complains of a dull, heavy pain in the chest walls. The disease in a large majority of cases is confined to the left side. The pain is circumscribed and limited to a space of not more than two inches in diameter, just below and a little to the left of the left nipple. At times the pain is very severe and always constant day and night, when the patient is awake. I have investigated the disease to some extent, and find it to be more common among tobacco users, especially those who use the weed to excess. Patients suffering from this complaint invariably come to their physician with the belief that they have heart trouble. I have not found signs of organic lesion in any of the cases that I have examined, but there does exist in some of them what might be called 'irritable heart.' I am convinced that the greater number of the cases are the result of intemperance, either in the use of tobacco or other stimulants, for the reason that when the patient abstains from the use of them for a short time, his pain ceases and his condition improves. In one case, where the patient abstained from the use of tobacco for 13 months, the pain entirely ceased; but at the end of this period the gentleman recommenced the use of tobacco, and after three weeks' use the old pain returned with all its severity. I am certain that quite a number in this vicinity are receiving treatment for heart disease, when if they would reform in tobacco using they would speedily recover."

**STOPPING ADVERTISEMENTS.**—We have frequently received letters from readers asking whether such and such a "firm," which recently advertised in the *PRESS* has suspended, and we know that advertisers do not always consult their best interests by removing their names from before the people. We believe that the following from the *Engineer* is very true: "Certain firms try to economize by taking out their advertisements occasionally; they might as well take down the sign over their doors. Advertisements should be continuous. Any idea of discontinuing them for a period, however brief, with a view of saving, is a mistake which leads only to disappointment and loss. It involves not only the loss of time during which the advertisement ceases to appear, but the additional loss of time required to bring the public interest up to the point at which it left off. The proverb 'out of sight out of mind' is nowhere more applicable than in the case of an advertisement."

**RICHARD B. CONNOLLY**, of the Tammany Ring, has opened negotiations looking to a restoration of a part of his plunder, now held in the name of his son-in-law.

**SOURCE OF ELECTRICITY IN LIVING BODIES.**—It is requisite that a few words should be said relative to the source from whence the electricity in the system is derived. With every breath of air which our lungs inhale, the venous blood is not only oxidized and transformed into arterial blood, but it is also charged with electricity, produced by the condensation of the air, which takes place by the pressure through the bronchial tubes of the lungs, during the act of exhalation. That this is actually the case is proved by the experiment of Dr. Kincke, of Berlin, showing that currents of electricity are engendered by pressing an aqueous liquid or damp air through a membrane of bladder, or silk, or even through a diaphragm of sulphur in a powdered state; the greatest quantity of electricity, equal to that generated by a Daniell element, being yielded by the latter.

## CENTRAL CALIFORNIA COLONY.



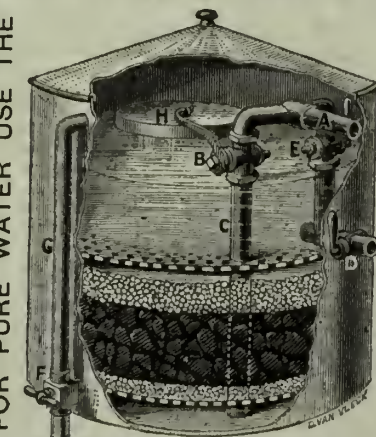
**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.  
**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

**WANTED.**  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to  
**M. THEO. KEARNEY, Manager.**  
306 Pine Street, San Francisco.

## SNOOK'S PATENT TANK FILTER.



FOR PURE WATER USE THE

SNOOK PATENT TANK FILTER.

It is self-regulating, will last many years without renewing filtering material. Is simple, durable, easily cleaned, and not liable to get out of order. A sure preventive against snakes, worms, bugs and all other impurities in the water. It will filter all the water required for any dwelling house, and is not expensive. These filters are expressly designed to use in place of a tank. May be connected to any tank and through the usual pipes supply all the house, or the water may be used direct from the filter, where no tank is required for other purposes. Every house should be provided with one and thus avoid one of the most fruitful sources of disease. Full satisfaction guaranteed and filters kept repair free of expense. For sale by  
**G. & W. SNOOK, 427 Pine Street, S. F.**

## LEVI STRAUSS &amp; CO.,

Patent Riveted

Clothing.

14 & 16 Battery St.,  
San Francisco.



These goods are specially adapted for the use of **FARMERS, MECHANICS, MINERS, and WORKING MEN** in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## DEWEY &amp; CO.

American & Foreign Patent Agents

OFFICE, 234 SANSOME STREET, S. F.

**PATENTS** obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle, Bulls, Cows and Calves for sale.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Poultry, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berks-shires, all ages. Perfect pedigrees. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

## Poultry.

RENO, NEVADA. I. P. LORD, BREEDER AND SHIPPER OF PUREBRED AND PRIZE POULTRY.

Eggs from the following varieties at \$4.00 per dozen, warranted fresh and true to name: Brown Leghorns, Buff Cochins, B. B. Red Games, B. B. R. Game Bantams and Rouen Ducks. Send for Price List and Terms. *State where you saw this.*

## LOOK!

ALBERT E. BURBANK, importer and breeder of Fancy Poultry, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Poultry at reduced prices. Send stamp for Price List. ALBERT E. BURBANK, 43 and 44 California Market, S. F.

Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. *Send for Illustrated Book and Price List.* MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

HEADQUARTERS FOR THE PACIFIC COAST OF THE U. S. Camp Lounge COMPANY. C. H. MOSELEY, Agt., 415 Sansome Street, S. F.

LANDSCAPE GARDENING. CHAS. A. REED, Experienced Landscape Gardener, SANTA BARBARA, CAL. Correspondence solicited.

E. GROTKASS, COLIMA, MEXICO. DEALER IN REAL ESTATE. Information given free of charge. Lands procured for sale or for rents on easy terms.

## TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit. Address J. A. FOPPE, Sonoma, Ca.

THE RURAL PRESS.—This is the best farm and stock journal in the world for the Pacific coast reader.—*Visalia Delta*, Feb. 10.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## HAY PRESSES

AND

## Excavating Machinery.

Constantly on Hand and for Sale

The well known PRICE or PETALUMA HAY PRESS, the standard machine of its class and the fastest baling press known; over 500 in use on this Coast. Price....\$450

The IMPROVED ECLIPSE POWER PRESS, the simplest and best press ever made for the price, which is.....\$300

The IMPROVED ECLIPSE HAND-POWER PRESS, very compact and powerful.....\$200

The PRICE PRESS, (extra heavy,) for baling hay for shipment in box cars. Will put from nine to twelve tons in a box car. A very strong and powerful machine, fully warranted as to strength and capacity.....\$600

## MADE TO ORDER.

Hide Presses for baling dry hides for shipment to the East.....\$500  
Presses for Hair, Wool, Rags, Hops, Moss, Broom Corn, etc., at reasonable prices.

PRICE'S BOX EXCAVATOR or SELF-LOADING GRADING CART, the most remarkable labor saving machine that has been invented for years. Will move earth any distance, from 50 to 2,000 feet at one-fourth the cost of the ordinary way. The large size, using four horses and carrying over one and a half yards at a load is worth....\$650

The same machine, carrying three-quarters of a yard and using two horses.....\$500  
Price's Draper Excavator, for making ditches from 10 to 20 feet wide.....\$650

There are conditions connected with the sale of excavators which will be explained upon application by letter or otherwise. Address

## PRICE PRESS COMPANY,

I. J. TRUMAN, San Francisco,

J. PRICE, San Leandro.

Office, With BAKER & HAMILTON,

No. 17 Front Street, San Francisco.

## JOHN H. GOVE'S

## CENTENNIAL HAY PRESS.

Farmers and Hay Pressers will find it to their advantage to examine this Press before buying any other. It is built compact, combining lightness for moving with the greatest power and durability in its working parts, capable of making the average 250 pound bale, more or less, baling 10 to 15 tons per day, with three men and a pair of horses, they traveling only 36 feet to operate it. No excavations required for this press. This is the original Gove Press improved, after an experience of building Presses in the States the past 15 years, where they gave the best of satisfaction. Price, No. 1, \$250.

Manufactured and for sale, or built to order, at the Eureka Grain Storage Warehouse, by

JOHN H. GOVE or ANDREW J. GOVE, Box 1122.

Also, for sale by DAVID N. HAWLEY, Agricultural Warehouse, 211 Market Street.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THUR—San Francisco.  
B. W. CROWELL—Amador, Placer, Calaveras and Tuolumne counties.  
G. W. McGREW—United States.  
A. C. KNOX—Plumas, Sierra, Lassen, Placer and Nevada counties.  
C. N. WEST—Santa Cruz, Monterey and San Benito counties.  
A. C. CHAMPION—Sonoma, Marin and Mendocino counties.  
A. U. STRONG—Lake, Napa and Solano counties.  
E. D. PLANK—Dakota Territory (Black Hills).  
JOSEPH DIMICK—Mendocino, Humboldt and Del Norte counties.

SUTTER CREEK, February 26th, 1875.

MESSERS. DEWEY & Co.—I have received my Letters Patent through your agency. And, for your promptness accept my thanks. Yours, S. N. KNIGHT.

London Assurance Corporation,  
OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - \$14,993,466

Western Assurance Company,  
OF TORONTO, CANADA.

Incorporated 1851.

Cash Assets - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

Farmers, write for your paper.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
VICE-PRESIDENT.....JOHN LEWELLING.  
TREASURER.....J. V. WEBSTER.  
CASHIER.....ALBERT MONTEPELLIER.  
SECRETARY.....FRANK A. CRESSEY

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

HEALD'S BUSINESS COLLEGE  
No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College. TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

## THE ALDEN FRUIT PRESERVING CO.,

OF CALIFORNIA,

No. 426 Montgomery Street.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,900 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE, Napa Co., Cal. P. O. Napa City, Box 51

## MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco.

Engraving done at this office.



## Field Fires.

During the hot weather of the past week a number of fires have occurred in different parts of the State, in some cases doing considerable damage. The most serious was in Santa Barbara county, where a fire broke out on the ranch of Don Jose Rochin, six miles from Lompoc, on the 10th inst. It ran first in an easterly direction, consuming stock and everything in its way. It then turned toward Messrs. Young Brothers & Buell's ranch, over which the monstrous enemy swept at a rate never equaled in the country. After burning 150 head of cattle for Don J. Rochin, and completely making away with all the grass on the three ranches, it came down into the San Margarita canyon, where, were it not for the noble citizens who turned out and fought it in the hot sun for fifteen straight hours without a meal, to save the settlers from entire destruction, it would undoubtedly have burned up every house in the canyon, and perhaps there are families who would have perished while struggling to save their homes. The Young Brothers are thinking of butchering what stock they have left, to prevent starvation, while Messrs. Buell and Rochin are looking for a new range. It is impossible to estimate the loss.

There is a fire raging on the Santa Maria ranch, seven miles northwest, and owned by Don J. Rochin, which has devoured over 2,000 acres of his best grass, which he was sowing to winter his sheep with. The ranchers are all worked down endeavoring to save something for their stock, and are almost hopeless.

Another fire has been raging for several days in the Caluenga canyon, about fourteen miles from Los Angeles, near Monte Vista. No definite report of the damage done has yet reached this city, but it is said that two or three houses, barns and a lot of hay have fallen prey to the flames, and 200 stands of bees have been destroyed. The fire has burned up to the mountains, and is plainly visible from Los Angeles by night. The extent of the fire is between eight and ten miles, and is still raging. A large amount of lumber is already consumed. The settlers have been making an ineffectual fight against the fire since Saturday.

A wheat field, of between 200 and 300 acres, belonging to Ed. McGarry, near Bridgeport, was burned, also, last week.

A large fire occurred near Vacaville, also, and swept across the wheat fields, destroying a large amount of property. This was started by a locomotive spark.

A destructive fire occurred at Plymouth, Amador county, on the 12th, burning up a number of buildings. The loss was about \$35,000.

It behooves farmers to take even more than ordinary precaution against fires at this season of the year, especially during the prevalence of hot weather, as when a fire gets started in a field there is no telling how far it may spread.

## Pipes for Irrigation and Sewers.

Wherever water can be had at reasonable cost, irrigation is the order of the day. Enterprises are being pushed of all degrees of magnitude, from the great "West Side canal" of the San Joaquin valley, down to the windmill or even hand pump of the market gardener, all having a common end in view, namely, to secure an unfailing supply of water.

With this object attained the cultivator of the soil in this climate is independent of the seasons and can be sure of a reward for his labor. One of the great obstacles to success in irrigation is the waste of water which takes place when it is run through open ditches from its source to the ground where it is to be used. A loose, dry soil will drink up an immense amount of water, and the burrows of animals which are cut across will dispose of it in an astonishing way.

We have ourselves let all the water from an inch hose, under heavy pressure, run into a gopher hole for several hours without any visible filling up, and we are told that a badger furrow will often take all of the water from a large ditch for several days before it allows any to pass on. In such cases there is doubtless a stratum of sand or gravel, which serves as an under-ground reservoir or water-course. The residents in some irrigated districts find that the water level in their wells is from 10 to 30 feet nearer the surface than formerly. To avoid this waste, and make a given supply serve for as much land as possible, recourse is being had to pipes to carry the water to the point where it will do the most good. This is particularly the case in Los Angeles and San Diego counties, as at the Indiana colony at San Gabriel, and the orange orchards on the Sweetwater. As some of our readers doubtless have this matter under consideration, we have taken pains to get some facts as to suitable pipes to use for this purpose.

We are indebted to Gladding, McBean & Co., of 213 Market street, for valuable information in regard to vitrified ironstone pipes, which they make at Lincoln, Placer county. The material used is fire clay, and the glazing is put on with "Albany slip," a mineral clay imported

from New York State. The lengths fit into each other so as to make a smooth joint, which is closed with Portland cement. There is also a new style of asphaltum joint coming into use, for which decided advantages are claimed for certain cases, as in connecting with small side branches.

The advantages claimed for this pipe over iron are cheapness and freedom from rust. The latter not only impregnating the water so as to injure it for some purposes, but at times accumulating on the inside of pipes so as to seriously diminish their carrying capacity. These ironstone pipes are being largely used in this city and Oakland for sewers, with highly satisfactory results. We can endorse them for this purpose from private experience.

We can hardly imagine anything clearer for carrying water to houses for domestic use than this sort of pipe, with its hard glazed surface, in cases where the pressure is not too great. Mr. Gladding gives the following instances of good results from pipe which he laid in the East, using a rather heavier article than that sold for sewers here. In 1861, at the Jacksonville Insane Asylum, Illinois, he laid three-quarters of a mile of three-inch pipe, with 30-foot head, which is still in good order. In 1853 laid a pipe for the Michigan Central Railroad Company, at Lawton, with 25 to 30 feet head. The Superintendent gave a certificate of satisfactory results eight years after. About 1854 laid a two-inch pipe at Granville, Ohio, with 65-foot head.

Learning that the resident engineer had used this pipe on the C. P. R. R., at Blue canyon, for bringing water to the track, we wrote to him for results, and he very kindly gave them as follows: A six-inch pipe was used; joints closed with hydraulic cement; not under heavy pressure, only about 40 feet head; no breaks nor repairs yet. He has used it for eight-inch drains under 30-foot embankments satisfactorily, and expects to use about four miles of six-inch pipe at Rocklin. The pipe is made from three to 18 inches in caliber.

## Concrete Pavements.

In making drying floors for raisins, and in dairies, cellars, etc., it is often desirable to use stone where no quarries are at hand. For such purposes artificial stone will often answer every purpose. Mr. Crowson Smith, President of the California Artificial Stone Paving Co., has given us the following information in regard to the work being done by his company under Schillinger's patent.

The patent relates to a concrete pavement which is laid in sections, so that each section can be taken up and relaid without disturbing the adjoining section. With the joints of this sectional concrete pavement are combined strips of tar paper or equivalent material arranged between the several blocks or sections in such a manner as to produce a suitable tight joint, and yet allow the blocks to be raised separately without affecting the blocks adjacent thereto. It is claimed that these detached blocks do not crack from shrinkage when setting, as larger areas of concrete often do. Two feet 10 inches by three feet four inches is a common size for the blocks, but they can be varied to suit circumstances. The foundation used is well packed sand, and on this the blocks are formed separately, each one being allowed to set before its neighbor is made. Sidewalks are kept covered about three days before using. The usual thickness is three inches. The price for this pavement is from 25 to 30 cents per square foot, according to the hardness required. The lowest figure answering for cellars and the highest for sidewalks on business streets.

The company has laid large areas in walks and drives for Mr. Crocker and Mr. Stanford at their private residences in this city. There are also good specimens in front of the new building of the Real Estate Associates, opposite the Russ house, and also in front of Baldwin's hotel. At the latter place an experiment was made to test the value of concrete for arches to support sidewalks, etc. An arch four inches thick, with two and one-half inches spring, was constructed under the walk. It supported 19,000 pounds of pig iron without any signs of weakness. This test was witnessed by several of the best architects in this city. We believe that there is no patent on this use for concrete.

The company is actively asserting its sole right to the detached blocks, as described above, and has brought several suits against parties in this city and vicinity for infringements.

**PERSIMMON PAPER KNIFE.**—We are interested in receiving from Rev. Henry Loomis a paper knife made from the wood of the black persimmon. It is from a tree different from the varieties Mr. Loomis has sold, the fruit being of inferior quality. The wood is, however, handsomely grained and clouded, and we should think the tree would be worth introducing as an addition to our handsome timber supplies.

**AGENCY FOR AGRICULTURAL MACHINERY.**—We note that David N. Hawley, lately head salesman for Linforth, Kellogg & Co., has opened a depot at 211 Market street, for the sale of agricultural machinery. He is agent for some of the machines formerly sold by the firm above mentioned, and his stock includes all kinds of agricultural goods.

## Free Reading Room in Oakland.

The public spirited people of Oakland have done a thing for the good of the young men which we think could be done in other towns to advantage. They have furnished and equipped a free reading room and it was opened formally on Friday evening of last week. Of the opening, the *Oakland Transcript* says: "Henry Vrooman, President of the Association, very greatly to his regret and that of the audience, was unable to be present. The substitute, Dr. Dio Lewis, unanimously selected as Chairman for the evening, worthily filled his place. Speeches were made by Rev. L. Hamilton, Charles N. Fox, and D. L. Emerson. By far the finest off-hand speech of the evening was made by Daniel Kilpatrick. Although an humble journeyman tailor, he fairly eclipsed the doctor, the lawyer, and the clergyman in his speech. It was witty, fitting, and pertinent to the occasion, and was rapturously applauded.

The Musical Club, at intervals during the evening, discoursed most delicious music. A solo by the wife of Prof. Ogilby, of the State University, was received with tumultuous applause. At the suggestion of Mr. A. T. Dewey, who, by the way, has been the grand moving spirit of this enterprise, blank notices were circulated among the audience, asking subscriptions for the permanent support of the enterprise."

In order that our readers in other parts of the State may know some of the objects of the enterprise we quote from a circular as follows:

The association is designed to promote greater unity of feeling and action in the community for the accomplishment of literary and other good works. It will endeavor to properly maintain a place where the young and the old, the rich and the poor, the representatives of every trade and calling may meet upon terms of social equality; a place to which strangers may come, and in which they can engage their unemployed hours pleasantly to themselves and profitably to each other.

The society differs, in some respects, from all other organizations, and its members hope to increase its strength and wisdom until enabled to introduce new benefits for the patrons of the institution. It will be a constant effort to make the work of the association such as will be an unfading honor to the fair fame of our city, at home and abroad.

In California, more perhaps than in older portions of the country, are needed, especially for the young, places of this character in which the attractions shall be even stronger than the temptations of other places of resort which are often the starting points of a career to ruin. Our aim is to refine and to improve. Our motto is to do as much good as possible with as little harm as possible.

## Officers of the Association.

President, Henry Vrooman; First Vice President, W. H. Jordan; Second Vice President, Mrs. J. M. Selfridge; Secretary, J. R. Porter; Treasurer, Mrs. J. I. Spear. [Ex-officio members Board of Directors.]

Directors—L. L. Alexander, Mrs. C. H. Chamberlain, Mrs. C. M. Shepard, Mrs. Jos. McGilivray, Mrs. C. L. Pierson, Mrs. E. J. Grayson, Dr. Dio Lewis, G. W. Armes, A. I. Gladding, David Kilpatrick, A. W. Swett, A. T. Dewey, E. W. Playter.

## The Cost of Pianos.

A correspondent in Monterey county asks why pianos are sold at so much higher prices in California than in Europe. Some of the reasons are as follows: some American pianos, like the Golden pianos for instance, are superior to the English pianos. Again, the wages of workmen are higher in America than in England. Of causes operating in California may be mentioned the cost of freight, the charge overland from New York to San Francisco being from \$50 to \$100.

There are some wrongs in the American piano trade. American dealers, since the war especially, have fallen into the bad way of adopting the motto of large profits and small sales, for which they need a good dose of co-operation administered by consumers.

It is too much the fashion of American piano dealers to have large show and salesrooms, and expensive salesmen; to sell on time, to receive little or nothing from some and too much from others.

**PERSONAL.**—We note by our Eastern exchanges that J. A. Johnson, of Santa Barbara well-known as a lecturer on California topics, is making a spirited campaign in the East this summer, speaking before farmers' clubs and city lecture audiences. Eastern papers report great interest manifested in his addresses and the subjects presented.

**DISPATCHES** from Omaha state that the water now on the bottom lands on each side of the Missouri river will not only destroy the crops already planted but will prevent future seeding. The river is now 17 feet and one inch above the low-water line and is still rising. The bottoms are entirely overflowed. The town of Augusta, opposite Little Rock, is entirely overflowed. More trouble is expected.

**A RANCH FOR SALE.**—An advertisement in this edition of the Press is deserving the attention of those desiring a home in the southern part of the State. It is concerning the sale of a small ranch, near Los Angeles, in the famous San Gabriel region, by Mr. Ira Carpenter.

## General News Items.

**THE Gaelic** took away 120 Chinamen on Saturday for China. On the same day the *City of Peking* brought here, however, 1,000 more.

**ALBERT HART**, of Sacramento, who was Private Secretary to Governors Booth and Pacheco, has been appointed United States Pension Agent at this city.

The Pope received during the jubilee \$1,100,000 in hard cash, not counting innumerable articles of value presented. The Pope announces three new Cardinals. A delegation from Guadalupe presented a number of bricks made of solid silver, similar to one previously given to the church by citizens of San Francisco.

**THE Chico** soap factory, which was burned early in the spring by the Chico incendiaries, was rebuilt and completed only about 10 days ago. It was burned again June 5th. The first batch of soap had just been made, but was not boxed. The factory was owned by Sterling, Soryen & Co. Their loss was about \$500. General Bidwell's loss in lumber is \$120. It was no doubt the work of an incendiary.

## PATENTS AND INVENTIONS.

## A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

- FOR WEEK ENDING MAY 22D, 1877.  
191,022. PLOW.—J. D. Bowen, Roseburg, Ogn.  
191,072. FRUIT DRIER.—W. S. Plummer, Portland, Ogn.  
191,101. CULTIVATOR.—N. T. Brewster and A. D. Neher, Roseville, Cal.  
191,194. WOOD PAVEMENT.—H. M. Stow, S. F.  
4,658. ZEPHYR WOOL.—Bauer, Tobriner & Co., S. F.  
1,065. STEELE'S PAIN ERADICATOR.—Crane & Brigham, S. F.  
FOR WEEK ENDING MAY 29TH, 1877.  
191,271. PUMP PLUNGER.—H. H. Tuttle, San Jose, Cal.  
191,301. WASHING MACHINE.—Daniel Best, Auburn, Oregon.  
191,303. FRUIT DRIER.—R. B. Blowers, Woodland, Cal.  
191,315. SCREW THREAD COUNTER.—C. C. Coleman, Honolulu, Hawaii.  
191,331. PEN RACK.—H. W. Foreman, Golden City, Col.  
191,332. ROTARY PLOW.—W. Freeborn, S. F.  
191,342. SULKY PLOW.—F. A. Hill, San Leandro, Cal.  
191,347. CULTIVATORS.—J. Jones, Stony Point, Cal.  
191,351. ORE ROASTING FURNACES.—H. G. Livermore, S. F.  
191,374. RAWHIDE BELTING ROPE.—H. Royer, S. F.  
191,378. PROCESS OF PREPARING COFFEE.—F. Silver, S. F.  
191,380. OIL AND FILTER CUP.—A. J. Stevens, Sacramento, Cal.  
191,383. SASH FASTENER.—T. Stewart, S. F.  
191,384. IMPLEMENT FOR OPENING OYSTERS.—T. W. Temple, Los Angeles, Cal.  
191,391. CUBE SCREW MACHINE.—F. Westermann and O. Mursch, S. F.  
191,394. STUD FASTENER.—M. Zacharias, S. F.  
191,404. COYVINO TELEGRAPH.—L. Pickering, S. F.

WOODWARD'S GARDENS embraces an Aquarium, Museum, Art Gallery, Conservatories, Tropical Houses, Menagerie, Seal Ponds and Skating Rink.

## WEBBER LAKE HOTEL!

DAVID G. WEBBER, M. D., - - PROPRIETOR.

A. J. ANDERSON, Manager.

Post Office Address, Truckee, Cal.

Hotel Open for Visitors From May 20th  
Until November 1st.

## WEBBER'S STAGE

Leaves Truckee Tuesdays & Fridays,

FARE, \$3.00.

BOATS, FISHING TACKLE, SADDLE

HORSES AND WAGONS Furnished to Guests Free.

Webber Lake is 6,925 feet above sea level, is well stocked with Silver Trout, and 24 miles from Truckee, on the Henness Pass Road, surrounded by the highest peaks of the Sierra Nevada mountains. As a resort for families and lovers of rare scenery, excellent fishing and fine drives, this hotel excels all others.

## POLAND CHINA PIGS.



A. J. TWOGOOD, Riverside, Cal.,

Has on hand and offers for sale a few pure blooded Pigs of this variety of Swine. Parties desiring first-class stock are invited to examine my herd or address me as above.  
A. J. TWOGOOD



## S. F. MARKET REPORT.

**NOTE.**—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 13th, 1877.

The chief part of the week has been so oppressively hot that few men felt at all ambitious or energetic, and ventures beyond positive requirements were exceedingly few. There was a certain activity among receivers of perishable goods, for supplies continually arrived and sales were so small that recourse had to be taken to packing, storing in cool cellars, etc. Along Front street, the chief center of Dairy Produce and Provisions, the heat was intense and not a breath of wind was stirring. Other centers of trade were hardly less seriously afflicted.

In Grain the only movement has been retrogressive, and prices of several Grains will be found lower than a week ago. The Liverpool market was at a standstill and gave no inducements toward investments.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	12s 5d@12s 8d	12s 10d@13s 6d
Friday.....	12s 5d@12s 8d	12s 10d@13s 2d
Saturday.....	12s 5d@12s 8d	12s 10d@13s 2d
Monday.....	12s 5d@12s 8d	12s 10d@13s 2d
Tuesday.....	12s 5d@12s 8d	12s 10d@13s 2d
Wednesday.....	12s 5d@12s 8d	12s 10d@13s 2d

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1875.....	8s 11d@9s 2d	9s —@9s 6d
1876.....	9s 11d@10s 2d	10s 4d@10s 6d
1877.....	12s 5d@12s 8d	12s 10d@13s 2d

## The Foreign Review.

LONDON, June 12th.—The *Mark Lane Express* says: Judging from present appearances, our harvest this year will be late, and whether farmers eventually obtain fair returns for their labor must depend on weather influences during the next two months. The supply of English Wheat, both at Mark Lane and in the provincial markets, has been very meager, and with stocks in growers' hands at such a low ebb but little change in this respect can be looked for. Business in the country, being less directly affected by the depressing action of continuous large foreign supplies, has been more active than at Mark Lane, and growers have succeeded in obtaining an advance on English Wheat, which factors in town have failed to do. Foreign imports into London have been liberal, to-day's returns showing the arrival of nearly 63,000 quarters. Statistics indicate that the requirements of this country between now and harvest will be about five million quarters, and as the supply in sight falls short of this quantity by about a million quarters, the firmness of holders seems reasonable. Still, the high level of values to which Wheat rose in London has been taken advantage of by nearly all exporting countries, so that the required quantity will in all probability be forthcoming from Russia and India, if not from America. The future course of trade is no doubt very uncertain, but there appears no reason for the anticipated further decline; while, should politics assume a more threatening aspect or the season prove unfavorable to farmers, we may again see wheat up to 70 shillings a quarter. The week's trade has been limited to the supply of the immediate requirement of millers, who have been able to satisfy their wants at two shillings per quarter less money. Maize sold slowly at about 25 shillings and 6 pence per quarter for mixed American ship, and the possible future of this article gives rise to much conjecture both at home and abroad. The brilliant weather which set in the first of the week has a quieting effect upon the floating cargo trade, and with the exception of the Ghinika's, which commanded full prices, all descriptions of wheat declined a shilling to two shillings per quarter. There are now few cargoes of Black Sea Wheat on passage, nearly all steamer cargoes having already arrived at their destination. Maize and barley have receded fully a shilling per quarter, and with large arrivals trade closed dull at a decline.

## Freights and Charters.

The *Commercial News* says: The near approach of the cereal harvest causes many vessels to refuse present offers from shippers, and as a consequence the market for Wheat tonnage is inactive. Very few engagements were made during the week. Rates are firm with an advancing tendency. Owners are holding for £2 5s and upwards to Liverpool direct for wooden and iron vessels. We have now in port 8,670 tons of tonnage secured for Wheat and 5,535 tons for miscellaneous. The disengaged tonnage is 37,824. Following were the engagements of the week: Ship *Oracle*, 1,550 tons, Wheat to Liverpool, £2 5s; *Cork*, U. K., £2 7s 6d; *Continent*, £2 12s 6d. *Norw* ship *Superb*, 837, Wheat to Liverpool, private, but supposed to be £2 5s.

## Eastern Grain Markets.

New York, June 9th.—The grain trade remains very dull. There is considerable Corn going forward to Europe, but the movement in Wheat is restricted by the firmness of holders. Spring Wheat has sold to a limited extent at \$1.55@1.60. Though stocks in the English market are low, there appears to be no urgency of demand there. Large wheat importers at Liverpool and Marseilles have arranged to receive Russian Wheat from points tributary to the Black sea from Baltic ports, an arrangement which has been made practicable by the railways recently constructed by Russia. Indian Corn is selling at 55¢@58¢. Barley is neglected. A lot of 42,400 bushels of California, by ship *Blue Jacket*, damaged on the voyage, has been sold at auction at 47¢@55¢. Flour is dull and irregular.

CHICAGO, June 9th.—The week closes with a strong recovery from the lower prices that have prevailed. In the Breadstuffs markets the activity has been a distinguished feature of the whole week's trading, and the proposition to cut short the hours of trading was adopted by an overwhelming vote. The hours of trading now are three-quarters of an hour shorter than formerly. Grain closed at about last Saturday's prices. Wheat sold at \$1.43@1.52. Corn has sold from 44¢@45¢ for cash. Oats are very steady. Receipts for the week were—Wheat, 22,000 bushels; Corn, 1,020,000; Oats, 226,000. Shipments—Wheat, 302,000; Corn, 1,274,000; Oats, 26,000. Receipts for the same time last year—Wheat, 831,000; Corn, 2,184,000; Oats, 503,000. Shipments—Wheat, 588,000; Corn, 1,950,000; Oats, 544,000. The remarkable feature of the figures is the falling off this year in the movement of Wheat. The stock in store here now is very small, scarcely more than half a million bushels. The Provisions market has been heavy and weak, and at the close of the week was decidedly lower, with but little recovery. Pork sold from \$12.50 to \$13.30, and Lard from \$3.75 to \$3.12. With this break in prices there has, however, been a vast amount of speculative transfer, and a considerable amount of the Pork product itself has changed hands. The closing prices are: Wheat, \$1.52; Corn, 45¢; Oats, 37¢; Rye, 68¢; Barley, 60¢; Pork, \$12.75; Lard, 88¢.

## Eastern Wool Markets.

NEW YORK, June 9th.—Although the business of the past week in Wool has been light, there is a decidedly better tone to the market, due to the reduced supplies. Quite a large number of manufacturers have recently made their appearance in quest of stock, but the limited quantity and generally poor condition of that in store has restricted trade. The new Western fleece has not yet made its appearance, but receipts may be looked for at any time. There remains no free spring California in first hands, and for the inferior quality of that in store an advance is demanded. Fall California is also stronger, holders being less anxious to realize. Western Texas is in light supply, and though the stock of Eastern is quite large, there is a greater degree of firmness, and in some cases an advance on recent sales is demanded. The quantity of old fleece on hand is small, and holders generally ask more than buyers are willing to pay. Later London cables report prices a trifle easier, with increased purchases for the United States. The sales for the week are 5,000 lbs Australian, at 46¢; 146,000 lbs spring California, at 20¢@25¢ for fair to good, and 27¢ for choice; 30,000 lbs Fall, 16¢@20¢; 30,000 lbs Black Colorado, 17¢; 3,000 lbs do lambs, 16¢@18¢; 151,000 lbs Texas, at 15¢@18¢ for ordinary Western, and 19¢@24¢ for imported do and 23¢@30¢ for fine Eastern; 10,000 lbs Georgia, 23¢; 10 bags super, 35¢; 20,000 X Ohio, 38¢; and 37 bales Montevideo Creola, 10,000 lbs scoured spring California, 2,000 lbs do pulled, 1,800 bags super and X do, 15 do No. 1, 10,000 lbs Domestic Noils and 30,000 lbs New Jersey fleece, on private terms.

BOSTON, June 9th.—The Wool demand has been active, and full prices have been obtained. The stock is considerably reduced. Some small lots of new Ohio fleeces have been received, and a sale of 5,000 lbs has been made for 45¢ for clothing, and 49¢ for combing. Sales of washed fleeces have been only 70,000 lbs of all kinds, and the prices realized indicate no change since last week. A lot of 20,000 lbs of X Ohio at 43¢, and 28,000 lbs of Michigan and New York at 37¢@40¢, combing and delaine are quiet. A small lot of New Ohio combing was sold at 49¢, a lot of new Kentucky combing at 37¢, and other lots of unwashed combing at 25¢ for coarse up to 40¢ for desirable fat sheep. Texas Wool continues to meet with good demand. The sales of the week have been 132,000 lbs, with prices ranging 21¢@32¢, principally at 27¢@32¢. The demand for pulled is good, and the market is steady and firm. Sales of the week include 420,000 lbs X and XX at 35¢@45¢; super, 30¢@44¢; good and choice supers are selling at 36¢@44¢; combing pulled sold at 46¢. California is quite active with large receipts and good assortment offering. Sales of the week—1,132,000 lbs spring, and 162,000 pounds fall. Prices ranged 19¢@34¢ for spring, the bulk of the sales ranging from 25¢@30¢, and choice lots from 32¢@34¢; fall wool ranging from 15¢ to 18¢ for poor, up to 25¢ for dusted.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. May 23.	WEEK. May 29.	WEEK. June 6.	WEEK. June 13.
Flour, quarter sacks..	19,652	47,536	39,139	21,321
Wheat, centals.....	46,890	41,334	81,080	34,714
Barley, centals.....	12,580	5,014	7,206	5,411
Beans, sacks.....	2,340	1,164	1,094	677
Corn, centals.....	4,082	4,164	2,863	6,725
Oats, centals.....	2,611	3,129	8,957	1,428
Potatoes, sacks.....	13,750	9,238	6,553	7,008
Onions, sacks.....	253	636	1,080	609
Wool, bales.....	5,328	3,321	2,406	3,780
Hops, bales.....	22	—	13	—
Hay, bales.....	991	727	1,362	1,200

Bags—No change in quotations is reported. Dealers report the market firmer because of the impression caused by the group of a dozen firms who have signed an agreement to put aside one-half of their stock, as formerly noted in our reviews. Whether the ring will hold is of course a problem.

Barley—A slight reduction has been experienced. Sales for the week include the following: 2,000 cts Coast Feed at \$1.55; 600 sks Bay Feed at \$1.57; and 200 sks do at \$1.60; 2,000 sks fair Coast Feed at \$1.47; 300 do good Bay do, \$1.55; 1,000 sks fair Brewing at \$1.60; 625 do good Feed and choice Brewing at \$1.55@1.65; 600 sks fair Brewing, \$1.60; 500 do good Bay Feed, \$1.55.

Beans—Beans are unchanged.

Corn—Corn has sold at a decline. We note sales: 400 sks fair Large Yellow, \$1.70; 300 sks good Large Yellow, \$1.62 1/2 ct.

Dairy Produce—Although the price for good, fresh and firm lots is unchanged, there has been considerable loss on boxes which have come in soft and almost melted from the heat in transit. Many dealers were forced to clear off their floors into the cellars, and some houses employed extra hands in packing the surplus. Customers would take but just what they needed for immediate use; five-box customers taking but a single box, etc. This left a large supply on dealers' hands which had to be packed. Cheese is selling at an average of 14¢, with fine lines bringing 16¢ and possibly 17¢. Some producers we hear of are holding their Cheese at home in expectation of 18¢. Dealers report that there would be a good outlook for prices were it not that Eastern prices are low and Eastern Cheese could be run in to fill the demand. But this is a question for the future.

Eggs—Eggs are weak at a cent lower per dozen than last week. There are thought to be now but few Eastern Eggs in the market.

Feed—A reduction is notable in some ground Feeds. Bran is now \$21 1/2 ton; Cornmeal, \$40@42. Straw has come in in considerable amount in answer to the late advance and the price has receded to 50¢@55¢ bale, according to quality. Much very poor Straw has been received of late. Hay holds its former range. We note Hay sales: 40 tons new Volunteer Wheat and Oat, \$17.50; 31 do good old Wheat, \$21.50; 50 tons old Wheat at \$21.50; 30 tons new Volunteer at \$17.50; 38 tons good old Tame Oat, \$19.75; 26 do new Clover, \$16; 24 do poor old do, \$15.50.

Fruit—There have been numerous changes in food prices as noted in our table before. Apricots, Cherry Plums, Currants, Figs and Strawberries are cheaper. Apples, Pears and Peaches are now received in boxes. Figs have declined most notably, falling from 75¢ lb to 15¢@20¢.

Hops—We note sales in the city of 20 bales at 20¢; 5 bales, 19¢. Exporters will not operate at holders' prices and the brewing demand is small. The New York market, for the week ending June 1st, is reported by Emmet Wells as follows:

A fair demand continues both for export and for home use at unchanged prices. The attention of the trade is now turned toward the new crop. The progress of the plant will be watched with unusual interest both here and abroad, for upon this alone depends the supply, the chances of export and the price next season. The early

indications point to another short crop in Germany, it being claimed that the plant was very much weakened by the severe blight of last season. In England, on May 15th, the vine was reported as being unusually backward, and scarcely any tying had been done at that date. Our own crop is progressing favorably in most districts, the vine being about two weeks in advance of the corresponding period of last year. Quotations—New Yorks, choice to fancy, 15 to 17¢; New Yorks, common to prime, 10 to 13¢; Eastern, 10 to 13¢; Wisconsin, 8 to 12¢; Yearlings, 6 to 10¢; Olds, all growths, 4 to 6¢; Californians (nominal), 12 to 17¢; Oregon (nominal), 12 to 17¢.

Oats—Oats decline in sympathy with Barley and other feed-stuffs. We note a sale of 250 sks fair feed at \$2.10 per ctl. Better grades range at \$2.15@2.25 per ctl, the latter only for choice milling selections.

Onions—The ruling price is still \$1.25 per ctl. Nearly all supplies just now are from the neighborhood of Stockton.

Potatoes—There are now a few old Humboldts in market which sell at 60¢ per ctl. New Potatoes range about \$1@1.50.

Poultry and Game—Nearly all kinds of Poultry rule 50¢ lower per doz than last week, owing probably to poor appetites during the hot weather. Turkeys drop to 14¢@15¢ per lb.

Provisions—The hot weather played sad havoc with the city butchers, unprepared as they are for refrigeration. Wagon-loads of spoiled Meat were carted from the markets, and much Meat was sold at a nominal price to packers to save it from utter loss. We are told by one of our largest firms of provision packers that large quantities of good beef were brought to them at 2¢ 1/2 lb by butchers. The supply of Meat of all kinds is ample. Hogs are dull, because it has been too warm for packers to use them. California cured Meats are a shade higher. Eastern, unchanged. Hams are in large supply and hard to sell in large lots. The market is reported only moderately active. There is an advance noted in Tallow, owing to a stronger demand for export.

Vegetables—Summer Squash and Tomatoes have reached their low prices, owing to large receipts. Sweet Peas are doing better. String Beans sell at a wide range, according to variety, some reaching 7¢. Rhubarb and Corn are cheaper. Wax Beans of only poor quality have been received and have sold as low as 2¢. Carrots are higher than last week. Some inquiry is reported from the market gardens of the interior, because of the intense heat.

Wheat—Sales have been small and at reduced rates. We note sales: 800 cts good white Australia at \$2.45, and 500 cts Oregon Milling at \$2.42; 242 cts white Australia, \$2.40; 2,000 cts choice Milling, \$2.35; 107 cts good Milling, \$2.27, and 350 tons Shipping, \$2.15, ex warehouse; 350 cts good white Australia, \$2.40; 140 do good Milling, \$2.27.

Wool—No change is reported in range of prices. We note sales of 500,000 lbs at 14¢@27¢. The *Producers' Price Current* makes the following note on the S. F. trade and supplies:

During the month of May there was shipped East per rail from San Francisco 11,091 bales; Sacramento, 1,974 bales; Marysville, 335 bales; San Jose, 33 bales; totals, 13,343 bales@50 lbs=6,683,360 lbs. State total shipments, according to the above average for the month of May, just closed, 20,422,171 lbs. The foregoing statistics show very plainly that our stocks on hand are not large, the best authorities compute it to be less than 3,000,000 lbs, all told. Say, 2,500,000 lbs unsold. The daily deliveries are rapidly decreasing. Buyers evince considerable anxiety to purchase the better grades at the prices now current, and the result is a pretty steady business. Stocks are steadily and rapidly being reduced. Oregon goods are held firm, one or two small sales have been effected, terms private.

## FRUITS AND VEGETABLES.

WHOLESALE.]		WEDNESDAY M., June 13, 1877.	
<b>FRUIT MARKET.</b>			
Apples, box.....	75 @ 1 25	Peaches.....	8 @ 10
Apricots, box.....	75 @ 1 00	Pears.....	9 @ 10
do Royal, lb.....	8 @ 12	Pistachios.....	3 @ 4
Bananas, bunch.....	2 00 @ 3 50	Plums.....	12 @ 14
Blackberries.....	— @ —	Raisins, Cal, box 150	50 @ 2 50
Cherries, blk, lb.....	8 @ 15	Malaga.....	3 00 @ —
do Red, lb.....	5 @ 8	Zante Currants.....	9 @ 10
Cherry Plums, box.....	75 @ 1 00		
Cocoanuts, 100.....	5 00 @ —	Asparagus, bx.....	1 25 @ 1 75
Currants, Chest.....	3 00 @ 4 00	Beets, chl.....	20 @ —
Figs, black.....	13 @ —	Cabbage, 100 lbs	50 @ —
do White.....	15 @ —	Carrots.....	70 @ 85
Gooseberries.....	7 @ —	Caiflower, doz	50 @ 60
Limes, Mex.....	8 00 @ 12 50	Corn, doz.....	12 @ 18
Cal.....	10 00 @ 15 00	Cucumbers, doz	20 @ 40
Lemons, Cal M.....	15 00 @ 22 50	Garlic, New, lb.....	3 @ —
Sicily, box.....	10 00 @ 12 00	Okra, lb.....	10 @ 3 1/2
Oranges, Mex.....	— @ —	Lettuce, doz.....	10 @ —
Tabiti.....	15 00 @ 20 00	New Potatoes.....	3 @ 1 1/2
Cal.....	15 00 @ 35 00	Parasnis, lb.....	1 @ —
Peaches, box.....	1 50 @ 2 25	Rhubarb.....	2 1/2 @ 3
Pears, box.....	75 @ 1 50	Horsradish.....	5 @ —
Pineapples, doz 60	8 00 @ 8 00	Squash, Marrow.....	35 00 @ —
Raspberries.....	10 @ —	fat, tn.....	25 @ 50
Strawberries, 100	15 00 @ 15 00	Summer, do bx	25 @ 50
<b>DRY FRUIT.</b>		String Beans.....	2 1/2 @ 7
Apples, lb.....	5 1/2 @ 8	Tomats, bx 30 lb.	25 @ 50
Apricots.....	10 @ 12 1/2	Turnips, chl.....	50 @ —
Citron.....	28 @ 30	White.....	75 @ —
Figs, Black.....	5 @ 7	Wax Beans.....	— @ —
White.....	6 @ 8		

## RETAIL GROCERIES, ETC.

WEDNESDAY M. June 13, 1877.	
Butter, California	18 @ 12 1/2
Chocola, lb.....	35 @ 40
Cheese.....	18 @ 30
do Eastern.....	25 @ 30
Lard, Cal.....	20 @ 25
do Eastern.....	20 @ 25
Flour, ex fam, bbl	10 @ 10 00
Corn Meal, lb.....	2 1/2 @ 3
Sugar, wh. crsld	12 1/2 @ 13 1/2
Light Brown.....	8 @ 9 1/2
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
do, ex fam.....	55 @ 60
Finest Japan.....	55 @ 60
Candles, Adm'ts.....	15 @ 25
Soap, Cal.....	7 @ 10
Rice.....	8 @ 12 1/2
Yeast Pwdr. doz.....	1 50 @ 2 00
Can'd Oysters doz	2 00 @ 3 50
Syrup, S F Gold'n	17 @ 21 00
Dried Apples, lb.....	10 @ 12
do Prunes.....	12 @ 14
do Raisins.....	9 @ 10
Peaches.....	11 @ 15
Olives, Kerosene.....	50 @ 60
Wines, Old Port.....	50 @ 60
French Caldo.....	1 00 @ 2 50
Cal, doz bot.....	3 00 @ 4 50
Whisky, O K, gal.....	3 50 @ 5 00
French Brandy.....	4 00 @ 6 00

## Gold, Legal Tenders, Exchange, Etc.

(Corrected Weekly by SUTRO & Co.)

SAN FRANCISCO, June 6, 13 P. M.  
LEAL TENDERS IN S. F., 11 A. M., 95¢. SILVER, 51¢@61¢.  
GOLD IN NEW YORK, 105¢.  
GOLD BARS, 880¢@890. SILVER BARS, 10¢@15¢ cent. discount.  
EXCHANGE on New York, 60¢@65¢-100¢ cent. premium for gold on London bankers, 48¢; Commercial, 49¢; Paris, five francs \$1 dollar; Mexican dollar, 91¢@96¢.  
LONDON Consols, 94¢; Bonds, 107¢.  
QUICKSILVER IN S. F., by the flask, 1/2 lb, 41¢@42¢.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., June 13, 1877.

BEANS.			HOPS.		
Bayo, chl.....	50	@ 75	California.....	15	@ 20
Butter.....	2 00	@ —	NITS—Jobbing.		
Pea.....	3 25	@ —	Cal. Walnuts.....	9	@ 10
Red.....	4 00	@ —	Almonds, hd shl lb	7	@ —
Pink.....	4 00	@ —	Soft shl.....	15	@ 17
Sml White.....	2 75	@ 3 00	Brazil.....	14	@ 16
Lima.....	3 00	@ 3 25	Pecans.....	17	@ 18
BROOM CORN.			Peanuts.....	14	@ 15
Common, lb.....	2	@ 2 1/2	Filberts.....	15	@ 16
Choice.....	3	@ 4	ONIONS.		
CHICORY.			Union City, chl.....	1 25	@ —
California.....	4	@ 4 1/2	Stockton.....	1 25	@ —
German.....	6 1/2	@ 7	Sacramento, New.....	—	@ —
COTTON.			POTATOES.		
Cotton, lb.....	15	@ 18	Petalums, chl.....	—	@ —
DAIRY PRODUCE, ETC.			Humboldt.....	—	@ 60
BUTTER.			Cuffy Cove.....	—	@ —
Cal. Fresh Roll, lb	25	@ 30	Early Rose, new.....	1 00	@ 1 50
Point Reyes.....	30	@ 32 1/2	Sweet.....	—	@ —
Pickle Roll.....	30	@ 32 1/2	POULTRY & GAME.		
Pirkin.....	27 1/2	@ 30	Hens, doz.....	5 00	@ 6 00
Western Reserve.....	16	@ 20	Roosters.....	5 00	@ 6 00
New York.....	20	@ 25	Broilers.....	3 00	@ 5 00
CHEESE.			Ducks, tame.....	10	@ 15
Cheddar, Cal, lb.....	13	@ 15	Geese, pair.....	1 25	@ 1 75
Old.....	8	@ 12	Wild Gray.....	1 50	@ 2 00
Eastern.....	—	@ —	White.....	75	@ 1 00
N. Y. State.....	—	@ —	Turkeys, Live, lb.....	14	@ 18
EGGS.			Dressed.....	15	@ 18
Cal. fresh, doz.....	22	@ 24	Sunbe.....	2 50	@ —
Ducks.....	19	@ 20	do, Common.....	10	@ —
Oregon.....	20	@ 22	Rabbits.....	1 00	@ 1 25
Eastern.....	19	@ 21	Hare.....	1 50	@ 2 00
FEED.			PROVISIONS.		
Bran, ton.....	21 00	@ —	Cal. Bacon, L't, lb	14	@ 14 1/2
Corn Meal.....	42 00	@ 42 00	Medium.....	13	@ 13 1/2
Hay.....	15 00	@ 23 00	Canary.....	10	@ 12 1/2
Middlings.....	16	@ 20	Lard.....	12	@ 14
Oil Cake Meal.....	40	@ —	Cal. Skn'd Beef	10	@ 11
Straw, bale.....	50	@ 90	Eastern.....	—	@ —
FLOUR.			Eastern Shoulders	—	@ —
Extra, bbl.....	8 00	@ —	Hams, Cal.....	12 1/2	@ 13
Superfine.....	6 50	@ 7 00	Armour.....	14	@ 14 1/2
Graham.....	7 50	@ —	Duques.....	15	@ 15 1/2
FRESH MEAT.			Dressed H'os.....	14	@ 15
Beef, 1st qual'y, lb	5 1/2	@ 6	Magnolia.....	15	@ 15 1/2
Second.....	4	@ 5 1/2	SEEDS.		
Third.....	2	@ 3 1/2	Alfalfa, Cal.....	25	@ 27 1/2
Mutton.....	3	@ 4	Canary.....	10	@ 12 1/2
Spring Lamb.....	4	@ 5 1/2	Clover, Red.....	25	@ —
Un-dressed.....	7 1/2	@ 8	White.....	50	@ 55
Dressed.....	7 1/2	@ 8	Cotton.....	6	@ 10
Veal.....	6	@ 6 1/2	Flax.....	4	@ 5
Milk Calves.....	5 1/2	@ 6 1/2	Hemp.....	6	@ —
GRAIN, ETC.			Italian Rye Grass	35	@ —
Barley, chl, etc.....	50	@ 60	Perennial.....	35	@ —
Brewing.....	60	@ 65	Millet.....	10	@ 12
Chop.....	1	@ 1 1/2	Mustard, White.....	10	@ —
Buckwheat.....	60	@ —	Brown.....	35	@ 4
Corn, White.....	1 60	@ 1 70	Rap.....	4	@ 5
Yellow.....	1 60	@ 1 70	Kf. Bar.....	24	@ 25
Small Round.....	1 75	@ —	2d quality.....	22	@ —
Oats.....	1 70	@ 2 15	Sweet V Grass.....	75	@ —
Milling.....	2 25	@ —	Orchard.....	30	@ 35
Rye.....	1 85	@ —	Red Top.....	25	@ —
Wheat shipping.....	2 30	@ 2 42 1/2	Hungarian.....	8	@ 12
Milling.....	2 40	@ 2 45	Lawn.....	50	@ 25
HIDES.			Mezquites.....	20	@ 25
Hides, dry.....	18	@ 18 1/2	Timothy.....	10	@ 10 1/2
Wet salted.....	7 1/2	@ 9	TALLOW.		
HONEY, ETC.			Crude, lb.....	6 1/2	@ 6 1/2
Beeswax, lb.....	25	@ 27 1/2	Refined.....	8 1/2	@ 9
Honey in comb.....	12 1/2	@ —	WOOL, ETC.		
do, No. 2.....	9	@ —	SPRING.		
Dark.....	8	@ 9	Short Flee, dusty.....	13	@ 15
Strained.....	6	@ 8	Good Southern.....	15	@ 18 1/2
			Choice Northern.....	22	@ 27 1/2
			Burry.....	12	@ 16
			do, Northern.....	18	@ 23



## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses, RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



BLISS'S ILLUSTRATED GARDENER'S ALMANAC and ABRIDGED CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

## SPANISH CHUFA

## SEED FOR SALE.

Address  
L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants, Spring Lists free. F. K. PUGH, 616, Bloomington Nursery, Illinois.

## Nurserymen.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets.

JOSEPH SEXTON, Proprietor.  
CULTIVATOR OF  
Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

## HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.,

Wholesale Grower of

## ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

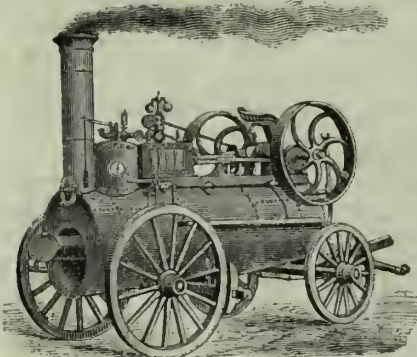
## RELIABLE TURNIP SEED.

Rupert W. Crompton, Esq., wrote March 7th, 1877, that RENNIE'S PRIZE SWEDT TURNIP yielded more than three times as much as the common seed. Price, per pound, (in American currency, pre-paid,) thirty cents. Wm. RENNIE, Seedsman, TORONTO, CANADA.

## Agricultural Articles.

## H. W. RICE,

MANUFACTURER OF THE RICE PATENT STRAW-BURNING ENGINES.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood-burning engines changed to Straw-burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

## Fraud! Fraud!!

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

## Winchester Repeating Rifle

MODEL 1873.



third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

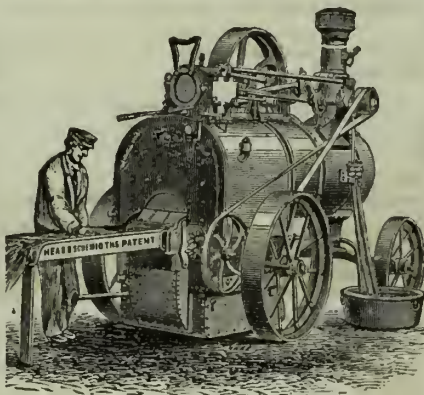
The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

HEAD & SCHEMOITH'S  
STRAW-BURNING ENGINES

At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,  
10 Bush Street, S. F.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating Farm  
Pumping, Railroad  
and Power

## WINDMILLS;

Pumps & Fixtures.

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders for a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,  
HORTON & KENNEDY,  
Managers for California and Pacific Coast.  
ALSO BEST FEED MILLS FOR SALE.  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

THE RURAL PRESS is one of the handsomest, best and most candid journals in California or the Union—Santa Barbara Press, March 17th.

## TO FRUIT MEN.

LILLIES' FRUIT PITTER,  
Patented March 7th, 1876.

H. JONES, Sole Agent for California,  
419 and 421 Sansome Street, S. F.

This machine pits all the different kinds of stoned fruits, (clinging-stones included,) both rapidly and well, and without waste, and with entire satisfaction to all who have used it. It does the work without waste and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully. For further particulars and terms, address

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,905, 157,124, 157,508, 164,181, 165,661, 172,790, 173,491, 179,687, 180,351, 181,433, 186,380, 187,126, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

HILL'S PAT. HOG RINGER,  
RINGS AND TONGS  
OR HOLDER.

A full line of these salable goods at manufacturers' prices. Address,

JAMES E. GORDON,

WHOLESALE HARDWARE,

254 & 256 Market, and 8 & 10 Front Sts. S. F.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## MUSIC BOOKS

- FOR -

## Schools, Academies &amp; Seminaries

THE HIGH SCHOOL CHOIR, (\$1. or \$2 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin"), is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book I, (35 cents), Book II (50 cents), Book III (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

## OLIVER DITSON &amp; CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.



OUR FIELD AND HOUSEHOLD PEST POISON is a safe, sure and cheap destroyer of all insects that infest houses, fields and gardens. Kills, Hates, Mites, House Flies and all vermin. Unlike Paris Green or Arsenic, it dissolves in water, and is applied by sprinkling or with syringe. Not injurious to plants. Safe to use. Put up in one-quarter pound boxes, free by mail for 30 cents. Circulars sent with testimonials. Kearney Chemical Works,  
P. O. Box 5138,  
66 Courtlandt Street, New York.

## HARRIS &amp; BRADLEY,

31 and 33 Beale Street, San Francisco,

Manufacturers of Harris's

## PATENT FRUIT DRIERS.

Patent Combination Heater and Cheese Vat, Patent Heater for Washing Churns, Pans, etc., Patent Heater for Steaming Feed for Stock, Patent Heater for washing or the Laundry.

Also, Windmills, which are made of Cast and Galvanized Iron, and warranted to work as well and last as long as those costing three times as much. All of the above machines are fully warranted. All that is asked is a fair trial, and if they do not give satisfaction the money will be refunded. All who wish a cheap, efficient Fruit Drier, should not fail to call and examine Harris's patent before purchasing any other make or style.

## DON'T BUY ANY OTHER THAN

## Walter's Patent

## FRUIT DRIER AND PRESERVER,

Manufactured and for sale by the

Walter Fruit Drying and Preserving Co.,

315 DAVIS STREET, SAN FRANCISCO, CAL.



## ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.

We can recommend the New York watch, of Springfield, Mass. as A 1.

Take the paper that stands by your interests.



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

**THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.**

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

### H. H. H. HORSE MEDICINE, D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeny, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

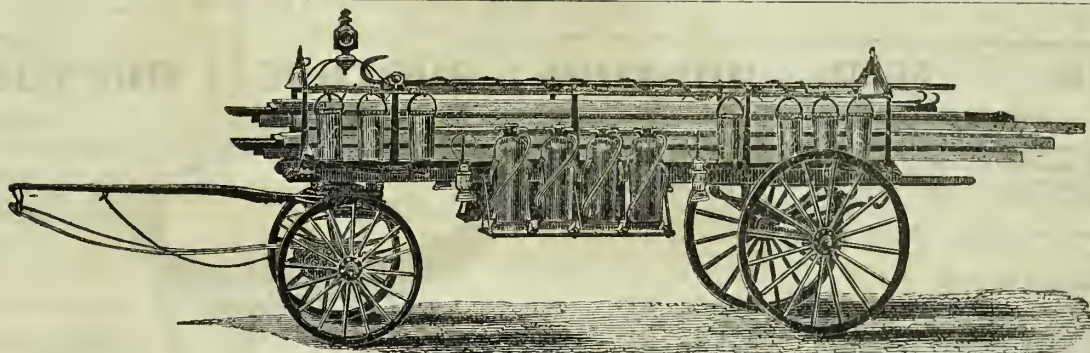
WILLIAMS & MOORE, Prop's,  
Stockton, Cal.



### CALVERT'S CARBOLIC SHEEP WASH, \$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

The BABCOCK.



The BABCOCK.

## Village Hook and Ladder Truck.

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

Address **PARKE & LACY, 417 Market Street.**

### In consequence of spurious imitations of LEA AND PERRINS' SAUCE, which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

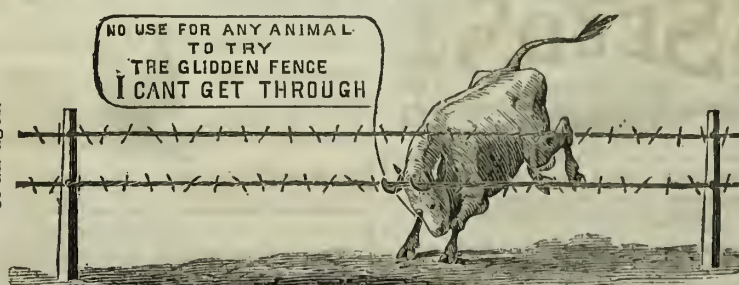
*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine. Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

### MOUSTACHE PROTECTOR.



Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.

50 FINE CARDS, Damask, Repp, Etc., with name on, 13 cents. CLINTON BROS., Clintonville, Conn.

### DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

50 MIXED CARDS, with name, for 10c. and stamp. One pack (20 styles) Acquaintance Cards, 10c. Samples for 3c. stamp. M. DOWD & CO., Bristol, Ct.

Dewey & Co. { 224 Sansome St. } Patent Ag'ts.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

\$55 2 \$77 a Week to Agents. \$10 Outfit Free. P. O. VICKERY, Augusta, Maine. YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. CLINTON BROS., Clintonville, Ct.



## Superior Pianos for the People at Popular Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

## The Brilliant and Durable GOLDEN PIANO

Which we now offer the readers of this paper

## At Greatly Reduced Popular Cash Prices.

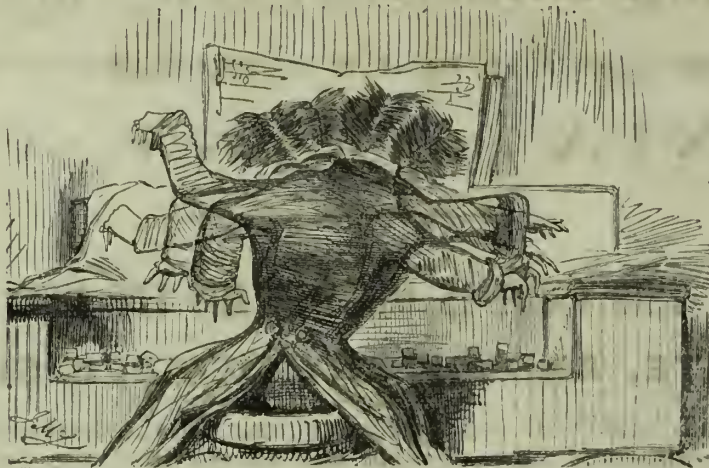
We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by

The Golden Piano is Superior in Tone and Durability.

The Golden Piano is Superior in Tone and Durability.

The Golden Piano is Superior in Tone and Durability.



OUR MUSICAL GENIUS PRACTICING FOR THE FOURTH OF JULY.

THE GOLDEN PIANO IS SOLD LOW FOR CASH.

THE GOLDEN PIANO IS SOLD LOW FOR CASH.

THE GOLDEN PIANO IS SOLD LOW FOR CASH.

Call and see the Golden Piano at the office of this journal.

calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

## Prices of the Golden Piano:

	The Installment Plan Prices.	Our Reduced Cash Price.
The Golden Piano, \$500 (UPRIGHT-C.)	\$350	
The Golden Piano, \$375 (SQUARE-No. 1.)	\$300	
The Golden Piano, \$500 (SQUARE-No. 2.)	\$350	
The Golden Piano, \$600 (SQUARE-No. 3.)	\$400	
The Golden Piano, \$800 (SQUARE-No. 4.)	\$450	

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be given further information by consulting our agents or sending to this office.

## SEEDS. SEEDS.

### IMPORTED.

Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New

Sweet Corn.

Early Canada  
Early Dutton

Yellow Flint Corn.

Long Red Mangel Wurtzel  
Yellow Globe  
White Sugar

Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL,

Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco, Alfalfa, etc.

R. J. TRUMBULL,

419 and 421 Sansome Street, S. F.

Another Compliment.

LOS ANGELES, May 21st, 1877.  
Messrs. Dewey & Co., Patent Agents, S. F.—Gentlemen:—I have just received my letters patent on machine for opening oyster shells, and compliment you upon your success. I shall not only contribute to you my own business, but also that of friends. Thanking you, gentlemen, for your promptness and the very thorough manner in which you have prosecuted this matter, I am, yours truly,  
T. W. TEMPLE

## RUPTURE! RUPTURE!! RUPTURE!!!

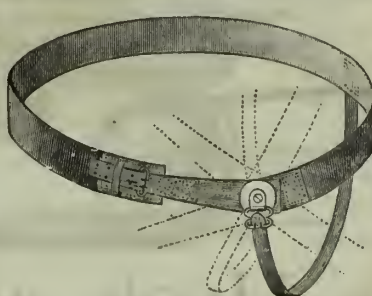
Use no more Metal Trusses! No more suffering from iron hoops, or steel springs! The patent

### Magnetic Elastic Truss

is now superseding all others, being adopted everywhere by the leading physicians and surgeons all over the land. All cases of reducible Hernia are permanently relieved by it, without regard to the age of the patient, or the duration of the injury.

Experience shows that all tempered spring Trusses necessarily press upon and often disease parts of the body that before were in a perfectly healthy condition. Lumbago and other equally distressing ailments are not unfrequently the outgrowth of such pressure, and in view of this fact it becomes a matter of decided consequence to avoid like calamities, if possible.

Beware of worthless imitations! Our trusses are not left with Agents, or Druggists for sale, and notice is hereby given that all persons who infringe on this patent will be dealt with as the law provides. For the genuine article send direct to the



There are no springs in the Magnetic Elastic Truss

To press upon and injure the back. It can be worn with perfect ease while riding horseback, as the pressure is the same while in any position. It will perform radical cures when all others fail, and is worn with ease and comfort

Night and Day, Which cannot be said truthfully of any metal truss whatever.

## MAGNETIC ELASTIC TRUSS COMPANY,

Illustrated Book and Price List Free.

609 Sacramento Street, San Francisco

## THOROUGHbred FOWLS,

### BRONZE TURKEYS,

Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS

Eggs Shipped to

EGGS, \$6.50 per doz.

Any part of the

BRAHMAS \$5.00.

Coast to Hatch Af-

LEGHORNS

ter Arrival.



Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.

Also, Thoroughbred Southdown Sheep.

## FOR SALE.

The Alfalfa Ranch, nine miles from the city of Los Angeles, bounded and fenced for one mile on the north by the Anaheim Railroad; east by San Gabriel (old) river, containing about 300 acres of land, all set with good grass, 60 acres alfalfa. Abundant water for irrigation and willow for fuel. Inquire on the ranch or by mail at Los Angeles.

IRA CARPENTER.

Dutcher's Lightning Fly-Killer.

Dutcher's Dead-Shot for Bed-Bugs.

Try them, and Sleep in Peace.

25 FANCY CARDS, all styles, with name, 10c; 25 Morning Glory Cards, with name, 20c; 20 fancy Scroll Cards, all styles, no name, 10c., postpaid.  
J. B. HUSTED, Nassau, Renss. Co. N. Y.



Constitutional Tendencies. The way in which different individuals are affected by the same causes of disease depends upon the constitution and temperament. Some persons, for instance, are prone to fevers, some to bilious attacks, and others to nervous affections. In all cases where a peculiar susceptibility to any variety of disease exists, the toning, regulating and purifying operation of

Tarrant's Effervescent Seltzer Aperient Will be found the surest safeguard against an attack. Individuals of a bilious and constipated habit, or subject to dyspepsia, or whose nerves are easily excited, should frequently resort to this refreshing saline corrective, especially in warm weather. It is no less potent as a preventive than as a remedy.

Promptness, Etc

SACRAMENTO, June 8th, 1877.

Messrs. Dewey & Co.—Gentlemen:—Yours of the 7th inst. is received, enclosing my patent for improvement in Ore Washers. You will please accept thanks and best wishes, for your promptness in obtaining the same. Very truly yours,  
DUNCAN BEAUMONT.

THE PACIFIC RURAL PRESS, the best agricultural weekly in California, has traveling agents and correspondents in different portions of the State who constantly furnish it with fresh correspondence, full of practical value and interesting descriptions. Mr. C. N. West will represent the Press in Santa Cruz and Monterey counties.—Castroville Argus, June 2d.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

## MARCUS C. HAWLEY & CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

## H. F. ROCKEY,

Dealer in

AMATEUR PRINTING

Presses,

Small Fonts of Type,

Printing Materials,

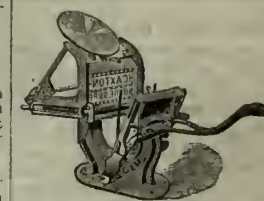
Plain & Fancy Cards, &c

22 Kearny St.

Ret. Market & Post, S. F.

(Up Stairs).

Send for Ill'd Circular.



BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.



# PACIFIC RURAL PRESS

Volume XIII.]

SAN FRANCISCO, SATURDAY, JUNE 23, 1877.

[Number 25.]

## Premium Jersey Cows.

We take pleasure in showing, on this page, a group of four thoroughbred Jerseys, which, together with the bull "Chelton Duke," took the herd premium for Jersey cattle at the Centennial exhibition. These animals are the property of Charles L. Sharpless, Esq., of Philadelphia, one of the oldest and best-known breeders of Jersey cattle in the country.

It is hardly necessary for us, at this time, to go into a detailed account of the derivation of the Jersey stock, or their special qualifications. The facts are already generally known to our readers through previous articles which we have

similar points it is not to our purpose to discuss at this time, although, of course, we do not ignore them.

Rather would we state some interesting facts concerning the animals whose portraits we show in this issue. Perhaps the queen of the group, in the way of reputation, is "Milkmaid," the animal shown at the lower left-hand corner. Of this animal Mr. Sharpless writes as follows: "The engraving of 'Milkmaid' is an exact copy of the photograph from life, taken in June, 1875, about a month after calving. 'Milkmaid' was brought up to calving in bony condition, and gradually increased in yield until, on grass, she gave 140 quarts in seven days. Her largest yield in any one day was 21 quarts 1 pint. In about two weeks afterwards we gave her a second trial, as follows: First day, 20 quarts 1

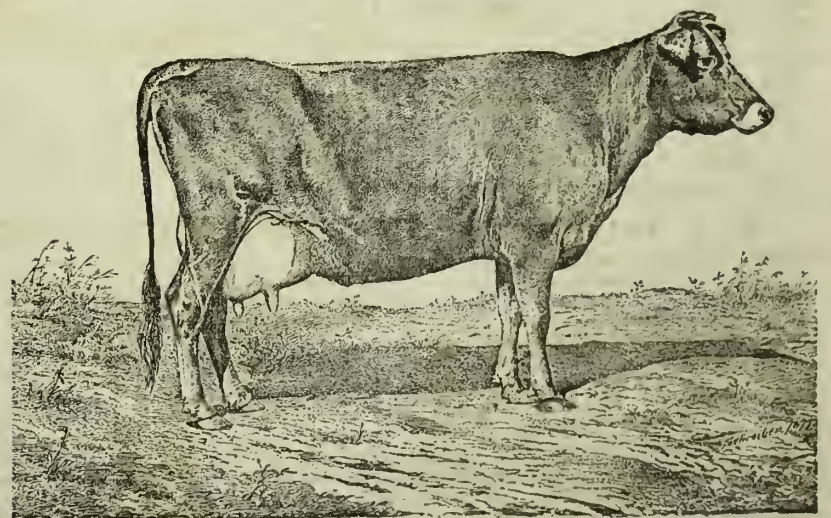
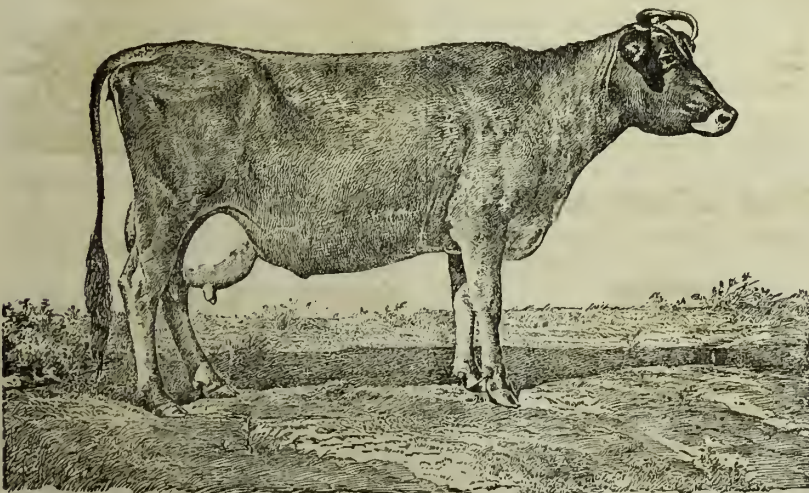
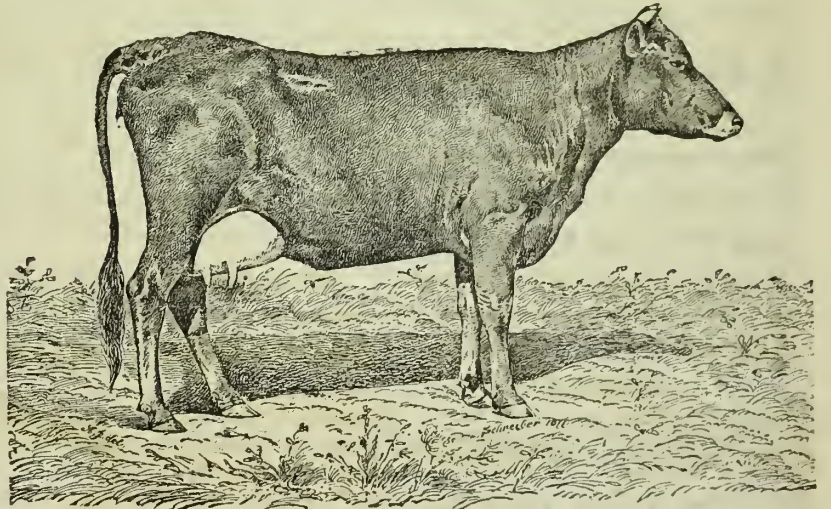
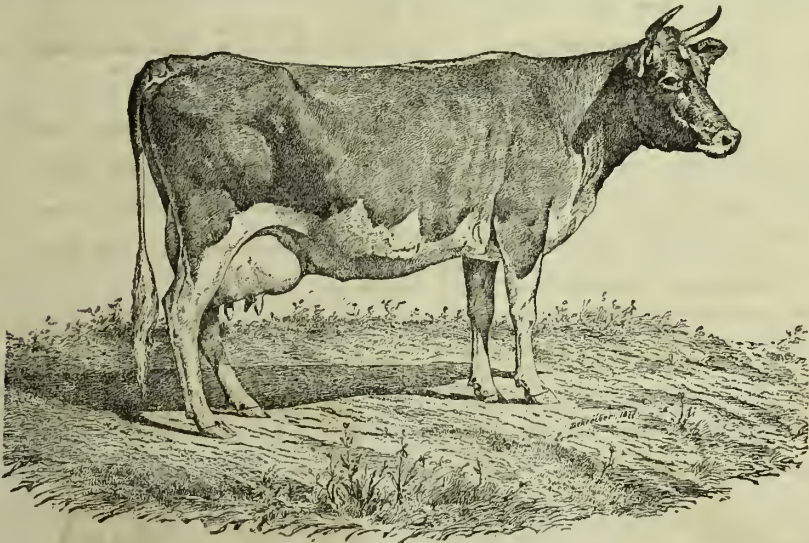
This comparatively small product is not creditable for the solid-colored cow, and I have tried to recall any case of large yield of butter, except from parti-colored cows.

"My friend, O. S. Hubbell, of Stratford, Conn., says that butter quality can be known only by testing the yield, but I contend that the yellow skin, as evinced in at least the inside of the ear, is a safe guide. In this respect 'Milkmaid' is deficient, and to correct it I have bred her to 'Chelton Duke,' the golden-skinned son of imported 'Duchess.' His yellow scrotum was pronounced by Hubbell to be a 'lighthouse in a fog.' If the daughters retain or approximate the quantity of the dam and inherit the skin-color of the sire, they should be among the best.

"Some cows whose skins are not yellow, are

her price of \$1,200. The calves of 'Milkmaid,' a cow purchased by Mr. Charles Sharpless, of Philadelphia, in England, for \$1,200, are in demand at from \$300 to \$500 each, and spoken for before birth. Elizur Smith, Esq., of Lee, Mass., had the preference by speaking in season over all others, as purchaser of her first heifer calf at \$300, and when he sent for her, Mr. Sharpless informed him that there were six other herders' names standing behind that of Mr. Smith as claimants in order for her. The heifer is now a fine yearling, and adorns the owner's pasture.

"The highest price that has really been given for any Jersey cow in this country, is probably that paid for 'Young Pansy,' by Charles Sharpless to John Carter Brown, 2d, and is said to have been \$2,500. 'Young Pansy,' 2,478,



CENTENNIAL PREMIUM JERSEY COWS, OWNED BY C. L. SHARPLESS, PHILADELPHIA

prepared on the subject, and through the object teaching which has been so well done by our Jersey breeders on this coast. Suffice it to repeat, that these cattle originated on the island of Jersey, one of the Channel islands, between England and France. Having been bred for generations to develop their milking qualities, the result was the establishment of a breed which is unexcelled for richness and color of product. The claims of advocates of the cattle are also for an unrivaled economy of production in the animal; that being small, and having the tendencies of the animal economy firmly established in the line of milk-making, there is more milk produced from less food than in any other breed of cattle. Points farther than this are, of course, disputed by the advocates of other breeds; the claim being that some of the larger breeds, by using much larger quantities of raw material in the manufacture of milk, will yield a larger profit to the dairyman, who works rather for large weights of milk than for a concentrated richness. These and other

pint; second day, 20 quarts 1 pint; third day, 20 quarts; fourth day, 20 quarts 1 pint; fifth day, 20 quarts 1 pint; sixth day, 20 quarts 1 pint; seventh day, 20 quarts 1 pint—143 quarts in seven days. During the trial she was fed two quarts per day of ground oats, besides the grass. This proves her to be one of the largest yielders of milk among the Jersey cows. She is a solid mouse color, running into tawny; long and low, with a large body; small, crumpled, waxy horn; with square udder, tail like a whip-lash, full black points, black switch, black tongue, etc., and is, therefore, a good example for those claiming merit for solid-colored animals.

"As to her yield of butter, Eastburn Reeder, of New Hope, Pa., who stayed over night during her trial and saw her milked, and the milk measured, estimated that it would make 14 pounds of butter for the week. This would have made her a great butter cow; but Biddy reported her yield—and I have no doubt she was correct—as weighing 11 pounds 3 ounces.

good butter makers, but I never saw a cow with pale ears that was a good butter maker, nor one with yellow ears whose milk was poor in quality. Hubbell's additional remarks cover the case, that the water of weak milk had better, if needed, be added after milking, rather than come through the cow."

Another point which we would mention in this connection is concerning the price which is gained by the most famous Jersey cows. The money value of the Short Horns has been made public in the many reports of sales which have been printed. Jerseys have not attained this pecuniary fame. We find, however, in the writings of Hon. Richard Goodman in the *Massachusetts Ploughman*, some statements which are of interest. He writes: "'Milkmaid,' was purchased in England by Mr. Sharpless for \$1,200, but the actual cost was greater, as it is understood her present owner sent a person expressly to England, where she was advertised to be sold, to purchase and bring her to this country, and those expenses added \$300 or \$400 to

American Jersey Cattle Club Herd Register, was imported from the Island of Jersey by Mr. Brown in 1873, when she was a year and a half old, and grew into a remarkable animal, and so attracted Mr. Sharpless's attention, that whenever he had occasion to write to Mr. Brown, he concluded his letters with the remark, 'Friend Brown, when thee is willing to sell Pansy, let me know,' or words to that effect. Mr. Brown, after sweeping off all the first premiums at the State fairs of New York and elsewhere where there was a worthy competition, at last sold 'Pansy' to Mr. Sharpless, and she is now the mistress of his choice herd on his farm near Philadelphia."

The other cows shown in the engraving are fit associates for the ones concerning which we have given the gossip above. They were all much admired at the Centennial, and are held in high esteem by their owner.

WEST POINT has 76 students in its graduating class—the largest number in several years.



## CORRESPONDENCE.

### Reclaiming Alkaline Soils.

EDITORS PRESS:—In your 9th of June number of the RURAL PRESS, I see an excellent letter by Prof. Hilgard on the analysis and reclamation of alkaline soils, which he proposes to do by the addition of land plaster; which he thinks would change, by chemical action, the extreme causticity of the alkaline salts with which the soil is supersaturated. If he succeeds in this I think it would not remove the main difficulty, which, in my opinion, is supersaturation both with earthy salts and water.

The simple and natural remedy for this is drainage. When this has been effected, by ditches either open or covered, the excess of alkaline salts, instead of rising to the surface of ground and destroying vegetation, as they do now, will drain out of the sides of the ditch, and will be carried away by the water when there is a flow in the ditch. Irrigating these lands whilst yet undrained only aggravates the matter, as it undoubtedly, by the evaporation of the surplus water, increases the quantity of alkali; but after drainage has been effected, then the more water put on the better, always supposing the drainage has been sufficient, and the water soaking into the ground and leaching out of the sides of the ditch will carry with it the alkaline salts, and in a short time the land, which is excessively fertile, will sustain a healthy and vigorous growth of vegetation. In most of our soils the above plan will be sufficient, but occasionally there are heavy soils of so dense a texture that seepage is difficult. In such cases it is easy, with the dirt thrown out of the main ditch, to embank a series of ponds on each side of the ditch; these should be filled with fresh water and permitted to stand about a week, by which time the water will be saturated with alkali. The bank of the pond should then be opened and the water drawn off into the ditch and the pond refilled, until the water ceases to be colored by the alkali, after which time the heretofore unproductive will become the most productive land on the farm. This was, of course, originally theory, to wit, that as the evaporation of water had made the alkali, the same element would, under proper management, remove the same. Each pond full of water when filled with alkali to the point of saturation, would remove that quantity; therefore, with a certain quantity of water an equal quantity of alkali can be removed. By this plan, which has been tested in this very settlement of Westminster, and was completely successful, the land reclaimed having produced 100 bushels of corn per acre, whilst the year before alkali weeds would not grow upon it. In Westminster they have an unlimited supply of water from their artesian wells, which can be indefinitely increased. The trouble is they will not drain. There is plenty of fall for the purpose, but digging ditches is too much like work to suit many parties there. It is a thrifty settlement, but if well drained would produce treble what it does at present and have no eye-sores in the shape of alkali spots to disgust the eye in the midst of their most fertile fields, which have produced splendid crops this year.

There is another settlement in this county, Los Nietos, of which the town of Downey is the center, that contains a large amount of alkali land, which has been irrigated until the increase of alkali has rendered it almost entirely unproductive. This is a belt of low land extending through the settlement for several miles. An open ditch six feet deep and nine feet wide would in a short time drain out all the surplus alkali, and then the land would become as productive as formerly. Just east of Downey about one and a half miles is a natural drain of the kind I have suggested, and the land on either side of it shows no trace of alkali, and although constantly irrigated the alkali does not rise, for the simple reason that the land is drained, and any excess of alkali must leach out at the lowest possible point, just as water does.

As I have already remarked, the remedy is drainage, and that is where the trouble comes in. Digging ditches, no matter how it is done, is something that looks very much like work, and when a settlement is composed of men the majority of whom have been born tired, you may talk ditching and drainage, but without any profitable result. If, therefore, any attempt is made to reclaim alkaline lands, I am confident that no success will be obtained without drainage, which removes the original cause of trouble and will of itself in time remove the alkali. Where alkali is not bad ordinary cultivation is sufficient. I know of plenty of land in this section that when first cultivated had unproductive spots, but which after two years' cultivation are now the most fertile and productive spots in the field. The only trouble is that the growth on them is rather rank, and the grain apt to lodge. The time is not distant when for farming purposes our alkaline lands will be valued higher than any others.

### Taxation of Growing Crops.

The taxation of growing crops naturally excites the ire of the farming community, who are surprised that such a law ever should have been passed, but if they will take the trouble to attend a few days and examine into the caliber of

our law makers, when in session, who are sent there to represent the people, they will find that with the exception of a few whose ability enables them to manage the rest, the mass is composed of blockheads, well meaning perhaps in some instances, but blunderheads nevertheless. The consequence is that the smart fellows who represent the capitalists manage to saddle all possible taxation on that miserable drudge, the farmer, who has not as a rule got sense enough to vote for men who will represent his interests. He is the slave of a party, (don't matter which party) and must do as his masters bid him—and gets his deserts.

I am at a loss to know under what head growing crops are taxed. Whilst growing they are not personal property, as they are attached to the realty. After harvest they are personal property, and have developed into something tangible, something that has an existence, and can be sold at a marketable price. They are a known quantity, but whilst growing, and until the grain is formed, there is no certainty that they will ever produce anything. The crop may be dried out or blighted by north wind, or frost; eaten by grasshoppers or threshed out by north winds, as has been done recently, and as is done every year. The whole thing is preposterous. If in any county the officials insist upon assessing them, let every man pay his tax under protest, and then let them employ a lawyer to have the legality tested before the Supreme Court. I am confident the law will be pronounced unconstitutional, and all the taxes they have paid that year will have to be refunded.

In this county our Assessor has good sense, and has not attempted to untie the "Gordian knot," he simply cuts it by refusing to make the assessment, and the same should have been done in every county in the State. It is well known that the State Board of Equalization has no legal standing under our Constitution as it is, and has no power to compel the enforcement of the rule.

Taxation is a matter in which there is great room for improvement. Now the producers pay all of them. Under the system recently adopted in Pennsylvania most of the tax is voluntary, and reaches the very class who evade it now, as the tax is on consumption, and not on land or real estate, and is so managed that the consumer pays the whole of it. This is certainly just and right. The rich man whose consumption is large pays a large tax, whilst the poor man, who consumes little, will pay little, and is probably as near an approach to a fair equalization as can be made at present until the subject is better understood.

WM. R. OLDEN.

Anaheim, Cal., June 12th.

### Sonoma County—A Successful Pre-emptor.

EDITORS PRESS:—Since the fourth the weather has been intensely warm, and growing warmer. Extensive fires in the hills add to the discomfort. The air is dimmed with smoke, and the mountains are hid in gauzy veils of blue haze, making them look farther away in the dim light. The thermometer registers away up in the nineties, in spite of a faint ocean breeze, and the atmosphere is tremulous all day with the reflected heat. Old settlers all say they never saw the like in this valley. But we console ourselves that there is no sirocco blast from the north.

Our crops are uninjured thus far, except that the Indian corn wilts down in the sunshine. Wheat is a magnificent crop in Sonoma county, and if the prospective prices be taken into the account this will, it is allowed on all hands, be the best paying grain crop ever raised here. Alfalfa sown last winter is standing up bravely. It is surely the best and hardiest forage plant we have. Water is not a necessity to its growth. The want of it is not enough drawback to compensate for its use, if it costs much. (The writer speaks only for himself, and of his own experience.)

Sonoma is the great grape growing district of the State. The prospect is fine for a larger yield than ever before, on account of so many new vines coming in bearing. Irrigation is not resorted to, nor is it required. One gentleman here, R. A. Thompson, Esq., has taken great pains to gather reliable statistics concerning the vine and its product. He places the yield for 1876 from the valley of Sonoma at 1,335,700 gallons of wine, and says that the combined yield of Santa Rosa and the three townships north of it will about equal the yield in Sonoma. Half-a-dozen townships are shown to produce say 2,671,400 gallons of wine and nearly 50,000 gallons of brandy. Santa Rosa township has 741,580 vines.

### Durability of Redwood.

A re-survey of a division line made it necessary to remove about a mile of partition fence the last winter. My neighbor drove the pickets 17 years ago. We used more than 9-10ths of them over. Only those with sap-wood were the least bit rotten. The stockade at Fort Ross, on the coast, was put there by the Russians more than 50 years ago. The timber is nearly all sound. If well selected there is little doubt but it will last indefinitely. It is certainly cheaper for a picket fence, at current prices, than oak or pine for nothing.

### Hall of Moscow.

"Did you know where I can get any work?" This was asked of the writer more than a year ago. The speaker was a tall, stout man, in the

prime of life, intelligent looking and neatly clad. He stated how he had heard of Santa Rosa and its rapid growth, and was here hunting work. He was as dead broke as Whittington when the bells of London rang out "Turn again! Turn again! Whittington, Lord Mayor of London! Turn again! Turn again!" Looking about on the group of idle men waiting for employment, we saw at once there was no use in his staying here, and said so. Then suggested, "why not pre-empt a quarter section of land?" At that time there was plenty of it in the big woods on Russian river (and there is some there yet a little beyond). The idea was to him an inspiration. He was not long about the building of a cabin on a tract of fair timber land. Then he sent for his family, and went to work making shingles, pickets, and posts—whatever he could sell. We saw him some months later when in town with a load of pickets. His face was sunburned, and his hands were hard with toil. But he was in high good humor with the world and everybody. "Why," said he, rattling the silver received for the pickets, "they are building two railroads slap into big bottom, and one of them passes close to my cabin!"

Time rolled on, and the other day a bronzed, gentlemanly looking man, whose face bore a familiar look, startled the writer by suddenly shaking hands with him; and pulling a parchment from his breast pocket he remarked, "You have not forgotten the man you advised to pre-empt, have you?" Having exhorted so many good fellows, and lazy fellows, and shiftless fellows to pre-empt, one time and another, my recollection of this particular pre-emptor was a little vague until he continued, "Well, here is my title to the land. The railroads are both in our woods. They have built a schoolhouse, a big mill, and a town near me. I can go to the city and back the same day. I have employment with the big sawmill at \$80 a month, and I will never forget your good advice." How many men who come to this coast to better their fortunes have the sand in their boots like Hall, of Moscow?

J. B. ARMSTRONG.

Santa Rosa, Cal., June 13th.

### Pacific Congress Springs.

EDITORS PRESS:—When we decided to go into the country for a few weeks, the all-important question arose, where should we go to? After consulting acquaintances who are patronizers of summer resorts, each recommended a different place, and of course no one place could compare in climate, beauty and every degree of comfort with the one at the moment under consideration. We concluded Pacific Congress springs to be all we could desire. Accordingly we left San Francisco one afternoon on the S. P. R. R. for Santa Clara, where a stage awaited guests for said springs. About seven o'clock our journey of four hours ended in the Coast range of mountains, 10 miles southwest of Santa Clara, causing us to feel as though we had suddenly come upon an oasis in a great desert; for everywhere on our way a parched and thirsty earth, shorn of her spring's yield of grass and flowers, had greeted our eyes but here. Congress hall, a two-story building with extended wing, garnished with a double row of galleries and attendant cottages, is nestled upon and among hills covered with trees, shrubs and vines dressed in every shade of bright, living green. Of course we were tired and hungry, so we were soon ushered into a cool, pleasant dining-room, where well-cooked food in abundance was placed before us by attentive waiters.

One of the most attractive features of this place is the exquisite neatness and harmony that prevails everywhere, in doors and out. The spring is about one-half a mile from the hall, so crossing the road and passing through a gate we stood beneath an arbor built over the road leading down the hill to a creek. This arbor will in time become a delightful resort, but the grapevines destined to cover it being still young, shade is afforded by trees, beneath which are pleasant resting places. To the right of this arbor is a croquet ground, laid off, graveled and covered. A little farther everything requisite is furnished for those who enjoy ten-pins. Then the mineral bath-rooms. This brings us to the creek, where children indulge in what is dear to every childish heart—clambering over great rocks and bare-footed wading the clear, shallow water. Crossing this creek upon a rustic bridge, before lies the road that winds upward, great hills or mountains as you please—each side of us that put forth their trees, sycamore, redwood, live oak and many others, to stretch out their long arms over our heads, in many cases bleaching to form a delightful shade, while the murmur of waters followed us always. The spring is at last reached, where it comes gurgling from the hillside into a basin prepared to receive it; the water is cool and refreshing at all times. The State assayer, B. B. Thayer, found it contained 335.857 grains of solid matter to the gallon, consisting of:

Chloride of sodium.....	119.159
Sulphate of soda.....	12.140
Carbonate of soda.....	123.351
Carbonate of iron.....	14.000
Carbonate of lime.....	17.205
Silica, alumina and trace of magnesia.....	49.882
Total.....	335.857

The beneficial effects of the water are too well known to require anything more said of them; but oh, if you require or would like rest and refreshing after all worldly contact, try Congress Hall.

### Too Much Education? Ignorance the Curse of the World.

EDITORS PRESS:—It is an easy matter for lecturers to expound on the dignity of labor, and for committees to pass resolutions as to the nobility of toil. Probably we all agree in damning idleness, but I hope we shall not all unite to deify brute-force. And I take it that brute-force is the labor that is now being put forward by aforesaid lecturers and committees as being noble and dignified; and technical skill, the acquisition of which they consider of more value than mental acquirement.

Happily the whole history of human progress, and the universal action of society, are both fundamentally opposed to any such assumption. Were it not so, the office of "coal passer" in the stoke-hole of a steamship would be held in higher estimation than that of chief engineer; and the farmer would be an object less worthy of regard than the farmer's horse.

Those who are clamoring for "reform" in education appear to consider that "book learning" tends to unfit lads for the duties of their station. My view of the case is, that it is the conceit arising from ignorance that is the cause of such unfitting. Take, for example, this mania with which many young men, (would that it were confined to the young), are smitten, to get rich by stock-gambling. Their ignorance prompts them to consider themselves just a little smarter than any one else engaged in that lucrative(?) pursuit.

Knowledge would say "Look here, you fool, do you suppose when men who have spent their lives in the business and made it their profession, can't 'make a royal,' that you, green as you are, can step in and make your salt at it? These men who so kindly give you 'tips' and post you, don't you feel sure that if they knew anything, they would use their knowledge to make their own pile?"

But conceited ignorance, inflated by flattery, says—"Ah ha! my boy, you know which way the cat will jump! You'll show them how," and so another "pigeon" gets plucked, and the pluckings are received into such a big pocket, by the big market-rigger, that the increment is not apparent. Solomon wondered over some such matters, and he said "surely in rain the net is spread in the sight of any bird," but conceit and ignorance blinded many then as now, now as then.

As I understand "education," Messrs. Editors, it is something to teach the avoidance of such snares, not to seduce the young into them. Now, making a boy into a useful machine by technical training is not what is required of parents and teachers.

The first duty a father owes his boy is to make a man of him. There is more worth in manhood than in machinery. A man can make a machine; but I never yet saw a machine-made man, though there are machines, one of which will do the work of thousands of men. It is to intelligence these machines are owing.

Let us then provide, first, for the cultivation of the intellect, which has already done so much to ease our shoulders from the burden and our feet from weariness. Remember that every fresh branch of study your child is taught gives him one more source of interest in life. Don't seek to turn him to your own pecuniary benefit too early in life. You allow even your colts two or three years to gambol and grow vigorous in, being satisfied if they look like making valuable animals at maturity. Don't, then, grudge your boy certain years of his life to develop his mind and body in. If you must needs teach him a trade before he is 16, you may, perhaps, by judiciously fostering any inclination he has to use tools, as recreation, make him quite a fair mechanic without an hour's set instruction. In this way he will love the occupation, whereas, given as a task or lesson, it would be distasteful.

Then, again, take a school of 50 children. Probably not more than three boys would wish to be taught the same trade. How is the thing to be managed. Is every teacher to be a Jack-of-all-trades? Or is there to be a tailor professor, a tinker professor, and a candlestick-maker professor attached to each school? The training of the intellect and character is a similar process for each of the 30 children. Come to their life destinies and here they part company.

I am in favor of raising the standard of a teacher's acquirements, moral and intellectual, and of raising the pay as well, so as to attract a better class of permanent teachers; but no individual can be expected to be skilled in 30 different trades. Moreover, for those who will use present appliances, without reform, there is provision made for technical education. At the University chemistry, engineering and agriculture are taught, as I understand (and I hope Prof. Hilgard will correct me if I am wrong), free to all suitable scholars; and, so highly is this unreformed technical education valued, that, if my memory serves me, there are the enormous number of two students of agriculture in the University. To me it seems that the reformers themselves need reformation, if thus they avail themselves of present facilities. In making these remarks I do not wish to appear as an opponent of technical or any other kind of education. "Too much education," is to me an impossible combination of words. The thing "can't be did." Ignorance has been and is, the curse of humanity. Think of the price humanity has paid, aye, is paying, for its ignorance. Think of the endless labor and



suffering that we are already relieved from by the glimmering of light that educated mind has of late years received! Realize, if you can, how black is the darkness of ignorance still encompassing us, and how glorious a destiny is that of light-bringer! Surely you will then think no time is misspent, no money wasted, that helps forward the coming day. Blind bigots may fear knowledge and deery the use of reason. Not so the Christian! Ignorance is his one foe, the one devil opposing that knowledge of God which is universal knowledge, and obtaining which we have, as our Lord taught, eternal life. "Give me," said the ancient mathematician, "whereon I may stand, and I will move the world." The Christian apostle found the standpoint, this knowledge of God, and declares "I can do all things." I will what God wills and His works become my works.

EDW. BERWICK.

## Double Tax, or the Absurdity of Extremes.

EDITORS PRESS:—A law or tendency of the human mind, in its processes of thought and inference, is to meet or repel extremes by equivalent or surpassing extremes. The *juste milieu* of the French, the middle ground, has no place in the controversy of extremes; for, in fact, extremes or equivalents only can resist or repel extremes. Attacking and repelling forces must be equal, or one of them must succumb. Further, extremists may agree on the same alternate proposition. For instance, the ultra-abolition and extreme pro-slavery factions agreed in the proposition to divide the Union to get rid of each other. The civil war was the extreme test of these extreme propositions, the weaker succumbing. So the extreme oppression of monarchical despotism was met by an excessive extreme by the decapitating ax of the Roundheads in England, and by the more summary guillotine in France. And religious bigotry is met by French skepticism—its guillotine proscription. Extremists are indisposed to regard *juste milieu* measures or to look to the demonstration of natural process. Thus, oppression results to the disregard of this proposition, *i. e.*, investment for profit or gratification of money or labor, in pro rata qualities or quantities, is only the proper subject of taxation, and not the processes of production, *i. e.*, the mill pays tax on the assessed value of its productive capacity, and not in addition thereto a tax on every bushel ground. So if the land (not under squatter regime) pays tax on its assessed value, it should have the miller's acquittal. Investment for profit or pleasure, or both, only is taxable property, but gold and silver in their money function only have no property value but as a medium of transfer of values, and demonetized they are less valuable than iron, and, in some pursuits, of no value. Thus I have money, gold and silver, but from age and infirmity I cannot invest it, but I must come to want if this is not done. So I lend or hire it to others to invest, which they do and also pay taxes on their investments. Thus the medium and investing value of my money has passed out of my control into the investing power of another; and now can any but an ultra-extremist see anything but an oppressive double tax that requires me to pay it on my loans to other tax-paying investors?

We must also distinguish between investment and its profitable processes, or its acquisition of taxable and business solvency. Thus the railroad would pay on its invested stock, and not a toll-gate levy on its passengers and freight.

An extremist's view is that all property the subject of ownership is or should be subject to taxation. Then my lottery ticket should pay for all it may draw. So with my insurance policy, and my money kept would be of less possible value than these. The assumption of honest investors is that their profits will pay interest, rent, etc., with a satisfying margin for clear gain. Money without relation to its medium value for investment to be taxed would take a demonetizing position, as the miser's hoard in bank vaults or the safe of the hoarder. It is to be expected that tax on crops and other unjust taxation will not be abated by retaliation of simultaneous double tax on the investor, and the lending motive to the investment. Extremes propagate in growing enormity of broad axe and guillotine enormity. This taxing oppression comes not so much from conflict between capital and labor as from all that needs reform in the multiplex processes of government—the Legislature, executive and the judiciary. The corrupting tendency of official position is to multiply and magnify its prerogatives. Its corrupting maxim "To the victors belong the spoils," *i. e.*, high taxes, overflowing treasury, executive patronage and fealty to party.

Petaluma, Cal.

C. M.

BETTER TIMES IN NEW YORK.—It is stated as an evidence of the improvement in the times, that while four months ago there were 50,000 idle mechanics in New York city, there are now not more than 15,000 men out of employment. The president of the Trades Assembly, it is said, regards the condition of the workmen as better than it has been any time for three years past.

## HORTICULTURE.

### Almond Trees Dropping their Fruit—Orchard Culture.

EDITORS PRESS:—Having noticed inquiry, and having the original tree from which all the Languedoc almond trees have been propagated in this State, I may be able to throw some light on the subject.

1. Young almond trees, while making a rapid growth of wood, bloom abundantly, but shed all the fruit soon after it is formed. All trees do this to a greater or less degree. When an almond tree is six years old it is large and should bear remunerative crops.

2. I have learned that after a few years of good crops, the tree again drops the recently formed almonds. The reason of this is that the vitality of the tree is taken away by overcrowding. The habit of planting almond trees 16 feet apart is wrong. I have cut out one-half my trees and have more almonds on the same ground; and the trees which are widely separated from each other, and from other trees, have born well every year.

3. The effect of water must be regarded in relation to the almond and all fruit trees. Careless irrigation is sure destruction to an orchard; especially to almonds. By this I would not discourage irrigation; indeed, it is the only way to cultivate an orchard in the highest perfection. Our winters are not sufficiently uniform in the amount of water to give a healthy growth to trees. For instance, the winter of 1875-76 was very wet. The permanent water under the surface rose up and killed the fibrous roots which had sought the water the previous year. Then came the last dry winter, and these roots lost the permanent supply of water, while the surface roots, by reason of the early rain, started fibrous roots which partially developed the fruit and leaf-buds on many trees. These rootlets in turn died for want of water, and as a result the buds were checked. The irrigation of an orchard should be in the winter. The permanent water in the ground should be kept each year at the same position. When trees are irrigated in summer, it should be done by running a small stream midway between the rows, and each year in the same place. Thus large clumps of fibrous roots will be formed along the little ditches and be ready to drink a full supply of water, while the roots in the dry portions will eliminate the refined sap necessary to give a high flavor to the fruit when ripe. This summer irrigation should be also uniform, so as to keep the rootlets in active operation until the fruit is nearly ripe.

4. All fruit trees should be made to bear a uniform crop of fruit each year, by summer pruning and thinning. Last year the orchards bore five apples where there should have been one; this year the exhausted trees shed their fruit.

5. I am led to believe that our valleys are not well suited to almonds and English walnuts.

I have caused these nut trees to be planted in several places in the mountains and side hills, and expect to learn that the western slopes will bring a sure and abundant yield. I would be glad to hear the character of soil and position, where they have borne uniformly, if there are such places.

The phenomena of so many

Leafless Fruit Trees

This year excites much wonder and many have been the inquiries, why is this?

I had a cherry tree which remained dormant. I turned the water to it. It yet remained dormant. When the cherries on the other trees began to turn red I irrigated this with the others and it was soon filled with blossoms and leaves. The second irrigation brought out the dormant plum trees also.

The Reason.

Last winter we had early rains and these trees gave signs that the buds would burst very early. Then came cold, dry weather and the rootlets, which always start from the old roots before the buds start, perished. The rootlets which reach the permanent water had been killed the previous year by the rise of the water in the ground two or three feet above the position it occupied before. It was necessary to start a new set of surface rootlets by giving the water after the warm weather had stirred the last struggling vitality.

Trees will be likely to die unless they are soon brought out by repeated irrigation. One wetting will not do. The ground must be kept for some time very moist, as it is in winter.

W. W. BRIER.

Centerville, Alameda County, Cal.

[We thank Rev. Mr. Brier for his contribution on these timely topics. He is a large fruit grower and a gentleman of habits of close observation, and his conclusions will be read with much interest. We should be pleased to have the subject farther discussed by our readers.—EDS. PRESS.]

LIQUID GRAFTING WAX.—There are many recipes for grafting wax, varying somewhat in their composition, according to the particular purpose for which they are intended. The *Practical Farmer* publishes the following formula for liquid grafting wax, which, being about the consistency of honey, it says may be readily applied with a brush for outdoor grafting, with-

out the trouble of heating. It is likewise a good application for wounds in trees, cuts made in pruning, etc.: Melt together one pound of resin and one pound of good beef tallow. Remove from the stove and let cool until a scum forms over it, then add one teaspoonful of spirits of turpentine; replace on the stove and add seven ounces of a mixture of two parts strong alcohol and one part water, stirring briskly and taking care that the alcohol does not inflame, as it will if the mixture is too hot. Stir until the liquid is lost in the mixture, when it should be of the consistency of honey. Keep in a closed bottle and apply with a brush. It after a month or two it becomes hard, remelt, add a few more drops of turpentine, and of the alcohol and water. A few days after it is applied it becomes hard, and will remain unchanged, except that it grows harder, for an indefinite time.

## ARBORICULTURE.

### The Cherrymoyer.

We hear that fruit from the cherrymoyer, cashew tree (*Anacardium occidentale*, L.) ripened in San Diego county during the present year. We notice that the Floridians are growing it. Mr. Benjamin Hall writes to the *Florida Agriculturist* as follows:

This large, wide-spreading tropical tree is of the family of *Tarebinthaceae*. Its leaves are of a bright green color, entire and lanceolate. The fruit consists of a pear or cucumber-shaped fruit stem, on which is a large brown nut. The two are used both raw as well as cooked into dishes. The fruit stem when ripe has an acid taste, and the kernel, when peeled and roasted, tastes very much like chestnuts. Formerly the natives of Brazil went to war with each other on account of this fruit, and the conquerors established themselves about the trees till the fruit was all consumed. This tree is indigenous to the West Indies, Central America, Guiana, Peru and Brazil, and is cultivated to a considerable extent there also. The Portuguese transplanted this useful tree as early as the 16th century to the East Indies and the Indian archipelago. All its names point to an American origin. Its existence on the eastern coast of Africa is of still more recent date, while neither China, Japan nor the islands of the Pacific ocean are acquainted with it. Its fruit stem is sometimes longer and sometimes shorter, varying with the influence of cultivation. In the Asiatic plant the stem is always shorter. This beautiful tree appears to be deserving of much merit, and is in every sense worthy of a careful trial.

In the fall of 1876 your correspondent received seed from Mr. Codrington, of the *Florida Agriculturist*, and planted in November. In three weeks thereafter the young plants had broke ground, and grew vigorously until the extreme cold weather set in, when the mercury for two mornings registered 40° and 41°, which nearly checked their growth. They at this time are nearly eight inches in height, stocky, with some 12 or 14 leaves five inches in length and two in width. The young trees are now looking fine, vigorous and healthy, bidding fair to be adapted to our soil and climate.

To the above the editor of the *Agriculturist* adds: The fruit and nuts are not the only values for which the cashew tree is famed. It produces a gum which is superior to gum arabic. The juice from the nut is very caustic, and produces a painful wound if it touches the flesh; it, therefore, requires to be well parched before being fit for use as food. The fruit is very fine for preserving, and makes a good wine.

## THE SWINE YARD.

### Corn in Pork Making.

In many parts of California there will be unusually large crops of corn produced this year. The acreage in this crop has been increased because of the failure of other crops. It may be inferred that our pork makers will run more on corn than usual. Of the value of this feed in the production of pork the *Prairie Farmer* says: In answer to an inquiry upon the question, how many pounds of pork will a bushel of corn make and the relative value of corn per bushel, in comparison with the price of pork, we have examined the records of careful experiments by farmers, with a view to getting at facts. From these we have selected a number of cases bearing directly upon the question, the experiments being, of course, made by feeding in pens, since in no other way can the question be satisfactorily decided.

An impression prevails that when pork is worth five cents per pound, gross, corn is worth 50 cents to the farmer to feed. This is not far out of the way, where fair care and judgment is used in the feeding, being on the basis of ten pounds of pork per bushel of corn.

One of the experiments we present is by Mr. L. B. Bingham, Bloomington, Wisconsin, where 55 bushels of corn at 56 pounds per bushel, produced a gain of 667 pounds of pork; averaging a gain of a little over 12 pounds per bushel of shelled corn. Thus, if pork be worth six cents per pound, corn is worth 72 cents per bushel, etc.

Mr. J. M. Billingsby, Spring Valley, Indiana,

fed 71 bushels of corn in the ear, at 68 pounds per bushel, which gave 760 pounds of pork. This average was a trifle less than 11 pounds per bushel of dry corn. At six cents per pound for pork the corn gave him 66 cents per bushel; at five cents, 55 cents per bushel, and so on down the scale.

The Iowa Agricultural Report for 1872, gives the record of five pens of swine, of two each, put up September 4th, the weight of the swine being given when put in and when taken out. They were of the following breeds: Native, Berkshire, Chester White, a cross between Berkshire and Chester White, and a cross of Chester and Suffolk. In all, ten hogs. On October 19th they were again weighed. Each of the five pens had been fed seven and one-half bushels of new corn on the ear, or 37½ bushels for the ten hogs. They gained in this time 515 pounds. This new corn fed averaged about 49 6-10 cents per bushel of corn fed. The number of pounds made per bushel of corn fed was not stated, but would be 13.44 pounds. The pork must therefore have brought him \$3.62 per 100 pounds. This will correspond with the market price of pork at that time. In these experiments we get as an average gain for those we have noted, first, say 12 pounds per bushel of corn; second, say 11 pounds; and for the five pens, say 13½ pounds; an average for the whole, in round numbers, of 12 pounds of pork per bushel of corn fed, and including shelled corn, old corn in the ear, and new corn in the ear. Thus we think 12 pounds gain may be taken as a fair basis for the number of pounds to be gained per bushel of corn fed, when good care is used.

## POULTRY YARD.

M. EYRE, JR., Napa, Cal., Corresponding Editor of this Department.

### Ducks—Setting Eggs and Rearing Young.

If possible, set duck eggs under hens, as they make better mothers and will find food for the ducklings—something a duck will not do. After the hen has set four weeks the ducklings will appear. Perhaps it will be necessary to help some of them from the shell, as they are not as lively as chickens, and sometimes are unable to get out alone.

A pen should be made with boards eight or ten inches high and five feet square, or large enough to contain the number of ducklings you may have.

The hen should be confined in a coop in one corner of the yard so as not to wander away. Keep your brood confined till they are a month old and do not allow them to follow the hen, for if you do they stray away and one by one your flock will grow numerically smaller. When they are sufficiently large and have their body feathers, less care may be bestowed upon them and they may range for themselves.

As for food, for the first three or four weeks we would recommend a variety. The week directly after they are hatched give them soaked bread, coarse bread being preferable as it is less pasty, potatoes, boiled and mashed, with bran or shorts. As they become older, do away with the former feed and use meal and bran, equal parts, scalded, and occasionally mixed with boiled potatoes, chopped onion tops or lettuce. This has been our bill of fare for our web-footed pets for some years and we have met with great success.

Last but not least, *beware of water*. You may think this a strange suggestion, but there are more young tame ducks lost on account of too much water than any other cause. A shallow dish with water, say two or three inches deep, is enough till they are a month old. If allowed free access to a pond or stream, they will get water-logged and invariably die. And if they escape this, cramp is most sure to attack them, and after a few days of tumbling and twisting death relieves them from any more such actions.

We know of no variety easier to rear than the Romans, and we have a young flock of 15 or 20 that are as sprightly as so many kittens. They all look as near alike as peas and are the admiration of all who see them.

I. P. LORI.

Reno, Nevada, June 16th, 1877.

HENS IN FRANCE.—According to *Acclimation*, there are in France about 40,000,000 hens, which are estimated to have an average value of 2.50 francs (50 cents) each, or 100,000,000 francs (\$20,000,000) in all. Of these about one-fifth are consumed annually, at a market value of 25,000,000 francs. There are also hatched annually 100,000,000 chickens, from which should be taken 10,000,000 of producers destined to replace the adults that have been sacrificed. The quantity must be further reduced by 10,000,000, on account of accidents and disease. We have, then, the number of 80,000,000 of chickens, which, sold at 1.50 francs apiece, give a profit of 120,000,000 of francs. To this should be added, on account of the extra value of capons and pullets, a sum of 6,000,000 francs. Total, 151,000,000. The 40,000,000 hens lay each 100 eggs in the year, which gives a total of 4,000,000,000 of eggs, worth six centimes each, or in all 240,000,000 francs. Thus, a commercial movement of nearly 400,000,000 francs (\$80,000,000) a year is generated in French farmyards.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Politics and Religion in the Grange.

EDITORS PRESS:—There seems to be a misunderstanding of a clause in the Constitution of the P. of H., page 5, "The Grange not Partisan." "No Grange true to its obligations can discuss political or religious questions."

Now the above quotation is taken in its literal sense when questions arise in the Grange about unjust taxation or some other question involving legislation for the benefit of agriculture. It would seem as if it was a complete gag against any approach at united action for everything bearing on politics. This question arose in Sonora Grange, under the good of the Order, when the W. Secretary made a report as one of a Committee concerning assessing growing crops. We might expatiate on the evils of the system and the injustice of the law, but according to the Constitution we could not take any united action against the outrage. I am aware that the same question and the same difficulty presented itself in sister Granges. Some member of the Grange may be so situated that these matters should better remain silent. And the clause above quoted is strong and decided enough to make it so, seemingly only, for I maintain that it was only meant for *partisan* politics, and not for measures which would be a general benefit to the agriculturist. Party politics and general legislation are two separate principles, and the phraseology should have been differently expressed so that a clear and well defined distinction would have been apparent. "Yet the principles we teach underlie all true politics." I maintain that the above was a license to use the influence of the Grange, politically, for the interests of the farmer. This taxing of growing crops is a sample of subjects for the serious consideration of the Granger, aye, and Grangers united. If we cannot make our influence felt against such aggressive and unjust laws, the real benefits arising from united effort is lost to the husbandman. This question is worthy of being discussed in all its bearings, for there seems to be a conflict of ideas and action regarding Article 5 of the Constitution.

It is the same with religion. Sectarian religion is forbidden to be discussed, and should be—but is that to drive all religious ideas from the sanctuary of the Grange? If so, why should we have a Chaplain to open and close the meetings by prayer, creeds and formulas. Sectarian notices and doctrinal points are strictly forbidden. But the whole structure of the Grange is based on religious principles. The ritual is full of sublime language and elevating thought, without touching on the domain of common prejudice, and still, if we were to treat the religious item in Article 5 the same as some of the brethren would construe the political item, we would discard every word which would have a tendency to remind us that we were mortal, with a hope of future existence.

There is a religion of nature, a religion of Good Samaritanism, a fraternal religion and one of aspiration. A doing good, and being good by living the requirements of true love to God and man, which is recognized by all men and far above sectarian prejudices, all of which may be both preached and practiced in the Grange without conflicting with the decided strictures of Article 5, page 5, of the Constitution. I construe the political article same as I do the religious portion of said article. Partisan politics and sectarian religion are only to be avoided. But legislation for the farmers' interest in life or religious sentiments for the elevation of character, and aspirations toward the higher sphere of spiritual exaltation, are in order, and from cardinal principles of the institution I recognize some of the most sublime religious sentiments in some of the charges in the ritual. But to discuss every point presented would be antagonistic to the principles of the Order. And so with politics. We may take action in legislation, but avoid discussing the merits of the question by party platforms. I do hope that Article 5 will be so amended as to define the limit of silence—or non-action on political grounds. If it is only party questions which are to be avoided, say so distinctly. And then define how far the Granges may go to secure proper legislation—collectively, and there will be more harmony existing when necessary legislation becomes necessary.

JOHN TAYLOR.

Mt. Pleasant, May 25th, 1877.

DISCUSSION ON EDUCATION.—The Grangers' Committee on Education was in session Tuesday afternoon, and at the open convention held Tuesday evening, Mr. I. G. Gardner in the chair, Mr. Thompson reported that the Committee had partially considered the matter of requesting the Legislature to establish State agricultural and industrial schools, but had not investigated the matter thoroughly enough to make any definite report. The Committee was accordingly granted further time. The question of industrial education was discussed by Mrs. Jeanne C. Carr, Professors Rising and Becker, Gen. Winn and Mr. Christy. An adjournment was had until the evening of the second Tuesday in August.

### Worthy Lecturer's Visits.

EDITORS PRESS:—After our meeting already noted at Modesto, June 7th, we were taken charge of by Brother Roe, from Waterford, and by him conveyed across 12 miles of arid plains to his own home near to

Waterford.

These plains between the Tuolumne and San Joaquin rivers are not arid naturally but only so from the severe drouth visiting this section of country this year. Otherwise, when they have the usual rains, they are exceedingly rich and fertile and constitute a part of the great wheat growing region of the San Joaquin. The farmers of this particular region and especially the older settlers (like our good Brother Roe) are a most indomitable class of people—not discouraged by the drouth of one year, for that they have experienced before, but from that same experience also they know that after such a dry season the following one is certain to be propitious, and the land that has given them nothing for their seed and labor is in a most suitable condition to give them their very largest kind of a crop, as if it were in compensation for their previous year's failure, and with the certainty of prices keeping up, they will most of them clear themselves of debt. Such an outlook is, to say the least, hopeful, and may complete success crown their indefatigable efforts.

But to work in the lecture-field. Staying the night with Brother Roe and his good Grange wife and large family, where we were most hospitably welcomed, we were all the next day from 10 o'clock A. M. at their new Grange hall in Waterford, built and owned by Waterford Grange, some three miles distant from Brother Roe's, and there met by such a number of Grangers, farmers and citizens as to comfortably fill their new hall, which had been provided with seats enough to accommodate some 200 or more persons. It was a cheering turn-out for Waterford. By 11 o'clock all was arranged for the lecture and after some most excellent music by the Waterford Grange choir, the State Lecturer was introduced to the audience by Past Master Brother Warder, in a most happy and courteous manner. We addressed this Grange for something over one hour in our usual Grange talk, making many applications to their peculiar local condition, which was received with only one disappointment—that we did not continue longer—but the heat of the day being in excess (the thermometer standing at 108°) we felt somewhat exhausted and gave way to the usual picnic. It was a most social time, and under the special charge of the Worthy Master, Brother Fagan, we were given a prominent place at the table and introduced to each and all the brothers and sisters of Waterford Grange. Among them I met Master Gallup, now Worthy Lecturer, who was in his happiest mood. The picnic and social meeting ended in a dance at night. We were taken in charge by Brother Search, who lived close by, on the banks of the old Tuolumne, and we rested from our warm day's work to be conveyed next morning by our ever ready good Brother Roe, to Turlock, 12 miles distant, where we reached the R. R. At

Turlock

We met with some disappointment, not finding any Grangers in town or at their homes, on account of a convention being held that day at Modesto, to which all except Bro. Dunn, Worthy Master of Turlock Grange, had gone, and we even found Bro. Dunn very busy in his partial harvest, where he had been at work for some four weeks past saving his little out of several thousand acres that had in good season yielded plentifully, but now only very sparingly where a late shower had fallen, while all the broad acres of the other part of his very large farm yielded nothing. So busy had he been that he had not attended to his mail for several weeks, and therefore was not apprised of the appointment till we informed him of it. But, in a true Grange spirit, to show his good will and appreciation of our situation, he not only provided for our comfort but the next day (Sunday as it was) conveyed us across 25 miles of arid sand plains and under a burning sun with the hot north wind blowing a scorching blast, and the thermometer at 112° in the shade, to our next appointment. Four miles from Cottonwood we found our good friend Bro. Crittenden, Worthy Master of Cottonwood Grange, ready to welcome us from sun and scorching heat to shade and genuine comfort, and truly never were two men more willing to be so fraternally treated. After a rest till the cool of the evening, Bro. Dunn retraced his steps toward where his labors called him, and left us in the good keeping of our kind host and his good Grange wife and friends, to be in readiness for our appointment at

Cottonwood

On Monday the 11th inst. We find this Grange field greatly changed on account of this unusually dry season; their numbers greatly lessened from the necessity of finding work and support elsewhere, but of those left to make ready by summer-fallow and otherwise for another season, are not any the less Grangers, nor any the less glad to see the State Lecturer on his mission of good works, but rather to give him, if possible, a more hearty welcome and to feel that his words of visitation are words so full of the Grange future that new life and new courage wells up in their souls, and many are the expressions of joy and hope for the yet unfinished work of the Grange. Here we found also the whole of the west side in enthusiastic

work for a system of irrigation, so completely shown by their utter failure of crops to have become a positive necessity. This necessity has caused them to take steps which, if not prevented by pretended reverse interests of the railroad company and landed monopolists, will secure for this, now to all appearance barren plain of tens of thousands of acres, a change that will make it the very richest of the rare alluvial soils of the great wheat growing part of California, and make lands, now worthless for want of water, worth from \$40 to \$60 per acre, for in no portion of the whole San Joaquin valley are the lands so promising for a rich grain harvest as are the lands of the west side with a good system of irrigation. Every one here therefore talks irrigation. Every one who visits here these hot days veritably feels the need of irrigation, and so would the company who have served upon these irrigators their writ of prohibition, if they were only compelled to live one month on these desert plains this year, and made to labor to no profit under a boiling hot sun at 115° in the shade. Only 12 miles distant, at Badger flat, on a much poorer soil, the land is made productive and comfortable, with the rich product of wheat and barley as grains, and alfalfa and other kinds of hay in profusion, and a general plenty of everything in the fruit and vegetable line. Thus is shown the great contrast between three inches of rainfall and a plentiful system of irrigation. Should any cause whatever, therefore, make a failure of the present West Side irrigation scheme, immigration to other quarters only can follow as a result, and woe to the power or powers that are not only trying, from the most selfish of all motives, to crush this out so as to occupy these lands for themselves, but woe also to the legislature that will not do all that can be done for these indomitable Grangers and farmers to give to them this greatest of all farm blessings.

But to our work as State Lecturer. At 2 o'clock P. M., what is left of the Cottonwood Grange, with visiting brothers from Orestimba and Badger Flat, congregated in the school house, and after a most fit and appropriate introduction by the Worthy Master, Bro. Crittenden, we gave them a plain, practical and earnest Grange talk of one hour and a quarter, which was most enthusiastically responded to in speeches from prominent members of all the three Granges. After some time in congratulations we were taken in charge by the Worthy Master of Badger Flat Grange and conveyed, in the cool of the evening, to

Los Banos,

Where we addressed a full house of Grangers and citizens for over one hour longer, and where, by the great not only difference but contrast between no rain and plentiful irrigation, both in moderation of the heat and a most abundant production of crops of every kind, we were a thorough convert to irrigation. After enjoying, as we did, the congratulations of the Badger flat community, and the hospitality of Bros. Clarke and Stockton, at each of their houses, and after a cool and comfortable night's rest, we were again taken in charge by Bro. Stockton, Worthy Master of Badger Flat Grange, and by 7 o'clock, on the morning of Tuesday the 12th inst., on our way back to Turlock, 35 miles across that (this season especially) terribly hot plain, with the thermometer still at 112° and a northerly blowing so as to sear our faces, to take the cars at Turlock for Merced, 25 miles further, where we arrived by freight train at 7 P. M. Who, but the State Lecturer of the Grange, aided and ever most willingly assisted by Brother Grangers all over the State, would, under this hot sun, and through this terrible season, keep on this labor of love. None but those in dead earnest to make of our Order what it will and must become: the farmers' "open sesame" to the solution of the great and growing question of labor, the equal and peer of capital. When legislation will be for the farmer instead of always against him. Our glorious Grange work goes bravely on.

B. PILKINGTON, State Lecturer.

Merced, June 13th.

### "Buying Together, Selling Together."

EDITORS PRESS:—Nothing so peculiarly marks Grange principles as their completeness; their capacity to meet directly or indirectly all the wants of agriculture; their practical dealing with whatever concerns the farmer's daily life. None of its principles should be overlooked or ignored; none of its work should be neglected, if we wish to secure for them the earliest and fullest success. First came our period of organization, then of action, with a gradual attainment of those benefits which are indispensable to secure permanent prosperity for the Order.

True, in establishing this organization and its enterprises, we have from time to time bent all our energies to complete some

#### Important Branch of Work

As best we could. This has led some people into the error of supposing that one or two of our many objects were all the Grange was "driving at." Hence, in some instances, they condemned the course of Grange work and Grange workers unjustly. Such critics lacked either the ability or will to grasp the true character, scope and wants of the organization. For example, in our early history, some condemned the attention and care given to our "secret work," that we might make it as perfect as we

could; being so short-sighted as to suppose that we sought too much accuracy here to the neglect of our more important objects. They were greatly mistaken. They forgot the advice, that whatever we attempt to do, we should strive to do well. They forgot, that care in small things will beget care in greater ones; that all such training is a useful discipline; that while we should labor most faithfully to build up our valuable business enterprises, we should not leave our other duties undone.

Beyond question, some of our enterprises assume special importance at certain times. Now, what is

#### The Vital Question

For California farmers in the next few months? Is it how best and soonest to secure the means for buying by the carload not only sewing machines, but wagons, mowers, reapers, plows, pitchforks, parlor organs, cooking stoves, washing machines, groceries and other supplies, so as "to reduce our expenses" in these items? We cannot well exaggerate the importance of this "buying together," but there is a more pressing question just now.

Is it how best to have our influence felt regardless of party, as clearly recommended by the National Grange, to aid in putting men in the State Senate, Assembly and other places of trust, who will not merely promise to stand by, but will stand by the interests of the people, the industrialists, the farmers, the taxpayers? This is a pressing duty, that needs immediate attention. Delay in this is ruinous; but there is a more pressing question still.

What is that question? It is

#### How best to Sell Together

The crops of this year. We fully understand that the sale of each kind of agricultural products should receive the proper attention from those especially engaged in such branch of agriculture. The fullest concert of action we can secure is needed for the best sale of all our products.

Evidently the more of them we can sell through our business associations, the more control we can have on their market value. Consumers must have them. Concentrate your sales through as few channels as possible, and you will have much more power to fix prices. This massing of our sales, according to Grange principles, will not lead farmers to practice extortion, but will free them from selling at a sacrifice.

Never before have the farmers of this State had so favorable an opportunity to concentrate in this way

#### The Sale of the Surplus Grain

As they have this year. They generally understand the situation so well, it is not necessary to dwell longer on the subject. Let them resolve to sell as much of their grain as possible through the Grangers' Business Association of this State, and they will soon find it to their advantage. There will be plenty of purchasers. The mass of our grain being controlled by our Association, where else will grain dealers go to buy? This Association already has good offers for buying and it has the confidence of our farmers. Why should not the Granger's Business Association, with proper management, fill the place once held by Mr. Friedlander; that is, have control of the San Francisco grain market? But with this difference, that it would control it in the interest of the grain raisers, and, whatever the profits, would divide them equitably with the producers.

The Wheat Convention for the State, called to meet July 12th in San Francisco, is, indeed, a move in the right direction, and all-important to our farming interests. Let us hope for large attendance and decisive action there. Let them show what can be done by "selling together."

J. W. A. W.

Nevada City, June 12th.

### Convention of Grangers on Legislation.

The convention which the Executive Committee of the State Grange called to meet on Tuesday, July 10th, at 1 o'clock P. M., at the Grange hall in San Francisco, promises to be one of unusual importance.

Already information has reached my office that the Granges in San Joaquin, Stanislaus, Sacramento, Butte, Colusa, Solano, Napa, Sonoma, Marin and Alameda counties will be represented, and undoubtedly a large number of the other counties will be represented who have not, as yet, signified their intention to do so.

In reply to letters received by me, I will say that it is not necessary for the Granges to appoint delegates, but that all members of the Order will be admitted and are cordially invited to be present and participate in the proceedings of the convention.

In this connection I will say that the Executive Committee will meet on the 9th, the Convention on Legislation on the 10th and the Convention of Wheat Growers on the 12th of July, enabling parties to attend the three meetings during the same week.

AMOS ADAMS, Sec'y State Grange.

June 20th, 1877.

TEMESCAL GRANGE, Oakland, will work in the third degree on Saturday, July 7th, at two o'clock P. M. It is hoped that the discussions of local and agricultural subjects will prove of special interest to members. A full attendance is requested. Per order,

JOHN S. COLLINS, Secretary.



## AGRICULTURAL NOTES.

## California.

## BUTTE.

**HARVESTING.**—*Record*, June 16: The coming week will witness nearly all our ranchmen engaged in the work of harvesting. The yield will be good, as it ever has been in this vicinity, if it be secured in season, and while it can be garnered without threshing out. Much barley has already been harvested and a large amount of hay has been cut. The Bidwell ranch has some 9,000 tons of excellent hay, well cured and baled, which will be placed on sale. The balance of the hay crop will be kept for home consumption. On Monday, Mr. Abraham Bidwell, the Superintendent of the ranch, will commence the work of harvesting some 8,000 acres of grain with four headers and a 40-inch separator. He anticipates a splendid yield of grain as the heads are large and well filled. Notwithstanding the untoward spring, our farmers seem to have an abundant harvest to reap, and a prospect of a price that will bring the balance of trade largely in favor of this county.

## COLUSA.

**BOARD OF EQUALIZATION.**—*Sun*, June 18th: The county Board of Equalization will meet on the first Monday in next month, and continue in session for three weeks. Persons coming to town can examine the assessment roll in the mean time so as to see if they may have cause to ask for a reduction. We would have published this week a list of all who were assessed on growing crops, but the Assessor is working at the books, and could not spare the time necessary for an examination by us. All who know that they have been assessed on growing crops ought to make application to the Board to have the amount stricken off the list, or failing in that, they ought to pay the tax on the same under protest. It is the fashion to get back money paid under protest, when the State concludes to let up on the article taxed. When the Supreme Court decided that money secured by a mortgage was not property, all those who had paid taxes for years back, under protest, got the money back, while those who were not so cautious lost the money. As it costs nothing, therefore, to protest, we hope all our farmers who have been assessed on growing crops will remember to state that they pay that much of the tax under protest. The Board of Equalization will have no right to strike this tax off without the application of each person so assessed.

## CONTRA COSTA.

**HEAT AND GRAIN.**—*Gazette*, June 16: The grain not already hard, suffered some shrinkage from effects of the heat, though not as much generally as was feared, the slow maturing process to which it has been subject having seasoned its fiber and substance to better than usual condition for enduring such a fiery trial, and much that would have been badly shriveled, but for the change, may recover with the cool weather.

**BAKED FRUIT.**—All over the State, as well as at home, a large portion of the fruit was ruined by baking or burning on the trees during our late hot spell, and in many instances the foliage was wilted and dried to a crisp.

## FRESNO.

**IRRIGATION MATTERS.**—On Saturday and Sunday last, W. S. O'Brien, of Flood & O'Brien, Louis McLane, President of the Bank of Nevada, G. Wallace, President of the California mining company, and W. H. Hall, C. E., visited Fresno. The party were here on a tour of observation. The Bank of Nevada having lately acquired control of the franchises and property of the Fresno Canal and Irrigation Company, the new directors were desirous of seeing the property, and determine by observation what steps were necessary to be taken to render the property a profitable investment, and at the same time comply with the wants and requirements of the section. To this end it has been determined to solicit from land owners who desire water for irrigation a statement of the amount required, the sum they are willing to pay for it, and the location of the land which they desire to irrigate. The drouth of this season has had the beneficial effect of urging the lagging interest in irrigation. Miles and miles of new ditches have been dug this season, and still the good work goes on. The new ditch from Kings river, being taken out by our neighbors at Kingsburg, is progressing favorably. The work was allotted to the stockholders in sections, and already most of the sections are completed. A new ditch has been dug from the Fresno canal to Hansen's and Jackson's farms. Other farmers are endeavoring to arrange for water, and build ditches. By the end of the present year it is safe to say that a hundred thousand acres of land will be placed in a condition for irrigation in this county. It will thus be seen that the drouth will be conducive of much good ultimately.

## LOS ANGELES.

**BEEKEEPERS' ASSOCIATION.**—*Herald*, June 16: The beekeepers of the Santiago and Trabuca settlements met at the rancho of Mr. Shrewsbury, May 26th, and organized an association called the Santiago and Trabuca Mountains Beekeepers' Association, with J. E. Pleasants, President, and J. R. Matthews, Secretary. Owing to the dryness of the season and the recent hot winds, the honey crop will be a failure in this section.

**BEES AT SANTA ANA.**—*Correspondence News*,

June 5: The bee season is passing rapidly, and so far with very little profit to the keeper. We have lost about 30% of our old stock, and enough of our usual increase to make 50% up to the present time. Our present stock is much behind ordinary seasons, but prospects are good for at least half the honey from now on to the end of the present season. It might be safe to put the yield at 60 pounds per hive for this year. I think this is all we need expect, with no increase in swarms. Comparatively few will swarm, if left to their choice. I, for one, shall not force swarming by any method, but shall endeavor to prevent as far as practicable. We have an abundance of bloom at present, but cool weather prevents the bees from gathering much honey. It is not so plentiful in cool weather as in warm. It also requires more bees in a hive to create the necessary heat for the rearing of brood and building of comb. I never saw brood in greater quantities than at present in my apiary. In most hives they rear brood in every flake of comb, and within half an inch of the top. I see an increase of honey since the 20th of May. Ere long we will know what our season will prove. Santa Anians need not whet their teeth, for it will be so good it will melt without grinding. Our sage, black and white, will open its bloom in a few days. We should see that our colonies are strong, clear of moth, and have plenty of honey in their hives, and a few hundred pounds set away for a case of necessity would be no detriment. Seventy swarms will live on a quart of honey in two gallons of water per day, and rear brood in weather not too cold. It is best to put but little in a vessel, covered with a cloth that will sink, and fasten it to the top, so all that fall in may crawl up. Keep it in as warm a place as there is near the apiary when the weather is cold. Bees may be fed by pouring diluted sweets on empty comb, and placing in the sun's warmth, the cells upward.

## MARIN.

**HEAT.**—The hot weather of the past week has ripened many grain and hay fields so rapidly that they will have to be cut two or three weeks earlier than was expected. The heat of such spells is ill for butter makers, by preventing the rise of cream and softening the product. But while they do little real damage, they remind us what an exceedingly favorable average temperature we enjoy for the great industry which forms the staple of our wealth.

**LITTLE HARM FROM RUST.**—The rust or blight which covered the crops on our coast line a few weeks ago, and kept farmers awake at nights, has nearly all disappeared, and the loss will be far less than was feared. It injured the fields earliest to mature quite a good deal. The heads of such are light. But on the later patches the effect will not be serious. The blight has passed away in the same mysterious way that it came; and though many will theorize upon it, very little is known. It is, however, pleasant to say that it is gone.

## MENDOCINO.

**WOOL CLIP.**—*Democrat*, June 16: Our Little Lake correspondent furnishes us this week with an interesting statement about wool and sheep, the information from Baechtel Bros. being particularly interesting. His 30 tons of wool, passing through or from there, figures up about \$15,000. Here's his letter, bearing date June 5th: Would like to hear from other wool growers in our county, and see if they can beat Little Lake. Not less than 30 tons of wool have passed through this place, or gone from around here, on to Ukiah, and at a guess for price, say 25 cents per pound, that makes quite a good sum for one week's travel. Take an average from this amount and I think others will with us say that we have one of the best, if not the best county in this State, and as for the great garden of this State for crops, fruit, vegetation and especially climate, I think this part beats all. Baechtel Bros. informed me, and they would like to hear from others, they marked 220 lambs from 192 Southdown ewes, being 114%. Average wool yield from fall and spring half-breed sheep, Spanish Merino and Southdown, 7.57-100. Average wool yield from fall and spring clips of their thoroughbred Spanish Merino flock of 42, 12.97-100 pounds in 11 months, 20 days, growth of wool one pound every 27½ days. Can any wool grower in this county beat Little Lake.

## MONTEREY.

**REDEEMING WASTE PLACES.**—*Democrat*, June 16: Visiting Thursday the marsh lands reclaimed by W. P. L. Winham, we report results most satisfactory up to this time. Partial crops of barley, wheat and alfalfa are already seeded, the first two, the earliest seeded, being some inches above ground. Our conviction is that the tract of reclaimed land is as choice a piece of ground as is to be found in the State. The means are at hand of irrigating it in a few hours whenever desired. About 85 acres is the quantity of land thus redeemed from water and which is now put in reach of farmer, dairyman or horticulturist for indefinite years. Thus an unsightly marsh, by the exertion of intelligence and energy, becomes chief among the productive lands of this valley and an ornamental appendage to our town site.

**CROPS ON COOPER RANCH.**—*Argus*, June 16: Riding over the Cooper ranch this week we found the prospect for crops better than we had expected. There are places where even of hay the yield will be scant; others where there has been a total failure; but generally a crop of hay will be raised, while in some instances a fair outcome in the way of grain is looked for. White & Haver, M. M. Moore and W. H.

Brown are among those who have promising fields of wheat that stands about three feet high, green and having plump berries. But by far the finest looking field of wheat we have seen this year is that of W. Stirling, on the F. D. Hall place. It is about four feet in height, bright and green, and the stalks are literally loaded down with grain heads. Of barley we saw some middling crops along the river, where considerable land has also been seeded to summer crops. George Blakie's barley on his irrigated land is looking well, as are the crops (we are told) on all the other irrigated tracts in this vicinity.

## NAPA.

**BASSFORD'S ORCHARD.**—*Register*: J. M. Bassford, Sr., of Brown's valley, has been shipping cherries to the San Francisco market since May 10th. He thinks this year's crop on his place will be a third lighter than usual, though the cherries are very fine in size and quality. From one of his old trees he has already picked this season 400 pounds, and there is a large quantity yet to gather from the same tree. For his first cherry shipments he received thirty-five cents, and now gets twenty cents. Mr. Bassford, who is a thorough fruit culturist, and owns the "Sunny Dale" property in Solano, is rooting out inferior trees and in their places is training up superior varieties.

## SACRAMENTO.

**IMPORTATION OF SHAD.**—*Record-Union*, June 16: Yesterday's express train brought through from the East 110,000 young shad, from Havre de Grace, Maryland, at the head of Chesapeake bay. F. M. Clark, who made a similar trip to the coast last year, came out in charge of the fish, being assisted by H. E. Irwin and L. Cummings. The fish were exactly one week on the journey, and came through in fine condition, frisking about in their cases with as much life as they could manifest anywhere. They are little fellows, scarcely more than a week old, and appear to run to eyes very extensively. Yesterday afternoon's train conveyed them to Sesma, opposite Tehama, the usual "planting" place of the Fish Commission, and there they were formally baptized as Californians.

## SANTA CLARA.

**FIRE IN THE MOUNTAINS.**—*Mercury*, June 16: The fires which have been raging in the Santa Cruz mountains, west of this city, during the past week, have resulted in the destruction of a vast amount of valuable timber. In some of the canyons the fire spread with such rapidity that the wood-choppers had to flee for their lives, leaving all their household goods to be consumed by the devouring element. On Tuesday, the 11th, a fire broke out in the Almaden canyon, and in the course of the day destroyed over 4,000 cords of cord-wood and many trees. The origin of these fires is unknown, though it is supposed that most of them originated through the carelessness of wood-choppers or some persons passing through the mountains. The fires are still raging and there is no telling where they will end. The destruction of these forests is a matter of very serious moment, and some measure ought to be adopted to secure their protection. A man who will carelessly, or through malice, start a fire in the woods, ought to be severely punished.

## SAN JOAQUIN.

**NEW WHEAT.**—*Stockton Independent*, June 15: A carload of the first new wheat of the season arrived from Nelson's station, Butte county, Wednesday evening, and was yesterday stored in the Farmers' Co-operative Union warehouse. It is club wheat and looks very plump and fine for that variety. It was cut from a field averaging 38 bushels to the acre, and the present consignment is but a part of 400 tons to be stored in Stockton by the same parties. It is the first wave of the great tide of wheat that may be expected to pour down into our warehouses from that highly favored section this year. The Farmers' Union already have some 28,000 cents positively engaged in Butte county for storage in their warehouses. The first new wheat raised in this county also came in yesterday by team and was purchased by I. S. Bostwick for \$2.25 per cental, which is over one-third more than the first new wheat brought a year ago. It was raised on the north side of the Mokelumne river near Lodi, by Mr. C. Lomasna. It is of the white Chile variety, and very handsome, plump looking wheat. It is very dry, as is evidenced by the number of kernels broken in passing through the cylinder of the threshing machine.

## SOLANO.

**THRESHING AROUND DIXON.**—*Tribune*, June 16: We are in the height of the harvest season, and since last week threshing has commenced in earnest. A good deal of complaint is heard that grain is not turning out quite equal to expectation. In nearly all cases it is considerably shrunken, and frequently very badly so. Mr. C. H. McMaster's summer-fallow yielded 25 bushels to the acre, though he had expected 30. Mr. Davis, of Binghamton, is one of the few farmers whose grain is turning out far above the estimated yield. He is said to have a splendid crop—more than ever was raised on the land before. One of the finest fields of summer-fallow grain is that of Hans Timm, just threshed by J. B. Bloom. The yield to the acre was 27 bushels and upwards. Only slight signs of shrinkage are visible. S. G. Little has finished threshing, and reports the average of summer-fallow at 20 bushels to the acre. J. M. Dudley has threshed his summer-fallow and the yield is far above the average this year—about 30 bushels to the acre, as Mr. D. estimates it.

The quality of the grain is good, the kernels being plump and full. Its weight averages 134½ pounds to the sack. A correspondent writing from Willows states that Oren Wright's threshing, engaged near that place, is doing splendid work. The grain is turning out well for the present season, and farmers are in good spirits. Mr. West, of Dixon, will have about 2,600 sacks on his place near Willows.

## SONOMA.

**THE HARVEST.**—*Russian River Flag*, June 15: This year Sonoma county will have one of the best harvests ever known. This will be one of the counties having grain to export, and our farmers have a prospect for good prices. The early sown grain promises a bountiful yield. The only light grain will be that sown late. This year we missed our usual spring showers, and the fog, so beneficial to late wheat, did not come as usual. But the season being so favorable, a great deal of the grain was sown early. This year has been just the thing for adobe or low moist lands, too wet for profitable farming in anything like a wet season. The harvest this year has already begun, being a great deal earlier than last year. Two or three headers and several reapers are already running in Dry creek and in Alexander valleys, and more will be started next week. A stack of barley was threshed near Haigh's station last Saturday. This county never yet has failed in a crop, and this year it stands out the banner county. Our section surely has a glorious prospect ahead.

**SONOMA COUNTY WOOL.**—The wool growers of northern Sonoma have been storing large quantities of wool in Cloverdale for some time, and last Tuesday it was offered for sale. The producers, by an understanding among themselves, stored their wool as above, and having appointed a man to have control of the whole lot, offered it for sale, so as to get the advantages of highest prices by competition among the buyers. Quite a number of dealers were present from San Francisco, besides one or two from the East. We understand that some of our local wool buyers were also represented. The amount of fleece offered for sale was 150,000 lbs. There were lively times there on the day of the sale. The whole lot of wool was sold to a San Francisco dealer for 27 cents per pound.

## SUTTER.

**THRESHING.**—*Banner*, June 16: During the week there has been sufficient threshing done in different parts of the county to enable us to give a tolerably correct idea of the yield of barley and summer-fallow wheat. We hear of the wheat going from 25 to 30 bushels to the acre, and barley 35 to 40. The high north wind whipped out some of the wheat, but we are gratified to learn that the loss from this cause is much less than was feared at the time.

## VENTURA.

**THE CONDITION IN THE APIARY.**—J. G. Corey, in *Signal*, June 16: The failure of the rainy season to put in its appearance in southern California caused serious alarm among beekeepers in our county. Feeding was first proposed and thoroughly canvassed at our bee convention the first of May, and resulted in everyone deciding to do as he pleased. When the question of removing to more favorable localities was proposed, my argument in its favor was that I had already moved most of my apiary, and that all colonies examined had commenced the first day putting in surplus honey. I continued moving until all were nicely settled in the vicinity of large mustard fields. They have built up strong in brood, and are making surplus honey beyond my most sanguine hopes. The success was so apparent that any beekeeper could see it; and now, after serious loss, in some cases more than 60%, all the apiaries of the Sespe region, so famous for its fine honey in large quantities, has been almost deserted, some leaving a few colonies as an experiment. Early in January I made an effort to ascertain what effect a dry season produced upon white and purple sage, little thinking that alfalfa should be taken into account, as it had already shot up sufficiently to warrant us in the belief that it would blossom at least as much as we would require for our bees during March and April, but we were disappointed in this. We next placed our hopes in the purple sage. This also failed, and the white sage remained without change, indicating that it would also prove a failure. Moving was the only remedy, and now we are all peddled out in 25, 50 and more colonies in a place, and so far as reported all are doing well. We now have hopes of carrying our bees through the year without increase of numbers, and with very little feeding. Surplus honey from this county is almost entirely out of the question this year. Some of us are sowing buckwheat, where land can be had that can be irrigated. Mustard has heretofore been considered a pest in the land, but the beekeepers of the county will hereafter hold it in respect.

## Oregon.

**SHEEP SHEARING.**—*Willamette Farmer*: This business comes off quite late here this season, as the weather has been quite cool and wet so far. The wool, as taken off, seems in good condition—sheep generally in fine order. There is a large increase of lambs this season in western Oregon, most of which have been saved. Owing to the need of all our wheat lands here for cereals, the pastures are insufficient for all the sheep. All the sheep, horses and cattle of western Oregon should be driven to the vast bunch grass country in eastern Oregon. The present prices of wool in Portland are encouraging to sheep raisers here.





### "Sometime."

"Sometime, when all life's lessons have been learned,  
And sun and stars forevermore have set,  
The things which our weak judgment here has spurned,  
The things o'er which we grieved with lashes wet,  
Will flash on us, and light dark night,  
As stars shine more in deeper tints of blue,  
And we shall see how all God's plans were right,  
And what we deemed reproof was love most true.

"And we shall see how, while we frown and sigh,  
God's plans go on as best for you and me,  
And how He heedeth not our feeble cry,  
Because His wisdom to the end could see.  
And e'en as prudent parents disallow  
Too much of sweet to craving babyhood,  
So God, perhaps, is keeping from us now  
Life's sweetest things, because it seemeth good.

"And if sometimes commingling with life's wine  
We find the wormwood, and rebel and shrink,  
Be sure a wiser hand than yours or mine  
Pours out the portion for your lips to drink;  
And if some friend we love is lying low,  
Where human kisses cannot reach his face,  
O! do not blame the loving father so,  
But wear your sorrow with obedient grace.

"And you shall shortly know that lengthened breath  
Is not the fairest gift God gives His friend;  
Sometimes the subtle pall of death  
Conceals the sweetest boon His love can send.  
If we could push ajar the gates of life,  
And stand within, and all God's workings see,  
We would interpret all this doubt and strife,  
And for each mystery could find a key.

"But not to-day. Then be content, poor heart;  
God's plans, like lilies pure and white, unfold;  
We must not tear the close-shut leaves apart,  
Time will reveal the calyxes of gold.  
And when, through patient toil, we reach the land  
Where tired feet, with sandals loosed, may rest,  
Where we may clearly know and understand,  
I think that we will say, 'God knew the best.'"

### Woodside Papers.—No. 11.

[Written for the RURAL PRESS by JENNIE E. JAMESON.]

"Oh! how glad I am that you have called, Mrs. Leslie, for an idea has been rattling around in my brain all the morning, and I shall be quite relieved to tell some one all about it. You remember I told you the other day about the poor widow who lives in the little house under the hill? She has five children to feed and clothe, and nothing to do it with. Now I wish that we ladies who live in this vicinity could form a society and make clothing for them, enough to make them comfortable. We can make over our own cast-off dresses and our husband's coats, etc., for them. We can meet at our own homes, and as we shall have to buy but very little new material, it will not be expensive."

"That's just the thing! We can do it as well as not. What nice ideas you do have.

"And more and more the wonder grew,  
That one small head could contain all she knew,"  
Said Mrs. Leslie, warmly.

"There now, don't make fun," returned Mrs. Payson. "Perhaps you will not like my next proposition as well. You know what the inclination is when a lot of ladies get together. If they are ever so good they do seem to ache to say something about their neighbors. It is—Mrs. So-and-so has left her husband. Did you ever! I always said it would come out so in the end; and 'They say Miss T. has a beau. Do you suppose she ever will get married? She must be on the shady side of 30,' etc., etc.; you know too well how it is apt to be, and how sometimes harm is done, though, of course, it is unintentional.

"Well, I propose that we have a stated subject for conversation. Let it be about health, or, perhaps, economy; and let each member of the society, if they please, bring some items of interest upon these subjects, so that we may all have an opportunity of receiving benefit from the experience of others. Then the thoughts of each one at times during the week as well as at our meetings will be busy with at least one subject that concerns our happiness, for what an amount of patience it takes to make one contented and happy when they have no health. As for economy, I think many extravagant individuals would be happier if they knew how to practice it, and would do so."

"I think the idea is excellent, excellent!" said Mrs. Leslie. "We are never too old to learn and I am sure I should be very glad to receive information from others. Oh! let's talk about cooking. We housekeepers have so much of that to do, and it will do the young ladies good to hear the subject thoroughly aired."

"I guess it will, indeed," returned Mrs. Payson energetically. "Every young lady ought to be a good cook; even if she is never obliged to go into the kitchen and handle the dripping pan and rolling-pin, she seldom escapes the labor of directing others. If she marries, her husband is sure to like a good dinner.

"He may live without poetry, music and art;  
He may live without conscience and live without heart;  
He may live without friends; he may live without books;  
But civilized man cannot live without cooks.  
He may live without books—what is knowledge but grieving?  
He may live without hope—what is hope but deceiving?  
He may live without love—what is passion but pining?  
But where is the man that can live without dining?"

"I must confess I have never seen one yet, though I have heard of those who managed to exist on one meal a day. There was a certain doctor named Fordyce, who said that one meal a day was enough for a hen and ought to be for a man. Accordingly, for more than 20 years he lived upon one meal a day. This he took at four o'clock, and he would eat a pound and a half of rump steak, half a broiled chicken, a plate of fish, a bottle of port, a quarter of a pint of brandy and a tankard of strong ale at this one meal. This took an hour and a half of his time."

"Oh, dear! I guess I wouldn't want anybody at my house eating an hour and a half at a time and in the middle of the afternoon. Not much economy of time in the way of eating, but some in the dish-washing line. But do tell me, Mrs. Payson, what kind of a kettle that is upon your stove."

"Ah, haven't you seen one before? It is granite ironware. Mr. Payson was in Boston last week and thought this ware was so much lighter than the old-fashioned iron, that it would be a good plan to buy some. You have no idea what a treasure it is. It seems as light as a feather, compared with the old ware—is almost as light as tin, and so smooth. I have scraped away on the rough bottoms of old iron, and worn porcelain kettles so long that it seems nothing but fun to wash this. One dealer said there was a kind he could not recommend, as it had some part of arsenic in it; but that has a different name, the marbledized—something. This is all right, anyway, and others say that the report about the other ware was gotten up to injure certain parties, and that there is no truth in it. I think it is a shame to set such a report swinging around the circle of newspapers, when it is not at all likely that a firm would put such an ingredient in their ware, as they would know it would prevent its sale."

"I know what I'll do," said Mrs. Leslie. "I will get one of our hardware dealers to send to Boston, or some other place, and get a quantity of this ware. Many a poor, almost broken-backed, woman will be delighted to have some to use, and so many will need a kettle, tea-kettle, spider, etc., that I think it will find a ready sale. Speaking about buying articles reminds me that I came over here to ask you if you knew of any way to prevent crockery from crackling, or 'cracking' as the dealer said. I have purchased a new tea set and am very fearful of the result when I shall apply hot water. The glazing—I suppose that is what crackles—upon my other set is checked beautifully, but I should prefer checks somewhere else—bank checks for instance."

"I never have had any crockery crackle so," returned Mrs. Payson. "Some one told me to soak my dishes before washing them, when I bought them, in cold water over night. They said it would prevent this crackling. I do not know whether it does or not, but it does no harm to try. You will excuse me if I beat these eggs, as my tapioca is ready for them."

"Of course I will excuse you, if you will tell me what you are making—something good, I suppose," said Mrs. Leslie, peeping into a dish of rich-looking milk.

"I shall be very glad to give you any information upon that subject, for I am very fond of 'tapioca cream.' You must take three spoonfuls of pearl tapioca (a common spoon, larger than a tablespoon, is what I use), and soak in a little water—say enough to just cover it—for three or four hours. Then put a quart of sweet milk in a tin dish; set the dish in a kettle of boiling water; put in the tapioca and let it cook until it is quite soft, when you must beat the yolks of three eggs with a cup of sugar, and stir into it. I use vanilla for flavoring. When the cream is cooked until it is like thick ice-cream, pour into a dish, whip the whites of the eggs with a spoonful of sugar and spread over the top. When this frosting is cooked slightly in the oven, and the whole made as cool as possible, it is a dish fit to set before any one."

"I shall go straight home and make some. Can't you tell me something else? I'm all attention."

"I do not know. I presume you are a better cook than I am, Mrs. Leslie. I know ever so many splendid cooks, but they never tell you how to do anything unless you ask them, and then it is not always plain; but I never can keep an idea that I think is useful to me. I always want other people to profit by it, too. For instance, my grocer has just sent up a pound of coffee. I do not drink it, but Mr. Payson does. The sight of it reminds me of the way I used to make it. Always, if I wanted it real nice, I would beat an egg up with the coffee, and then pour on the boiling water. Many people do this, and it makes quite an item in the course of a year, if one has to buy eggs. I have found out, however, that the shell of the egg will answer the same purpose, making the coffee quite as clear, though perhaps not quite as light brown. I take the coffee out in the top of the can; should think it would be a large spoon heaping full. Then I wash an egg shell and put into the coffee-pot with it; wet it with a little cold water and pour in about two cups of boiling water; I let this boil a moment upon the stove, when it is ready to set on the table. Speaking of boiling anything this warm weather makes me think of the treasure I am going to have the next time Mr. Payson goes to Boston. He is going to buy a 'Little Union' oil stove. A friend of mine has one, and says she could not keep house without it. She has a small family, but used to get so warm and tired getting the dinner over a hot stove that she could eat nothing when the others did. Now, a pint

of common kerosene cooks their dinner. A thick iron teakettle will heat so quickly that the water will boil in 15 minutes; and in a tin kettle the water will boil in five minutes. She can fry or broil steak. There is an oven which will set upon the top, in which she can bake pies, cakes, potatoes, etc. There is also an arrangement for heating flat-irons. The stove is so small and light that it can be carried into any room, the flat-irons heated, and there one can iron with no hot stove within 20 miles, unless their neighbors have them. I think it is delightful to contemplate, and I understood the whole arrangement could be purchased for seven dollars. They had a larger oil stove, the 'Monitor,' I think, which they used for heating the rooms on cool mornings, but I do not know as I should care for that."

"I am sure I never heard of that before," said Mrs. Leslie. "The very idea of doing an ironing without a hot stove almost takes my breath away. I have decided upon my line of action. I was intending to have a new dress, but I will make the old ones do, and get one of those oil stoves. Of course I shall have to use my large stove often, as my family is none of the smallest; but I always have to make up a fire when I get tea, and that will be avoided."

"I will tell you how I saved the money for mine. We were thinking of getting a new sofa, and instead of buying one, Mr. Payson made a frame of slats of wood and I covered it with a thicket dress, which had an old-fashioned full skirt. I am very well satisfied with it, and have the money for other purposes."

"Mrs. Payson, if it was not 'slangy,' I should say 'you are a brick.' That expression had a noble beginning, for, in a certain army the soldiers were so trusty that when their commander, when told he had no walled cities, could reply, as he pointed to them, that there were the walls, for every man was a brick. But I must go; I'll see you soon at our new 'society.'"

### Faces.

[Written for the PRESS by M. JENNIE HUNT.]

A face tells the story of a life. It seems strange that a surface of such limited extent can contain so many pages of history; and yet I doubt if ever an angry feeling in the heart left without tracing its record on the face.

The forehead has lines of sorrow, care and ill-nature written so indelibly upon it, that time only deepens the impressions.

Though a life may be spent in sadness and its story blotted by many a sorrowful tear, yet what a beautiful face may be worn if only a kindly glance comes from the eye, and a pleasant smile flits across the features.

Did you ever smile lovingly upon a child fretted with its little troubles and see how instantaneously the cloud on the face bursts asunder, and floats away driven by a smile of sunshine?

Your face at the close of life will show every passion and feeling you have ever known.

All smiles together with all frowns form an equation in which every factor has done his work.

THE COST OF FEEDING PARIS.—The cost of the daily dinner of the Parisians has been calculated by one of the French papers as follows: Bread, about 275,000 francs; wine, 250,000 francs; beer and cider, 15,000 francs; water, for cooking and drinking purposes, 6,500 francs; sausages, pig's feet, etc., 8,000 francs; pates and crabs, 5,000 francs; oysters, 4,500 francs; eggs, 17,500 francs; butter, 11,000 francs; beef, 230,000 francs; veal, 20,000 francs; mutton, 35,000 francs; pork, 33,000 francs; poultry, 24,000 francs; fresh water fish, 2,000 francs; sea fish, 16,000 francs; vegetables, 200,000 francs; entre-mets, fine and ordinary pastry, 50,000 francs; cheese, 4,000 francs; fruits and preserves, 12,000 francs; brandy, liqueurs, etc., 50,000 francs. This gives a total of 1,268,500 francs, or about \$255,000, with the addition of 5,000 francs, estimated cost of toothpicks, making altogether an average cost of 25 cents per head as the daily cost of the nourishment imbibed by the Parisians.

KILLING SATAN.—A young girl from the country, being on a visit to a Quaker, was prevailed on to accompany him to the meeting. It happened to be a silent one, none of the brethren being moved to utter a syllable. When the Quaker left the meeting-house, with his young friend, he asked: "How didst thou like the meeting?" To which she pettishly replied: "Like it! Why, I can see no sense in it—to go and sit for whole hours together without speaking a word. It is enough to kill Satan himself!" "Yes, my dear," rejoined the Quaker; "that is just what we want."

WAR.—General Sherman, who speaks understandingly, predicts a fearful and general conflict in Europe. He thinks we shall witness the greatest battles ever fought, so far as destruction of life goes, and believes that the struggle is going to cost at least a million of lives before it is ended; nor will they all be Russians and Turks, either. "I can hardly believe the Turks can withstand the shock," he says. "They may save Constantinople, but if they lose every other point, what use will it be to them?" He also says that neither Russia or Turkey were ever in such excellent fighting trim, both having all the improved arms of modern warfare.

### Painting the House.

My neighbor is an odd man, and when his new house was ready to paint he did the queerest thing. Instead of painting it white with green blinds, or an imitation of stone, like mine, he consulted "nature and the birds," and I write out his conclusions merely to show how odd a man he is: The swallow, with her nest of mud, I passed, and in a forked limb of the first apple tree I found a home built of the same material as my own—a nest built of bits of wood and sticks, so like the color of the bark that it might have grown there with the leaves. A house is always in the landscape, catching the eye; let us see now how Nature colors her permanent objects, quoth I. Trees are green, you say; but I see no green trees from my window, this day of October, save some lonely pines; nor will they be green again for almost six months. Then will be the blossoming of spring, all yellow, white and red, deepening into green; but soon the leaves will put on gala dress, and dance in grand masquerade the limit of their days. But the bark of the tree that endures is a sober gray, darker around the knots and shading off into pearl tints in the smooth places.

There are evergreen trees, but who shall say that the greenness the ice beats upon is the same as the foamy green which wreathes it in the spring, when every twig is tender tipped? The luxuriant under-growths of open woods—and bushes springing up in fence corners and about stone heaps—have many green branches, but they harden to wood color or die with the winter; and the grass, resplendent in its broad stretches of emerald, soon becomes a fading pillow for fading leaves. The sky is commonly called blue, but how many days in the year do we see an unstained dome. The clouds troop over and break it into a thousand pieces. The sun looks upon it, and it reddens and glows with fitful beauty. All that is lasting is quiet in color, while the gorgeous hues are piled upon the fleeting visages—a sunset cloud, a humming bird's wing. The roads stretching through our broad counties, answering firm to tread of hoof and ring of wheel, are soft backgrounds for shining horses and parti-colored cattle; and fences of rail or stone are charming trellises for the clematis, or a rugged sea-wall against which beat yellow waves of grain.

Happy is he who can shelter his household gods within warm stone walls, and there are exquisite colors in stone. But choose not the cold ones, I beg; and a house of white marble seems like profanation. We reverence the white walls of the temple, but for daily living we need to gather all of the warmth in this sunny earth to keep the heart from chilling when the evil days come. We are glad of whiteness, which is seldom given lavishly; of the marble blocks, in which sleep lovely forms, hand locked in hand, dreamless of the chisel; of the cloud fringes and crest of ocean wave, and of piles on piles of snow, fair and fleeting as are all pure things of earth. But let us not comfort ourselves within white walls. There is a house across the road whose white paint dazzles the eye when the sun shines, and is cold and forbidding when the clouds lower. The fences are the same color, and with so much cleanness without it is not strange that the floors are fairer than the mistress's hands, and the "best room" innocent of books. The owner, not content with a single outrage against nature, built a barn—a red barn—and many a good raindrop was flattened against it, and the sun blazed down thirty years before the glaring red was worn off and the warm, rich gray clothed the weather-beaten boards. How much meaning in that phrase, "weather-beaten!" We are apt to think of rattling clap-boards and broken window-panes; but do not forget that it is weather-beating that stains the apple, that robes the plum in purple, and coaxes the meadow flowers into royal attire. Paint the house one of the warm wood colors, and accent it about porches and windows. Then let the billowed grass roll to its doors the fluttering sails of flowers; let the winds dance around the chimneys, and the trees stretch out their protecting branches, and call your home akin.—L. R. D., in Christian Union.

FOR HER MOTHER.—An assistant of a drug-gist recently put up a prescription of a dose of castor oil for a young lady. She innocently inquired how it could be taken without tasting. He promised to explain to her, and in the meantime offered her, courteously, a glass of flavored and scented seltzer water. After she had finished it, he said triumphantly, "You see, miss, you have taken your oil and you did not know it." The young lady screamed. "It was for my mother!"

DIVISION OF LABOR.—Mrs. Mary Livermore speaking: "In Iowa I saw a law sign, 'Foster & Foster.' It meant Mr. and Mrs. Foster. They attended the same law school; became attached, became partners for life. The man looked up the cases; the woman pleaded them before the court and jury. In a certain difficult case where a woman was concerned he doubted his ability to do it justice and carried it to his wife, and she proved it to be a case of insanity."

NEATNESS.—One evening in Boston, just as Washington Alston, the painter, was approaching the door of a dwelling, where a splendid party had assembled, he suddenly stopped short and said to his friend, "I cannot go in." "Nonsense! why not?" "I have a hole in one of my stockings." "Pshaw, mau, nobody knows it." "But I do," said the celebrated artist.



## A Judge's Address on Liquor Selling.

Three saloon keepers in Chicago were found guilty of selling liquor to minors. The address of the justice when they were sentenced, as reported in the Chicago *Tribune*, is original and eminently wholesome. The evils of the liquor traffic, and what a license involves, are rarely set out in a clearer light than in the following address by Judge Reading:

"By the law you may sell to men and women, if they will buy. You have given your bond, and paid your license to sell to them, and no one has a right to molest you in your legal business. No matter what the consequences may be, no matter what poverty and destitution are produced by your selling according to law, you have paid your money for this privilege, and you are licensed to pursue your calling. No matter what families are distracted and rendered miserable; no matter what wives are treated with violence; what children starve or mourn over the degradation of a parent, your business is legalized and no one may interfere with you in it. No matter what mother may agonize over the loss of a son, or sister blush at the shame of a brother, you have a right to disregard them all and pursue your legal calling—you are licensed! You may fit up your lawful place of business in the most enticing and captivating form; you may furnish it with the most costly and elegant equipments for your lawful trade; you may fill it with the allurements of amusement; you may use all your arts to induce visitors; you may skillfully arrange and expose to view your choicest wines and most captivating beverages; you may then induce thirst by all contrivances to produce a raging appetite for drink, and then you may supply that appetite to the full, because it is lawful; you have paid for it—you have a license.

"You may allow boys, almost children, to frequent your saloon; they may witness the apparent satisfaction with which their seniors quaff the sparkling glass; you may be schooling and training them for the period of twenty-one, when they, too, can participate, for all this is lawful. You may hold the cup to their lips, but you must not let them drink—that is unlawful. But while you have all these privileges for the money you pay, this poor privilege of selling to children is denied you. Here parents have the right to say 'Leave my son to me until the law gives you a right to destroy him. Do not anticipate that terrible moment when I can assert for him no further rights of protection. That will be soon enough for me, for his mother, for his sister, for his friends and for the community to see him take his road to death. Give him to us in his childhood at least. Let us have a few years of his youth, in which we can enjoy his innocence, to repay us in some small degree for the care and love we have lavished upon him.' This is something you who now stand prisoners at the bar have not paid for; this is not embraced in your license.

"For this offense, the court sentences you to ten days imprisonment in the county jail, and that you pay a fine of \$75 and costs; and that you stand committed until the fine and costs of this prosecution are paid."

**AGRICULTURE.**—Pursued with intelligent industry, agriculture affords a larger number of high advantages than any other occupation of human life; it strengthens the body, invigorates the mind; and while it refines the sentiments, it purifies the heart, by compelling it to look upward for reliance and help towards Him who giveth rain and fruitful seasons. It curbs inordinate ambitions, by yielding a moderate remuneration for toil, while at the same time it imparts a feeling of quiet confidence in the future, from the declaration that while the world stands, seed time and harvest shall not cease. The young man brought up to till the soil, begins to feel gradually that the rewards of his toil are proportioned to his labor, and this imparts by degrees a spirit of self-reliance, which begets independence, and an amount of industrious activities, worth more to that young man, in his after conflicts with the world, than the inheritance of unearned thousands.

**DON'T RUN AFTER A MEAL.**—We do not mean that a man should not exercise due haste in pursuit of a meal, but he should be calm after he has caught it. A gentleman and his son the other morning were a little late for their customary town train on the South Western, and had "to make a run for it." They were successful in their attempt, and caught the train. But the younger gentleman gasped for breath, made a few motions with his hand, and would have fallen if he had not been caught. Before the train arrived at the next station he was dead. The verdict of the coroner's jury, following the opinion of the medical witness, was to the effect: "That death arose from syncope of the heart, brought on by running, after a hearty meal." Such was the end of a gentleman only 30 years of age.

**RUSSIAN WOMEN.**—A great number of Russian ladies in St. Petersburg have pledged themselves mutually neither to wear silk nor satin nor costly ornaments, nor to give balls, nor to indulge in other luxuries during the present war; but to devote the money which they would otherwise have spent upon such objects to the nursing of the sick and wounded of their country. This is just what a good many women did in this country during our war, and what women have done in all countries under similar conditions.

## YOUNG FOLKS' COLUMN:

## A Story of a Cow.

How excellent it is for our young people to learn ways of gentleness and kindness. These lessons will influence them as long as they live and will do much to make them truly gentlemen and gentlewomen when they grow up. In farm life there is splendid opportunity for inculcating gentleness in the care and treatment of domestic animals, and one beauty of the habit is, that when our boys become men they will find that the greater kindness and care and gentleness they give their animals, the faster they will grow and the greater profit they will derive from them. We find in the *American Cultivator* a nice story of a cow, which enforces the truth we have stated:

Among the Swiss mountains there lives a race of simple, pastoral people, whose tastes are primitive and pleasures few, but whose hearts are large enough to take in not only their kindred and friends but their gentle domestic animals. There is much to admire in their conduct toward the pretty little cattle that graze on the scanty herbage of these mountain sides. We can learn from them that gentleness and consideration, rewards and caresses are much more potent in the profitable management of their dumb animals than kicks and curses, punishment and revenge.

It is customary among the mountains to hang bells around the necks of the cattle, because, as they are allowed to roam among the steep and windings of the hills, the sound of the bells tends to keep them together and also to inform the herdsmen of their whereabouts. The bells are not the hideous-toned instruments of torture to the ear, so common in the back pastures of America, but really musical bells, varying in size and form from tinkling bits of metal to large, deep-toned bells, the latter worn by leaders of the herd.

To show how much of the instinct of pleasure and pain may be traced and developed in these domesticated pets, and how much of simple and commendable pleasure these Swiss mountaineers enjoy in their daily toil, we give a sketch made by one who has visited these mountain homes and who has compared their methods of treatment with our own.

So accustomed and attached do the animals become to these bells that the deprivation of them is felt as a punishment. The cow whose superior beauty, sagacity and good conduct fit her to be leader of the herd, is always on gala-days distinguished by the largest and finest-toned bell and the bravest ornamental collar, and so down, through the gradations of good, to the small appendage that marks the indifferently good animal, and the total absence of ornament and distinction which stamps the self-willed or vicious cow. If any cow has been guilty of straying, of unseemly behavior, breach of discipline or any vicious trick, the displeasure of the herdsman is not testified by blows but by the temporary deprivation of her bell; and this seldom fails to reduce her to order and prevent a repetition of the offence. It is only necessary to see the cow on a gala-day, with her badge of distinction strapped round her neck, and then to see her deprived of it, for some offense or other, to be convinced that this is true.

A certain cow that had long worn the bell of honor round her neck, had recently given birth to a calf and was considered too weak to bear the weight of the large bell, or, indeed of either one. Her owner turned her out to go with the herd to the upland pastures. This summer removal of quarters is always held as a holiday. The peasants were dressed in their best clothes, the cows had on their bells and badges, and all went on gaily except the poor matron who was deprived of hers. After proceeding a few paces she began to show signs of great uneasiness, and which constantly increased. It was vainly attempted to coax her forward, and soon she lay down on her side and would not move. In this dilemma one of the old herdsmen came up, and, seeing how matters stood, deliberately went into the house and brought out the bell and collar, which the animal no sooner felt about her neck than she rose, shook herself, and raising and throwing her tail over her haunches in token of complete satisfaction, went off prancing and curvetting with every appearance of health and gayety, and, taking her place in the van, was from that moment as well as ever.

The lesson we would inculcate from this simple recital is that of the desirability of kindly treatment to the animals in our charge. Not only is pleasure to be derived from petting and caressing them, but vastly more profit can be secured by keeping them in a state of satisfaction and contentment.

**HOW A MOUSE WAS CAUGHT.**—All mice are full of curiosity. They poke their noses into all sorts of places where there is a prospect of something to eat, and often meet the fate which ought to be the end of all poking of noses into other people's affairs—they get caught. When oysters are left out of water for any length of time, especially in hot weather, they always open their shells a little way, probably seeking a drink of water. A mouse hunting about for food found such an oyster in the larder, and put his head in to nibble at the oyster's beard; instantly the bivalve shut his shells, and held them together so tightly by his strong muscles, that the poor mouse could not pull his head out, and so died of suffocation.—*St. Nicholas*.

## GOOD HEALTH.

## Pure Milk for Infants.

The ills which the innocents have suffered through the drinking of impure milk form one of the most startling chapters of modern hygienic literature. It is wise when we know, the evil exists to guard against its coming to our loved ones. Prof. James Law, of Cornell University, writes on the subject to the *New York Tribune* many useful suggestions:

The milk must be obtained from a sound, healthy cow, as it is unquestionably tainted in some cases before it leaves the udder.

Few people have any idea of the perfect cleanliness necessary to the preservation of milk. An ordinary washing with water, though uncomfortably warm for the hands, or even with soap, is utterly insufficient. There should first be, the thorough cleansing of the dish, and then a rinsing with water at a boiling temperature, which must be poured out, and the vessel dried by simply inverting it over a drawer or table, but without the possibility of contact of its interior with any solid body. If dried with a towel, or if hand or finger, or, indeed, any solid body, is brought in contact with its interior after it has been scalded, organic matter, bacteria, and other germs may be deposited which will precipitate decomposition in the milk placed in it. But if the vessel is first carefully cleansed from all organic matter that may cover and protect such germs, then rinsed out with boiling water, set aside to drip, and finally filled with milk, having had nothing touch its inner surface from the contact with the boiling water until now, such vessel will not communicate to the milk any decomposing element. Every vessel, from the pail which receives the milk as drawn from the udder, to the bottle from which the baby sucks its supply, must be treated in the same way. In the case of babies' bottles, it is best to keep two, to be used alternately, the one with its tubes and the teat being thoroughly washed with soda, and then immersed in a dish of pure water until wanted.

As regards temperature and antiseptics. None of the chemical antiseptics are entirely unobjectionable. Boiling of the milk renders it more indigestible, and tends to produce costiveness. The only unobjectionable method is to secure perfect purity of dishes and milk, and to keep the latter at a low temperature. A sufficient degree of cold may be obtained in any house, with no expense and little trouble, by simply enveloping the dish in which the milk is kept in a wet towel, from which evaporation will go on constantly. A tin can with cover, enveloped in a wet cloth, will not only be kept very cold, but will be protected against the access of germs which would superinduce decay. I have in this way kept milk for the baby, perfectly sweet and good, in the warm rooms of a boarding house, in midsummer, while the landlord failed to keep the same milk sweet for half the time, though in a cellar and abundantly surrounded with ice. The great superiority of the wet-cloth preservation consists in its filtration from the air of all germs of decomposition which would otherwise gain access to the milk.

## Do Not Check Perspiration.

Nearly every one knows it is dangerous to check perspiration quickly, and yet many forget to practice the truth they know. The weather has been unusually hot, and the heat may return. Let the following be a hint for behavior. *Hall's Journal* says checked perspiration is the fruitful cause of sickness, disease and death to multitudes every year. If a tea-kettle of water is boiling on the fire, the steam is seen issuing from the spout, carrying the extra heat away with it, but if the lid be fastened down and the spout be plugged, a destructive explosion follows in a very short time.

Heat is constantly generated within the human body, by the chemical disorganization, the combustion, of the food we eat. There are 7,000,000 of tubes or pores on the surface of the body, which in health are constantly open, conveying from the system by what is called insensible perspiration this internal heat, which, having answered its purpose, is passed off like the jets of steam which are thrown from the escape-pipe, in puffs, of any ordinary steam engine; but this insensible perspiration carries with it, in a dissolved form, very much of the waste matter of the system, to the extent of a pound or two or more every 24 hours. It must be apparent, then, that if the pores of the skin are closed, if the multitude of valves, which are placed over the whole surface of the human body, are shut down, great harm results. The great practical lesson which we wish to impress upon the mind of the reader is this: When you are perspiring freely, keep in motion until you get to a good fire, or to some place where you are perfectly sheltered from any draft of air whatever.

Cooling off suddenly when heated sends many of our youth to an early tomb. It is often a matter of surprise that so many farmers' boys and girls die of consumption. It is thought that abundant exercise in the open air is directly opposed to that disease. So it is; but judgment and knowledge of the laws of health are essential to the preservation of health under any circumstances. When over-heated cool off slowly; never in a strong draft of air. Gentle fanning, especially if the face is wet with cold water, will soon produce a delightful coolness, which leaves no disagreeable results,

## DOMESTIC ECONOMY.

## Making Soap.

Most people in the country prefer home-made soap. They have the fat necessary in the shape of refuse lard, tallow, bacon, skins, etc., and the potash of soda can now be easily obtained for use with much less labor than was formerly required when the potash had to be extracted from the pile of wood-ashes at home. Where wood is used for fuel this is yet done.

If one has no home-made lye, buy caustic soda—you can get it at any apothecary's if nowhere else—and use it in this way: For hard soap take one pound of caustic soda, three pounds of fat, or five or six pounds of ordinary soap fat, and three gallons of water; put all together in a kettle over the fire and boil, adding three or four handfuls of salt before the boiling is quite finished; from two to three hours' boiling will be necessary. The experienced soap-boiler will know by its appearance when it has boiled enough. The novice will soon learn.

Where caustic soda cannot be obtained get common washing or sal-soda, and by the addition of lime make it caustic, after the following plan, which is the one generally in use at the present, and which makes an excellent soap: Take six pounds of washing soda and three pounds of fresh, unslacked lime; place together in any water-tight vessel—an iron kettle is best—and pour on two gallons of boiling water; stir occasionally until the lime is slacked and the soda dissolved, then allow it to settle. Take the clean lye from the top and pour it on the fat—of which three pounds common scrapings are to be taken—and commence boiling; then add another gallon of water to the settlings of the soda and lime, stirring as before. This lye is then to be added to the other while boiling; also throw in about six single handfuls of salt about half an hour before it is done boiling. Boil two hours.

Without the salt either of these methods will make a semi-soft soap; but for a real soft soap potash must be used. This you can buy for the purpose; or, if you prefer, extract from wood-ashes by simply mixing a little fresh lime with them and pouring on water. An old barrel or tub will do to hold them, if there is a hole in the bottom for the liquid to drain out. The ash-hoppers formerly used for this purpose are yet standing alongside of some outhouses on many farms, but seldom used now.

For toilet purposes a soap made with a vegetable oil is to be preferred—castile, palm, or cocoa—rather than those highly perfumed, but which are sometimes made from the most impure materials. If perfumed soap is wanted the common soap above can be melted, and perfume of any desired kind can be added; but it will be rather strong for delicate skins, and castile is much to be preferred.

Soap-making need no longer be dreaded by the women to whose lot it falls, as, by the methods we have given, as well as other similar ones, all the soap needed in a family for six months can be easily made in a single day.

It is sometimes said that the home-made soap costs more than it could be bought for. Perhaps it does, but then you have the satisfaction of knowing from what it is made.

**SUGAR MAKING.**—On the subject of sugar making, the *Ipswich Observer* writes: "Mr. Eastes, of Beccleigh, has made a most astounding discovery in sugar making. He claimed to be able to crystallize the whole of the juice and leave no molasses. He tested his discovery at Dart's mill, near Brisbane and the result was astonishing. He experimented on Chigacca rattoon juice marking 10° Beaume, and from 1,900 gallons was produced 2,400 pounds of beautiful white sugar, equal to the refined of Yengarie, and not a pint of molasses! It was finished in vacuum pans, and came out with only a little moisture, which the centrifugal soon removed. This is assuredly the precursor of a revolution in sugar making, and the magnitude of its importance is tremendous."

**HAM FOR SANDWICHES.**—A writer gives the following to the *Country Gentleman*: Boil as for the table; take one-third fat, two-thirds lean, chop fine, add a small teaspoonful each of pepper sauce and Worcestershire or Halford sauce, mustard and cayenne pepper; mix thoroughly and keep in a tightly covered bowl. To make sandwiches, cut white bread in smooth slices of uniform thickness, spread thinly with butter, then spread with the prepared ham thickly or thinly, as suits your taste; cut the slice across, and place the halves together with the ham between. In adding the cayenne pepper, put in a little at a time and taste, adding to suit yourself. I make a pint bowlful at a time. It is very handy for small parties, levees, basket picnics, &c.

**FLY PAPER.**—The hot weather last week brought us flies by thousands, if not more. We meet them thus, getting the hint from an exchange: "Powdered black pepper is mixed with syrup to a thick paste, which is spread by means of a broad brush upon coarse blotting paper. Common brown syrup will answer, but syrup made from sugar is preferable, as it dries quicker. For use, a piece of this paper is laid upon a plate and dampened with water. The paper may also be made directly at the mill by adding sugar to the pulp, and afterwards one-quarter to one-third of powdered black pepper, and rapidly working it into a porous absorbent paper."





A. T. DEWEY, W. B. EWER,  
Publishers.

Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4;  
six months, \$2.25; three months, \$1.25. Remittances by  
registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.  
Per line. . . . .25 .80 \$ 2.00 \$ 5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch. . . . .2.00 5.00 14.00 40.00

DEWEY & CO.

A. T. DEWEY, W. B. EWER, O. H. STROMO, J. L. BOONER

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these  
Columns.

SAN FRANCISCO:  
Saturday, June 23, 1877.

## TABLE OF CONTENTS.

**GENERAL EDITORIALS.**—Premium Jersey Cows, 385. The Week: The Abnormal Growths in Our Orchards; Bee-Eating Birds; Experiments at the University; The Isthmus Canal, 392. Marketing Wheat; Grasshoppers, 393. Notices of Recent Patents, 394. Another Indian Uprising; Comfort in Camp; Table Showing the Fluctuation in Prices of Wheat for the Past 13 Years, 395.

**ILLUSTRATIONS.**—Centennial Premium Jersey Cows, 385. Diagram of the Highest, Lowest and Average Prices of Wheat for the Past Ten and a Half Years, 393. The "W. T. Sherman" Folding Cot; The "Sheridan" XX Camp Cot, 396.

**QUERIES AND REPLIES.**—Melon Sugar; Poisoning Meat for Coyotes, 392.

**CORRESPONDENCE.**—Reclaiming Alkaline Soils; Sonoma County—A Successful Pre-emptor; Pacific Congress Springs, 386. Too Much Education? Ignorance the Curse of the World, 386-87. Double Tax, or the Absurdity of Extremes, 387.

**HORTICULTURE.**—Almond Trees Drooping their Fruit—Orchard Culture; Liquid Grafting Wax, 388.

**AGRICULTURE.**—The Cherry-monger, 387.

**THE SWINE YARD.**—Corn in Pork Packing, 387.

**POULTRY YARD.**—Ducks—Setting Eggs and Rearing Young; Hens in France, 387.

**PATRONS OF HUSBANDRY.**—Politics and Religion in the Grange; Discussion on Education; Worthy Lecturer's Visit; Buying and Selling Together; Convention of Grangers on Legislation, 388.

**AGRICULTURAL NOTES** from the various counties in California and Oregon, 389.

**HOME CIRCLE.**—"Sometime" (Poetry); Woodside Papers.—No. 11; Faces; The Cost of Feeding Paris; Killing Satan; War; Painting the House; For Her Mother; Division of Labor; Neatness, 390. A Judge's Address on Liquor Selling; Agriculture; Don't Run After a Meal; Russian Women, 391.

**YOUNG FOLKS' COLUMN.**—A Story of a Cow; How a Mouse was Caught, 391.

**GOOD HEALTH.**—Pure Milk for Infants; Do Not Cheek Perspiration, 391.

**DOMESTIC ECONOMY.**—Making Soap; Sugar Making; Ham for Sandwiches; Fly Paper, 391.

**THE STABLE.**—Speed Programme at the State Fair, 394.

**GENERAL NEWS ITEMS** on page 396 and other pages.

**MISCELLANEOUS.**—Better Times in New York, 387. To Discover Cotton in Woolen Fabrics; Cubical Contents of a Ton, 394.

## NEW ADVERTISEMENTS.

Grape Crusher and Stemmer, Wm. G. Wendell & Co., S. F.; Washington College, Washington, Alameda County, Cal.; Thrashing Engines, Berry & Place, S. F.; Fancy Cards, J. B. Husted, Nassau, Kansas, Co., N. Y.

## The Week.

The week has found our grain growers in the midst of their harvest hurry and excitement. Early and late the black and white have chased each other from the smoke-stack; early and late the swaying belt has carried power from roar to rattle; early and late have the great circles of the headers been concentrated into the small circles of the sacks. It is the time when poets most sing of the farm and painters grind their golden colors. There was both poetry and picture in the old round threshing floor with its slowly circling oxen; there was meter in the pounding of the flail. What is there of art or verses in the engine, dingy and hot-breathed as a demon? What poetry is there in the rattling separator, unless it be a roundelay of racket? Human progress has massacred the picturesque. There was grace in the carved cross-bow and the winged arrows; what is there in the stolid corpulence of the 100-ton cannon? There was beauty in the sickle and meter in the swinging cradle; what is there in the chattering reaper? Not in the material embodiments of the items of progress does their beauty lie. Rather must we seek it in the results gained by them. The progress in warfare has produced ghastly engines of destruction, but it has at the same time made war less bloody. There was a caution christened "The Peacemaker." The progress in industrial implements has strangled art with mathematics, and yet it has doubled the length of human life by doubling its productive power, it has doubled human joy and culture by giving time and means for their securing. Let these be the reflections during the few leisure moments which come in harvest time; and, when the hurry ends, let the thought come home, that every one who does not employ the opportunity which time-saving progress has bestowed, in fitting effort for self-culture and elevation, plays false to the spirit of progress which places opportunity within his reach.

## The Abnormal Growths in Our Orchards.

EDITORS PRESS:—I would like to have someone tell what is the matter with the peach trees in the southern part of the State. There is not a budded tree in this or Ventura county that has leaved out yet, and this is the 11th of June. All seedlings put out promptly, and the budded trees have now and then a scattering bloom out. Most of the fruit falls off when the peach is about the size of a pea. It is not for the want of water, as my trees that have stood close to a ditch all winter are as backward as those that have not been irrigated. I have several hundred trees, and 15 different varieties. Not one tree has started out yet. The apples too are very backward, but the most of them show some signs of starting or have started. Will some one explain? E. H. PIERCE, Carpinteria, Santa Barbara Co.

If we ever feel more hungry for wisdom at one time than another, it is when some vexing problem arises in one of the many forms of agricultural work. We have seen anomalous conditions and manifestations in all kinds of endeavor which we have attempted; inexplicable phenomena both in growth and in decay, both in the wakefulness and somnolence, so to speak, of vegetation. It is generally the case, too, that if one takes into account all the different phases which an unusual manifestation assumes, the effort toward a true generalization for cause is beset by many vexations. This fact impresses us more and more deeply with the need for more light on the complex industry which is the portion of the agriculturist. Let us hope that in the years to come this practical and needful science of agriculture will be developed.

The trouble which our querist notes is one which calls for more insight into vegetable growth than our poor wisdom compasses. Although it may seem easy to form a conclusion which will meet one or more shapes which this year's orchard mysteries assume, it is more difficult to embrace them all in the assignment of cause. The trouble extends over a wide area of our State and it comes in spite of diverse modes of treatment. In our Horticultural Department on another page, Rev. Mr. Brier gives a diagnosis and cure for the disease as it has come under his observation. His theory seems sound under his conditions, and may be summarized as growth prematurely started, then cruelly arrested, and the remedy is to furnish conditions which shall invite it to return. But how does this apply in places where the trees have not apparently experienced this sequence of conditions. For instance, in the case of our querist, whose trees seem to have the best chance to grow, because they had the abundant winter irrigation which Mr. Brier and others agree is safest and best. Evidently the problem as demonstrated must have corollaries, and atmospheric conditions would seem to have entered into the account so far as to overcome the conditions of moisture in the soil. Mr. Brier instances the cold as well as the drouth as influencing the arrest of normal rootlet growth, but an appendix must be framed to meet cases where the rootlets seem to do their work correctly in seedling trees, and show their activity in budded trees by throwing up a growth of "suckers," which certainly indicate root action. We commend the subject to the farther study and examination of our orchardists.

Minds are active in the counties most affected by the unusual phenomena. In order that our readers may have the benefit of these thoughts of inquiring minds, we shall quote two theories which are framed by Los Angeles fruit growers. Ex-Governor J. G. Downey writes to the Los Angeles Express as follows: The abnormal condition of certain classes of our fruit trees has elicited many inquiries through the press as to the cause. The apple, budded peach, pear and apricot look dry and lifeless. It has not been for want of moisture, as I have regularly all through the winter irrigated my trees and given them constant attention, myself and wife paying them daily visits. I remarked to her frequently how strange it was that the leaves did not fall. This is their period of rest but the sap is still flowing and the old leaves are green. I said there will be no fruit this season, or it will surprise everybody by coming to us in October instead of July and August. Now my humble theory for this phenomenon is that the winter was so mild and warm that the sap continued to flow, the temperature of the earth and atmosphere being just right to favor it. Recently we had a cold snap, the earth and atmosphere being reduced in temperature, the sap retired and the tree assumed its period of rest. I am of the opinion that within a few weeks you will see them all bud out, and we shall all be gladdened, first with the lovely blossoms that bring a thrill of joy to the child, an instinctive harbinger of fruit, the ever grateful refresher of the palate not vitiated by stimulants or narcotic weeds. This condition of the fruit tree is strange, but we have seen it here before though not to such an extent. In 1864 the swallows never migrated. They were around my farm-house the whole winter. They knew what was coming, and if we were as wise as they we could have profited by it. These occurrences are strange indeed and our scientists should investigate them. I do not offer this theory of mine in any dogmatic sense, but with a hope of bringing out some more plausible reason, because I encounter at once a strong argument against me in observing that the California seedling peach is up to its time in fruiting, and never was it more abundantly laden.

Another theory is one which is set forth by a writer in the Santa Ana News, and he addresses himself directly to the different behavior which is noted in seedling and budded trees. He writes: The condition of the budded and

grafted peaches and plums is exciting the alarm of our fruit growers.

As seedling trees are not affected by the blight, and the roots of the grafted trees are in active growth, it is evident that the trouble lies in or above the graft.

In all deciduous trees, there are distinct periods for the rising of the sap, governed more or less by the state of the weather.

This flowing of the sap takes place at different periods in distinct varieties of trees, and even in trees of the same variety, which have been subjected to a different mode of culture, and is affected by a higher or lower degree of temperature. It follows therefore, that a degree of heat and moisture which would excite the flow of sap and distend the sap ducts (below the graft), might not act in an equal degree above the graft. Something like this I conceive has taken place in connection with our peach and plum trees this season.

The high temperature, (accompanied with dryness) of our last winter, acting on the sap-vessels of the roots, has caused them to distend and the sap to flow, at a period too soon to find the sap-vessels above the graft in a fit condition to receive it. Meeting thus with a check, it was forced to descend and seek an outlet in the roots, which resulted in the water-sprouts to be seen round the trees.

It will be remembered that about the time our seedlings were showing signs of blooming, we had some cold dry winds. This would tend to check the development of the buds while the soil was still warm enough to excite the roots to activity.

If this is an explanation, it will be asked, is there any remedy? I think there is. At least some means might be taken to avert the evil in future. I would not advise, as some are doing, the substitution of seedlings for grafts, as I am confident that even with occasional seven-years barrenness a small orchard of good budded trees will be worth a forest of seedlings.

## Bee-Eating Birds.

We notice that some of the southern county apiarists are producing evidence that martins eat bees, and they are killing the birds to avenge the death of their workers. One bee-keeper writes to the Los Angeles Herald as follows: "When we first started our apiary we did not pay any attention to the martins, but about a year ago, in the swarming season, we lost so many queens that we took notice of the martins in our apiary, and were soon convinced of their destructiveness to young queens and bees. We saw one bird, in the space of 30 minutes, catch 18 bees. That was enough. We had lost about \$100 worth of queens and still they went. We got a man to come one day, who shot 37 martins in our apiary, and we had no more trouble with our queens. We took a lesson, and this year we were prepared for them. We have shot over 100, consequently they are not as plentiful as they were. Like quail, they do not seem to be nesting this year, as I fail to find the first nest. But there are other birds as destructive to bees as the martin. The blue-jay is a perfect tiger among the bees, although I have never seen them eat bees until this year. I am inclined to think this is on account of the drouth, as there is a scarcity of their kind of forage. The phoebe is a bad bird in all years, and it is a good thing they are not so plentiful as the martin."

"While we are talking about the enemies of the bee let us say something of the common toad. Now, if there is a necessary evil the toad is one we will put in that class, nor will I kill a toad, and to avoid their ravages among the bees I set mine up from six to 12 inches on stakes six feet apart and 10 feet between rows, and as the toad is a night bird he does very little if any damage."

Another writer says: "In answer to your inquiry as to whether martins eat bees, I can say from my own observation they do. Seeing great numbers flying about the apiary, and becoming convinced that they were catching bees, I killed several and found they had, as there were bees in their crops. I have heard that they are very destructive to bees in Lytle Creek canyon, San Bernardino county."

There is no doubt of the fact that birds do eat the bees. The Greek poets announced the fact centuries ago, and Langstroth singled out the swallow or martin as one of the devourers, although the "king bird" (*Tyrannus musicapra*) is the greediest of the winged foes of the hive and its inmates. But Langstroth could not brook the idea of killing the birds for the bees they ate. He argued that the removal of the birds would lead to such an increase of noxious insects that what the apiarian gained in the number of his bees, he would more than lose in the insect depredations in his fruit and grain crops. This reasoning, although sound in a general way, because we must look to the birds as our best friends in the warfare against insects which stands before us in this State, becomes rather cool when the apiarian loses bees to the amount specified above. There seems to be a choice of evils forced upon the beekeeper. We should like to know how he could protect his bees and still spare the birds, but if this is beyond his power his industry must be protected. We ought to know accurately which is the greater of the evils and act upon the knowledge.

Not so Hot.—The report from Santa Rosa that the mercury reached 120°, and that there were several cases of sunstroke, is denied.

## QUERIES AND REPLIES.

### Melon Sugar.

EDITORS PRESS:—Can you give me any reliable information in regard to the culture and the manufacture of watermelon sugar, which I have heard has met with unqualified success in southern California?—E. L. LESSER, 71 Sudbury street, Boston, Mass.

It is true that syrup and sugar have been made from melons in this State, and that the syrup and sugar have been good, but we infer from the wording of the above query that our querist has heard that the manufacture has been successfully prosecuted on a large scale. We do not think so, at least we have no information of this kind. Several of our readers have informed us that they have turned out a very good article for home use in an experimental way, but we know of no successful operation of factories. There was a large melon sugary built on one of the islands of the Sacramento river, but we believe there was some difficulty in obtaining a supply of melons and the establishment has been transformed into a beet sugar factory, as described some time ago in these columns. We do not suppose that this change has any general bearing on the sugar in the melon, but was decided upon for local advantage. Concerning the production of sugar from melons we know of no fuller information than is given in a pamphlet on the subject, which is issued from this office at 25 cents a copy.

### Poisoning Meat for Coyotes.

EDITORS PRESS:—For the benefit of Mr. Morse, of San Bernardino county, and others, I will say, we have practiced killing coyotes with strychnine in the valley for a number of years, and now there is not a coyote, or wolf, or panther, to be found in this whole region. Our plan is to cut off small chunks of fresh meat, say a good bite for a dog, and with a pocket knife make a small split in each piece, and with the point of the blade take from the bottle what would lay on the point once and insert it in the cavity, and close it up so it will remain inside to dissolve or be taken by the animal. Then we tie a rope to a bone or chunk of meat of some kind to make a trail, and drag it on the ground in a circular form around the ranch, so that the animal will strike it while prowling around. In this trail we drop the little poisoned chunks at intervals, so when the animal strikes the trail he follows up and partakes to his destruction. Do not poison the whole carcass, as it might be scattered in little pieces and do mischief. If you choose you can leave the carcass where the animals will get at it after taking the poison, and you will probably find them dead on the spot. I have taken sometimes four or five of a night. We also kill the wild cats and foxes in this way, as they trouble our lambs and kids. CHAS. ALEXANDER, Alexander valley, Sonoma county, Cal.

**EXPERIMENTS AT THE UNIVERSITY.**—We notice that Professor Hilgard has written a letter to the *Chronicle* editors to inform them that the experiments which they upbraided him for not conducting have already been in progress at the University for two seasons. This the readers of the *RURAL PRESS* already know, for we have had articles descriptive of the trial plots of grain to be grown with different depths of plowing and with the application of different fertilizers. Professor Hilgard is now getting ready for publication the two seasons' observations as far as they go, together with the results of investigations in the chemical laboratory of soils and industrial products of various sorts. We are sorry that the *Chronicle* fell into the wrong of berating the University Agricultural Department for not doing what it should have known was really being done. Such ignorance on the part of one who sets out to criticize is unpardonable. Nor is this fault of the *Chronicle* confined to it alone. It is too much the disposition to criticize the Agricultural Department of the University without knowing the facts of what it is doing and the facilities which it has for work. It would be the commonest sense for critics to first inform themselves on these points before making statements which are wide of the truth.

**THE ISTHMUS CANAL.**—The agitation of the isthmus canal project continues. Gen. Grant, before the expiration of his Presidential term, announced himself a believer in the enterprise, and since he has been in England, it is said that he has been waited upon by British capitalists in the interests of the canal. There seems hope of the success of the venture, if the requisite capital can be enlisted, and the interest which is awakening abroad promises well for the realization of this essential. It is a thing to be sincerely hoped for by the dwellers on this coast, and farther news will be looked for with interest.

**CORRECTION.**—In our review of Jersey farm last week, we were in error in stating that Mr. Sneath had prepared to irrigate 1,000 acres with underground pipes and hydrants. We should have placed the area at from 100 to 200 acres.

**ON FILE.**—"W. L. Visits," B. P. We have received a document from Farmington Grange without a signature. Signatures are necessary as proof of authenticity.



Marketing Wheat.

The wheat harvest is now being pushed with all activity. The weather is as favorable as could be asked, and the prospect is that all there is in this year's harvest will be stored by the producers in good condition. The thought turns naturally upon the question of marketing. When to sell wheat is not so easy a matter to decide as some would think. Some self-constituted instructors of farmers settle the matter as flippantly as though it did not require careful consideration and the wisest action. They are free to denounce farmers as speculators if they do not turn over their grain as soon as a buyer calls upon them to do so. This is an insult to the intelligence of the farmer, and makes him but a mere productive machine instead of a thoughtful and intelligent producer. Selling produce wisely is just as much a part of a farmers' legitimate business as taking measures for the production of a good crop. Indeed, if the fullest thought and investigation are not given to the selling, the productive effort does not gain its proper reward. We believe that a farmer should study the market and the conditions which affect it, and act upon the understanding and judgment which such study gives him, just as firmly and resolutely as merchants act upon their business conclusions. Such being our firm conviction and belief, it becomes clear what is our duty as an agricultural paper. It is to furnish to our readers every trustworthy fact and condition which bears upon the market. It is to afford the producer the opportunity and the materials for forming his own judgment of the action which he should take. It is not our province to dictate his action, because, as a wise and self-reliant man, he must determine this for himself and stand or fall on the correctness of his own conclusions. It is our sphere to set forth the truth as nearly as we can determine it from all sources of information, and to aid the producer in every possible way to the possession of the fullest knowledge and to the formation of the soundest judgment.

One of the methods which merchants constantly use in the formation of business conclusions is a due regard for the precedents in the lines which they are pursuing. Precedent is consulted by the merchant almost as carefully as by the lawyer. Past events always have an influence in forecasting the future. Influences which affected the market at one time will influence it again if conditions are similar. Therefore, it is well for the producer to have constantly in mind the course of prices in the years which have gone by. If he has been long in the business of producing for a market he can remember the quality and amount of the crops in many of these years, and the character of the demand which his produce met on the market. It is valuable then to supply him with an accurate statement of the prices which prevailed in these years. For this purpose we have secured a valuable diagram showing the course of wheat prices in this market for the last 10 years, in such form that the course of fluctuation in the different months may be clearly perceived. In addition to the diagram, which appears on this page, we give on page 396 our usual table of prices carried down to the present week. These condensed statements of the history of the wheat trade in this State we would advise all our wheat-producing readers to preserve for future consultation.

One of the factors to be taken into account in this year's sales is the amount of wheat we shall have to export. Figures on this point are apt to be very delusive. From the way in which these estimates are made at present they are little more than conjectures. Last year, for instance, with our splendid season, the reality was far below the wild estimates upon which some dealers were broken. There is even more reason for disappointment this year because the conditions are so adverse that great reduction must be expected, and no one can tell how great allowance must be made. For the purpose of informing our readers concerning what our city merchants think on this subject, we cite an estimate made by the *San Francisco Journal of Commerce*. This journal solicited the aid of all our leading dealers in making the estimate, and though the matter is of general interest, our readers must bear in mind that it is a buyer's estimate. We quote as follows:

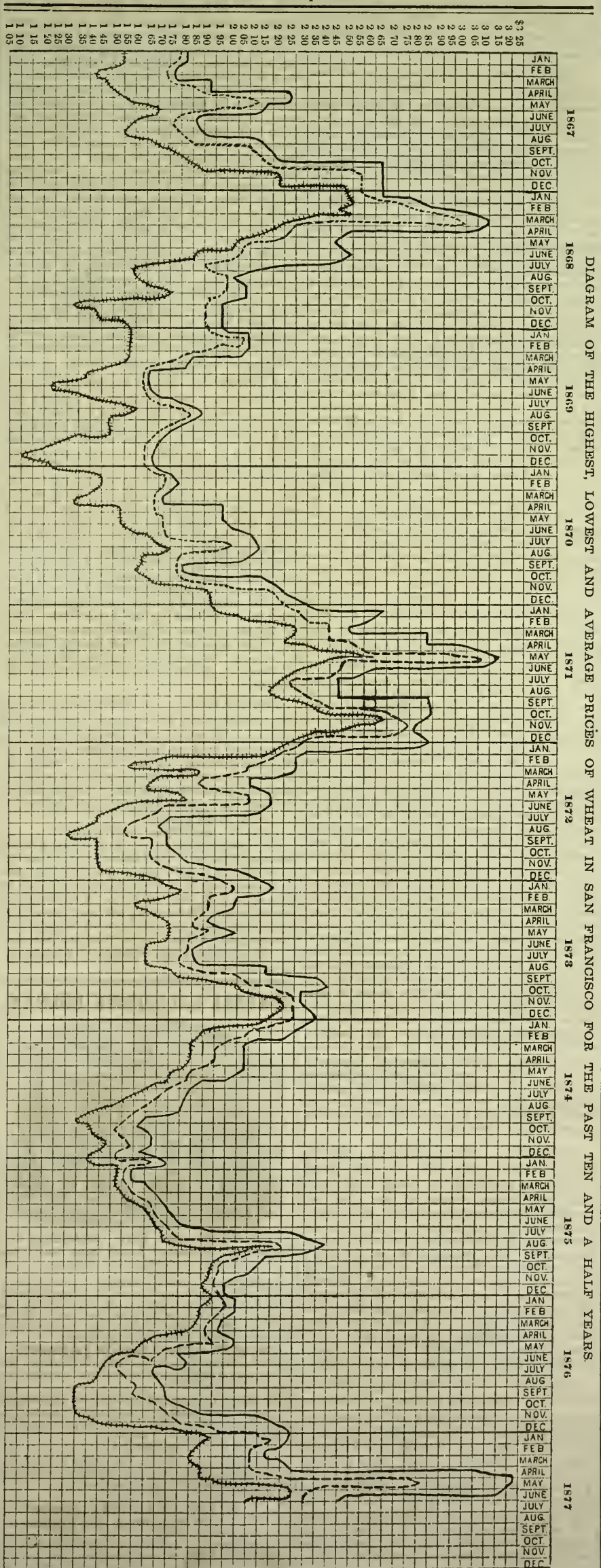
Total production in the State.....	12,895,000 cts.
Total amount shipped to San Francisco.....	7,905,000 "
Less estimate for S. F. consumption, etc.....	1,400,000 "
Surplus for export.....	6,595,000 "
Add Oregon surplus.....	3,000,000 "
Total for export from Pacific coast.....	9,595,000 "

These figures allow California the yielding of about half as much for export as last year, and Oregon, where the season has been unusually favorable both for large acreage and production, is estimated to double her exports of last year. Thus our readers can see what dealers think of the coming crop. It is yet too early to give an opinion of the estimate from the actual ratios gained from the threshers which are now at work in the different counties, but this we will give as soon as the facts more clearly appear.

The review of the English production for this year, which may be found in our market columns, gives a more hopeful description of the home crop than has been proposed for the last two weeks. The weather in England has greatly improved and the grain is said to

look better. We read in our English exchanges that the London Board of Trade returns will be gained this year about three weeks earlier than

The selling of wheat is a subject which will bear the closest scrutiny and discussion among producers.



usual, and this will give us trustworthy information of the English crop much in advance of former years.

In the above table, the top line shows the highest prices each month, the middle line the average, and the bottom line the lowest prices.

Grasshoppers.

Considerable quantities of grasshoppers were recently reported from San Joaquin county. It was thought they came too late to do material injury, but their presence gives reason to feel increased interest in the work which is now in prosecution by the U. S. Grasshopper Commission, which, it will be remembered, is composed of Professors Riley, of Missouri, Packard, of Massachusetts, and Thomas, of Illinois. These skilled entomologists have divided their territory, and begun the season's work of investigation. We expect that in the end we shall know far more than we do now of the habits of this winged foe, and the best ways to accomplish his destruction. We notice that California is included in the list of grasshopper States, and it falls to the lot of Prof. Packard to study up our conditions. It would be too bad if our grasshoppers should have all expired before he comes or sends for specimens.

The Commission undertakes, as one branch of its labors, the promulgation of the best means of fighting the insects. In order to do some good this season, there was sent out, a few days ago, a preliminary report of ways and means of destruction. We shall quote from this report some of the methods said to be most effective:

Heavy rolling, where the surface of the soil is sufficiently firm and even, destroys a large number of the newly-hatched young during the first eight or 10 days after hatching, and in the mornings and evenings subsequently. They then drive almost as readily as sheep, and may be burned in large quantities by being driven into winrows or piles of burning hay or straw. They may also be killed with kerosene, and by means of flattened beating implements.

But the best method is ditching. A ditch two feet wide and two feet deep, with perpendicular sides, offers an effectual barrier to the young insects. They tumble into it and accumulate and die at the bottom in large quantities. In a few days the stench becomes great, and necessitates the covering of the mass. In order to keep the main ditch open, therefore, it is best to dig pits or deeper side ditches at short intervals, into which the 'hoppers will accumulate and be buried. Made around a field about hatching time, few 'hoppers will get into that field till they acquire wings, and by that time the principal danger is over, and the insects are fast disappearing. If any should hatch within the inclosure, they are easily driven into the ditches dug in different parts of the field. The direction of the apprehended approach of the insect being known, from their hatching locality, ditching one or two sides next to such locality is generally sufficient, and when farmers join they can construct a long ditch which will protect many farmers.

We have not a doubt but that with proper and systematic ditching early in the season, when the insects first hatch, everything can be saved. When water can be let into the ditches so as to cover the bottom they may be made shallower, and still be effective.

A ditch three feet wide, unless correspondingly deep, will be more apt to permit the escape of the insects when once in than a narrower one. In hopping, the more perpendicular the direction the insects must take the shorter will be the distance reached. Of course the wider the ditch, if it be correspondingly deep, the more effectual it will prove. In exceptional cases, when the locusts are nearly full grown and the wind is high, so as to assist them, even the two-foot ditch loses much of its value.

One of the most effectual means of destroying the young locusts, and one which is too often overlooked, because its effects are not so directly apparent, is the preservation and multiplication of the native birds. Without undertaking at this time to specify the species which should be especially protected, and about which there is yet some difference of opinion, we believe that until the useless species in this respect are distinguished from those that are beneficial, it is best to protect all insect-eating birds, and if the laws of the State are insufficient for this purpose, let communities, townships and counties use all their lawful powers therefor.

Chickens, turkeys and hogs devour them in immense quantities, and thrive during years of locust invasion, or whenever these insects abound. Prairie chickens and quails devour them with avidity, and even hunt for their eggs; swallows and blackbirds pursue them unrelentingly.

We therefore strongly recommend the raising of as large a number as possible of hogs and poultry, both as a means of utilizing and of destroying the young locusts.

The Lord Provost of Edinburgh has notified General Grant, through the American legation at London, of the desire of the corporation and citizens to make, in the event of General Grant's visiting Edinburgh, a public recognition of the high estimate they hold of his character and the services which he, as President, rendered to the cause of general peace, particularly in the continued friendly relations between the United States and Great Britain.

The San Francisco Benevolent Association distributed \$18,989 in charity last year.



## THE STABLE.

### Speed Programme at the State Fair.

As a matter of news we print below the speed programme of the races to be held at the California State fair at Sacramento:

#### First Day—Monday, Sept. 17th.

No. 1. Running stake, and purse of \$250 added—Dash of three-quarters of a mile; free for all two-year-old fillies; \$50 entrance; \$25 forfeit; second horse saves entrance. Closed with the following nominations:

J. B. McDonald, Marysville; g f Lexington Belle, by Lexington, dam Eagless, by imp Glencoe. J. B. McDonald, Marysville; ch f Cordelia Planet, by Planet, dam Lilla, by imp Yorkshire. E. J. Baldwin, S. F.; g f by Baywood, dam Lag. E. J. Baldwin, S. F.; br f by Virgil, dam Mary Martin. Jas. Mee, S. F.; ch f by Planet, dam Miranda, by Lexington. W. L. Pritchard, S. F.; br f by Lady Evangeline, by Leicester, dam Tibbie Dunbar. W. L. Pritchard, S. F.; ch f by Mattie Moore, by imp Glen Athol, dam Mattie Gross. W. L. Pritchard, S. F.; bl f by Little Moore, by imp Glen Athol, dam Little Duke. H. R. Covey, S. F.; br f by Carrie C, by Monday, dam Annetta, by Lexington. Coombs & Coglan, S. F.; br f by Sadie, by Billy Cheatham, dam Ruth Ryan, by Lodi. Coombs & Coglan, S. F.; br f by Haldee, by Lodi, dam Trampoline, by Cheatham. R. K. Allen, Oakland; s f by imp Glen Athol, dam Little Miss, by imp Sovereign.

No. 2. Same day—Running; purse and stake \$300; \$50 entrance; \$25 forfeit; added; mile heats for three-year-olds; second horse saves entrance; entries close with the Secretary July 1st.

No. 3. Same day—Trotting; purse \$400; mile heats, three in five; for three-year-olds; first horse, \$300; second, \$60; third, \$40.

#### Second Day—Tuesday, Sept. 18th.

No. 4. Trotting—Purse, \$300; 2:40 class.

No. 5. Same day—Trotting—Purse, \$600; for 2:30 class; first horse, \$400; second, \$140; third, \$60.

No. 6. Same day—Running; purse, \$400; dash of one mile, free for all; second horse saves entrance.

#### Third Day—Wednesday, Sept. 19th.

No. 7. Trotting race—Purse, \$750; for 2:25 class; first horse, \$450; second, \$225; third, \$75.

No. 8. Same day—Running; purse, \$600; mile heats, free for all; first horse, \$400; second, \$140; third, \$60.

#### Fourth Day—Thursday, Sept. 20th.

No. 9. Trotting—Purse, \$500; mile heats, three in five; free for all four-year-olds; first horse, \$375; second, \$75; third, \$50.

No. 10. Same day—Occident's plate, value \$2,000, to any horse that beats Occident's time, 2:10, without a break.

No. 11. Same day—Running; purse, \$750; dash of three miles, free for all, first horse, \$450; second, \$225; third, \$75.

#### Fifth Day—Friday, Sept. 21st.

No. 12. Running—Stake and purse of \$300 added; entrance, \$50; forfeit, \$25; free for all two-year-olds; dash of one mile; second saves entrance. Closed with the following nominations:

James Ward, S. F.; s f by Glen Athol, dam Little Miss, by imp Sovereign. James B. McDonald, Marysville, g f Lexington Belle, by Lexington, dam Eagless, by imp Glencoe. J. B. McDonald, Marysville; ch f Cordelia Planet, by Planet, dam Lilla, by imp Yorkshire. Henry Schwartz, S. F.; s f by Mark L, by Monday, dam Jennie C. Willis Hull, Milpitas; b c by Norfolk, dam Jennie Hull. E. J. Baldwin, S. F.; h f by imp Glenelg, dam The Nun. E. J. Baldwin, S. F.; b f by imp Glenelg, dam Regan. James Mee, S. F.; ch f Planet, dam Miranda, by Lexington. W. L. Pritchard, S. F.; b c North Wind, by Norfolk. W. L. Pritchard, S. F.; ch c Pike's Peak, by Leicester, dam Sophia Jennison. W. L. Pritchard, S. F.; Lady Evangeline, by Leicester, dam Tibbie Dunbar. W. L. Pritchard, S. F.; ch f Mattie Moore, by imp Glen Athol, dam Minnie Gross. Theo Winters, Winters; b c Springbox, by Norfolk, dam Ada C, by Bob Johnson. Theo Winters, Winters; b c by Norfolk, dam Nevada, by Cheatham. Theo Winters, Winters; b c by Norfolk, dam imp from Jamaica. Henry Walsh, S. F.; b c by Monday, dam Camilla Uro, by Lodi, grand dam, Annetta, by Lexington. H. R. Covey, S. F.; br f Carrie C, by Monday, dam Annetta, by Lexington. Coombs & Coglan, S. F.; br c Muldoon, by Lodi, dam Belle Roney, by Cheatham. Coombs & Coglan, S. F.; br f Haldee, by Lodi, dam Trampoline, by Cheatham.

No. 13. Same day—Trotting; purse, \$600; 2:27 class; first horse, \$400; second, \$140; third, \$60.

No. 14. Same day—Running; stake, \$350; \$50, entrance; \$25, forfeit; added; two-mile heats for three-year-olds; second saves entrance; entries to close with the Secretary July 1st.

#### Sixth Day—Saturday, Sept. 23d.

No. 15. Trotting—Purse, \$300; 2:23 class; first horse, \$500; second, \$200; third, \$100.

No. 16. Same day—Running; purse, \$300; two-mile heats, free for all; first horse, \$500; second, \$200; third, \$100.

No. 17. Same day—Running; purse, \$400; mile heats; selling race, free for all. Horses entered to be sold for \$1,000, his entitled weight; for \$750, seven pounds off; for \$500, 14 pounds off; for \$1,250, seven pounds added; for \$1,500, 14 pounds added; excess to second horse. Stark mare and Graves mare barred in 2:40, 2:50 and 2:27 classes.

Entries to trotting races to close on the 20th of August; to running races the day preceding the races.

Ten per cent. entrance to all the above races except purses Nos. 1 and 10—entrance money to accompany the nominations.

National Association rules to govern trotting; Pacific coast rules to govern running races. Five to enter and three to start in trotting races; three to enter and two to start in running races.

**TO DISCOVER COTTON IN WOOLEN FABRICS.** The Journal of Chemistry says: Ravel out the suspected cotton fiber from the wool and apply flame. The cotton will burn with a flash, the wool will curl up, carbonize, and emit a burned, disagreeable smell. Even to the naked eye the cotton is noticeably different from the filaments of wool, and under the microscope this difference comes out strongly. The cotton is a flattened, more or less twisted band, having a very striking resemblance to hair, which, in reality, it is; since, in the condition of elongated cells, it lines the inner surface of the pod. The wool may be recognized at once by the zigzag transverse markings on its fibers. The surface of wool is covered with these furrowed and twisted fine cross lines, of which there are 2,000 to 4,000 in an inch. On this structure depends its felting property. Finally, a simple and very striking chemical test may be applied. The mixed goods are unraveled, a little of the cotton fiber put into one dish and the wool into another, and a drop of strong nitric acid added. The cotton will be little or not at all affected; the wool, on the contrary, will be changed to a bright yellow. The color is due to the development of a picrote.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

**ROTARY PLOW OR CULTIVATOR.**—William Freeborn, San Francisco. This invention relates to an improved cultivator or rotary plow for digging and turning the soil, and it consists of a series of concave-convex flanges or mold boards, arranged spirally around a horizontal shaft in such a manner that when the shaft is rotated the mold-board will cut and turn the soil in furrow slices. The curve and overhang of the spiral are so arranged that while rotating the soil will be turned in the same manner as by an ordinary plow. Successive furrows of the same length are cut diagonally across a strip of ground in width equal to the length of the hub of the rotating mold-boards. This rotary plow can be mounted in any suitably constructed frame and can be operated by animal, steam or other power. The advantages gained by the use of this plow as claimed by the inventor are as follows: 1. Economy; as a much greater surface of ground can be plowed over in the same time with the same expenditure of power, than by the present mode. 2. Better work; this manner of plowing avoids sole friction and leaves the ground under the furrow in the same condition as it was previously. 3. Equal twisting and cracking of furrow slice and as complete inversion of the same as by the present mode. 4. The whole field can be plowed without leaving head lands in any part of it. 5. This plow can be operated more economically by steam than any other, as the motion of the revolving mold-boards is in the line of direction; consequently the lightest engine consistent with requisite steam capacity can be used. 6. In consequence of the compact form of this plow when operated by steam, harrowing and seedling can be done at the same time as the plowing.

**BELTING ROPE.**—Hermann Royer, S. F. The object of this invention is to provide an improved article of belting rope, which shall be free from the fault of stretching too much or being too stiff to move freely around small pulleys, and a liability to crack and break off by use. Round rope, of various kinds, is largely employed for the purpose of driving groove pulleys, and it is very difficult to obtain an article which will work well and be durable. When these ropes are made of leather, which has undergone the ordinary process of chemical tanning, they are inferior in tensile strength from the effects of the tanning. When made of pure rawhide these ropes are too stiff to run well on small pulleys; they will stretch too much, and from their stiffness, will eventually cut and break, and wear out. This invention consists in making ropes of fluted or mechanically prepared rawhide, and it is done by first preparing the hide mechanically, by a method previously patented by the same inventor, or by any other means for rendering rawhide pliable without tanning or other chemical process. After the hide is made pliable it is cut around in long threads and these threads are cemented together and wound upon spools or bobbins, and twisted or plaited into rope. The rope made of this prepared rawhide possesses all the strength of the original hard rawhide, and it has the elasticity necessary for belts without the tendency to stretch. It is unaffected by time or atmospheric changes. The advantages are its pliancy and elasticity without the fault of continuous stretching, its greater adhesion to the groove pulleys, and the ease with which splices can be made without making unsightly enlargements at the point of junction.

**SULKY PLOW.**—Frank A. Hill, San Leandro. Mr. Hill's latest improvement in sulky plows consists in mounting the crank axles upon which the hearing wheels of the plow are mounted, in reverse positions, so as to throw one of the wheels in advance of the other for convenience in turning the plow at the end of the furrow. This arrangement also provides a more convenient disposition of the levers by which the crank axles are adjusted. Mr. Hill also provides a novel arrangement for attaching the rear plow to the plow-beam where two plows are to be used, and detaching it therefrom when it is desired to use it as a single plow. These improvements render the sulky plow much more convenient and easily operated.

**CULTIVATOR.**—John Jones, Stony Point, Sonoma Co. This invention relates more particularly to that class of plows or cultivators in which the plows or cultivator teeth are attached to the two diverging timbers of a V-shaped frame, which frame is mounted upon two rear wheels and a front swivel or steering wheel. The improvement consists in a novel combination of levers for enabling the driver to raise and lower the frame and plows without leaving his seat. The arrangement of levers is very simple and convenient, and the power of the driver is applied to the best possible advantage.

**WASHING MACHINE.**—Daniel Best, Auburn, Oregon. The improvement in this washing machine consists in combining an endless rubbing belt with two or more pressing rollers which are arranged above the belt. This machine will wash articles of all sizes from the smallest pieces of lace to the largest blankets.

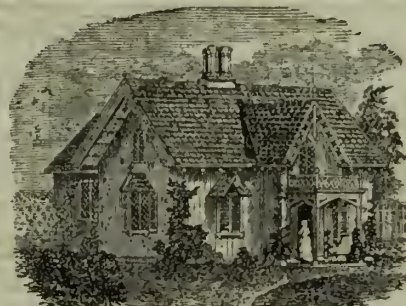
**FRUIT DRIER.**—Russell B. Blowers, Woodland, Yolo county. This patent covers certain improvements on a former invention of the patentee. In the previous patent he claimed a heating chamber surrounded by drying rooms with doors and a draft chimney to produce a laterally and downward moving current of air for the purpose of drying fruit and other substances. The present improvements consist in the employment of reversible air currents and a mechanism by which this is accomplished, and also in a means for admitting large quantities of air and bringing them into contact with the heaters so that it will all be heated before passing into the chambers. In order to dry economically by artificial means, it is necessary that any apparatus built for the purpose should be able to dispose of large quantities of the material to be dried in a short time; and as the capacity of air for carrying off moisture is limited, it is necessary to pass it through the apparatus rapidly and in large volumes without the use of expensive blowers or other machinery for producing a draft. This is accomplished by Mr. Blowers by means of the draft chimney and passages described in the previous patent, and he has found that with certain additions the apparatus may be made useful in drying lumber, fish, hops, chicory and various other substances.

**HORSE-SHOE BAR.**—Arthur Barton, Nevada City, Nevada Co. This is a compound iron and steel horse-shoe bar, which is so adapted and combined that when the bar is bent or formed into a horse-shoe, the iron will form the upper part of the shoe, or portion which comes next to the foot of the horse, while the steel forms the wearing surface or lower part. The steel portion or sole is only about half as wide as the iron portion, so that it will form when welded to the bar the proper outline for the base of a horse-shoe. When this bar is bent into the proper shape, this steel ridge or sole will form a wearing surface for the shoe, while the iron portion comes next to the horse's foot; the steel can then be hardened as much as desired, so as to form a shoe of great durability and one which is much cheaper and easier made than an entire steel shoe. By making the upper inside edge of the shoe inclined or beveled towards the center of the shoe, any dirt which may get jammed in between the horse's foot and the shoe will be displaced by the jar of walking and will readily fall out.

**OYSTER KNIFE.**—T. W. Temple, Los Angeles. The patent covers an improved implement for opening oyster shells, after they have been split or serrated by a splitting machine invented by the same patentee. It consists of a handle in which are secured two blades, one of which is fixed and the other adjustable. The implement is simple and easily handled and is quite effective as an oyster opener.

**CUBICAL CONTENTS OF A TON.**—Few persons have any idea as to the amount of coal that can be stowed in a given space; we therefore give an example of the manner in which it may be figured up. A shed or room 15 feet high, 18 feet wide and 300 feet long will hold 200 tons of anthracite coal, and perhaps 10 tons less of Cumberland. Thus 15x18x300=8,100, divided by 40, average cubic contents of a ton of anthracite=202½.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!** Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.** Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.** Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

**WANTED.** Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
303 Pine Street, San Francisco.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

## Poultry.



**SAVE MONEY.**  
\$10 PER PAIR, \$15 PER TRIO.  
All Chicks ordered during June and July will be sold at the above prices.  
Can spare Brown Leghorns, Silver Spangled Hamburgs, Buff Cochin, Black Breasted Red Games, Game Bantams and Rouen Ducks. After July my prices will be changed and those wishing to purchase FIRST-CLASS stock at low figures should write to me at once. Everything warranted as represented and strictly pure bred. Enclose stamp and address: F. P. LOEH, Reno, Nevada.  
No order booked unless accompanied by the cash.



**LOOK!**  
ALBERT E. BURBANK, Importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.  
ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## WEBBER LAKE HOTEL!

DAVID G. WEBBER, M. D., - PROPRIETOR.

A. J. ANDERSON, Manager.

Post Office Address, Truckee, Cal.

Hotel Open for Visitors From May 20th  
Until November 1st.

## WEBBER'S STAGE

Leaves Truckee Tuesdays & Fridays,

FARE, \$3.00.

BOATS, FISHING TACKLE, SADDLE

HORSES AND WAGONS Furnished to Guests Free.

Webber Lake is 6,025 feet above sea level, is well stocked with Silver Trout, and 24 miles from Truckee, on the Henness Pass Road, surrounded by the highest peaks of the Sierra Nevada mountains. As a resort for families and lovers of rare scenery, excellent fishing and fine drives, this hotel excels all others.

## POLAND CHINA PIGS.



A. J. TWOGOOD, Riverside, Cal.

Has on hand and offers for sale a few pure blooded Pigs of this variety of Swine. Parties desiring first-class stock are invited to examine my herd or address me as above.  
A. J. TWOGOOD



R. S. THOMPSON,

IMPORTER AND BREEDER OF

PURE BERKSHIRE SWINE,  
NAPA, CAL.

## MOUSTACHE PROTECTOR.

Will fit any Cup.  
Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you. C. H. BARROWS, Patent tee, Willimantic, Conn.

**E. GROTKASS, COLIMA, MEXICO.**  
DEALER IN REAL ESTATE.  
Information given free of charge. Lands procured for sale or for rents on easy terms.

## TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872. In lots to suit.  
Address J. A. POPPE, Sonoma, Cal.

Don't trifle with a poor watch when you can buy a good one of Dewey & Jordan, 433 Montgomery street, San Francisco, at prices according to the times.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

## SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thoroughbred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Importers and breeders of Pure Breed Angora Goats.

## POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oakland. Bred Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Premium Fowls, White and Brown Leghorns, S. S. Hamburgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berkshires, all ages. Perfect pedigree. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

## Seedsmen.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON, Importer and Dealer in Seeds, 425 Washington Street, - San Francisco



BLISS'S ILLUSTRATED GARDENERS' ALMANAC AND ABRIDGED CATALOGUE—123 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA L. L. BEQUETTE, Downey City, Los Angeles County, Cal.

Trees, Plants. Spring Lists free. F. K. PHOENIX, Bloomington Nursery, Illinois.

## Nurserymen.

SANTA BARBARA NURSERY, Located seven miles west of Santa Barbara, Cal. Depot, Cor. Montecito and Castillo Streets. JOSEPH SEXTON, Proprietor.

CULTIVATOR OF Fruit, Nut and Ornamental Trees. Also, Orange, Lemon, Lime and Palm Trees, Pot Plants, and Hardy Evergreen Shrubbery.

HENRY SHAW, VENTURA, VENTURA COUNTY, CAL., Wholesale Grower of ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

50 FINE CARDS, Damask, Repp, Etc., with name on, 13 cents. CLINTON BROS., Clintonville, Conn.

## GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

## OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).  
A. D. LOGAN, (VICE PRESIDENT).  
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).  
G. W. COLBY.  
I. C. STEELE.

W. L. OVERHISER.  
A. T. HATCH.  
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

## SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - - - 106 Davis Street, S. F

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

## HAY PRESSES

AND

## Excavating Machinery.

Constantly on Hand and for Sale

The well known PRICE or PETALUMA HAY PRESS, the standard machine of its class and the fastest baling press known; over 500 in use on this Coast. Price....\$450

The IMPROVED ECLIPSE POWER PRESS, the simplest and best press ever made for the price, which is.....\$300

The IMPROVED ECLIPSE HAND-POWER PRESS, very compact and powerful.....\$200

The PRICE PRESS, (extra heavy,) for baling hay for shipment in box cars. Will put from nine to twelve tons in a box car. A very strong and powerful machine, fully warranted as to strength and capacity.....\$600

## MADE TO ORDER.

Hide Presses for baling dry hides for shipment to the East.....\$500

Presses for Hair, Wool, Rags, Hops, Moss, Broom Corn, etc., at reasonable prices.

PRICE'S BOX EXCAVATOR or SELF-LOADING GRADING CART, the most remarkable labor saving machine that has been invented for years. Will move earth any distance, from 50 to 2,000 feet at one-fourth the cost of the ordinary way. The large size, using four horses and carrying over one and a half yards at a load is worth....\$650

The same machine, carrying three-quarters of a yard and using two horses.....\$500

Price's Draper Excavator, for making ditches from 10 to 20 feet wide.....\$650

There are conditions connected with the sale of excavators which will be explained upon application by letter or otherwise. Address

## PRICE PRESS COMPANY,

I. J. TRUMAN, San Francisco, - - - - - J. PRICE, San Leandro.

Office, With BAKER & HAMILTON,

No. 17 Front Street, - - - - - San Francisco.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester: Cross & Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSSE & CO., San Francisco.

## JOHN H. GOVE'S

## CENTENNIAL HAY PRESS.

Farmers and Hay Pressers will find it to their advantage to examine this Press before buying any other. It is built compact, combining lightness for moving with the greatest power and durability. In its working parts, capable of making the average 250 pound bale, more or less, baling 10 to 15 tons per day, with three men and a pair of horses, they traveling only 30 feet to operate it. No excavations required for this press. This is the original Gove Press improved, after an experience of building Presses in the States the past 15 years, where they gave the best of satisfaction. Price, No. 1, \$250.

Manufactured and for sale, or built to order, at the Eureka Grain Storage Warehouse, by

JOHN H. GOVE or ANDREW J. GOVE, Box 1122.

Also, for sale by DAVID N. HAWLEY, Agricultural Warehouse, 211 Market Street,

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

## PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

## OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.

VICE-PRESIDENT.....JOHN LEWELLING.

TREASURER.....J. V. WEBSTER.

CASHIER.....ALBERT MONTEPELLIER.

SECRETARY.....FRANK A. CRESSEY

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

## THE ALDEN FRUIT PRESERVING CO.,

OF CALIFORNIA,

No. 426 Montgomery Street.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,960 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 100 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE, Napa Co., Cal. P. O. Napa City, Box 51

## MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco

50 MIXED CARDS, with name, for 10c. and stamp. One pack (20 styles) Acquaintance Cards, 10c. Samples for 3c. stamp. M. DOWD & CO., Bristol, Ct.



HIGHEST AND LOWEST BAROMETER.							
June 13	June 14	June 15	June 16	June 17	June 18	June 19	June 19
29.79	29.84	29.91	30.00	30.00	29.96	29.93	29.93
29.77	29.80	29.82	29.93	29.96	29.91	29.91	29.91
MINIMUM AND MAXIMUM THERMOMETER.							
06	06	07	05	03	03	02	02
56	55	56	56	54	55	54	54
MEAN DAILY HUMIDITY.							
80	72	08	75	75	72	71	71
PREVAILING WIND.							
W	W	SW	SW	SW	SW	SW	SW
WIND—MILES TRAVELLED.							
418	339	301	289	240	330	316	316
STATE OF WEATHER.							
Fair.	Fair.	Clear.	Fair.	Fair.	Fair.	Fair.	Fair.
RAINFALL IN TWENTY-FOUR HOURS.							
Total rain during the season, from July 1, 1876, 11.03 in.							



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 20th, 1877.

There is no lack of activity now in some lines of trade. The great weight of summer Vegetables and Fruits which are arriving make the wharves hum in the early morning, and fill some streets with hurry as the work of distribution to consumers proceeds. Dealers in agricultural implements and in other farm supplies are still busy with orders for harvest use. But the general trade in non-essentials for interior consumption is slow, because purchasers have little thought for aught else but life and work.

The talk about the coming Grain continues. Shippers have lowered their bids somewhat, because of less favorable advices from abroad. The Liverpool Wheat market to-day is reported by cable at 12@12s 2d for average California, and 12@12s 9d for club. These rates, at the present price of charters, 2 7/8, are equivalent to \$2.25 to \$2.42 per cwt in this market, so it appears that shippers who bid \$2.15 are below the foreign rates.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	12s	5d	12s	8d	12s	10d	13s	2d
Friday.....	12s	5d	12s	8d	12s	10d	13s	2d
Saturday.....	12s	5d	12s	8d	12s	10d	13s	2d
Monday.....	12s	5d	12s	8d	12s	10d	13s	2d
Tuesday.....	12s	5d	12s	8d	12s	10d	13s	2d
Wednesday.....	12s	—	12s	—	12s	—	12s	9d

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875.....	9s	—	9s	3d	9s	3d	9s	6d
1876.....	9s	9d	10s	1d	10s	1d	10s	6d
1877.....	12s	—	12s	2d	12s	—	12s	9d

## The Foreign Review.

LONDON, June 19th.—The *Mark Lane Express*, in its weekly review of the British Corn trade, says: Under the influence of the continued sunshine steady improvement has been going on in the agricultural situation. The Forage and Cereal crops are showing unmistakable signs of a healthy increase. The weather having become more settled, very little rain has fallen, and the aspect of the country has undergone a rapid and favorable change. Wheat is now coming into ear, and with the exception of a few complaints as to the color, the reports speak favorably of the appearance of the plant, which has been making rapid progress during the past fortnight. Barley and Oats still leave something to be desired, but Beans afford satisfaction. In most districts the light rains and subsequent sunshine have caused the pastures to exhibit wonderful improvement. Grass and Clover have grown luxuriantly. As cutting will commence shortly, the continuation of dry weather is desirable to enable the yield, which promises well, to be gathered in good order. There seems reason to anticipate seasonable weather between this and harvest. The country markets continue to be meagerly supplied with home-grown Wheat, while at Mark Lane the offerings have been quite insignificant. The trade has been dull, and lower prices would have been necessary to effect sales; but growers evince considerable firmness, in spite of the improvement in the appearance of home crops; in a very few cases sales have been pressed. The value of foreign has necessarily suffered from the sunshine and the continued large imports into London; but as the market has been recently subject to unusual fluctuations, it is not unlikely that at a reaction may set in and a portion of the decline be recovered. This is rendered more feasible from the fact that the statistical position of the trade remains the same, and the requirements of the country between this and harvest will absorb all the available supply in sight. The withdrawal of political influences from the trade has given a full and somewhat undue effect to the depressing tendency of the fine weather and the large foreign arrivals. Inactivity has prevailed throughout the trade during the past week, and business has been confined to the supply of the immediate wants of millers, who have been enabled to satisfy themselves at 10@2s per quarter less money. The same want of animation has characterized the trade for feeding stuffs, and, in limited business, the passing tendency of prices has been against sellers. With brilliant weather throughout the past week, the floating cargo trade for Wheat has been very dull. Ghirkas, owing to scarcity merely, maintained their previous value, but other descriptions have been neglected. Lower prices would have to be accepted to effect sales. Maize ruled quiet, without quotable change, but Barley declined a sixpence and one shilling per quarter.

## Freights and Charters.

The *Commercial News* says: We have had a very quiet week in all classes of freights; one Wheat charter has been drawn at £2 7s to Cork, U. K., for a small wooden ship, but aside from this we hear of nothing having been done. The state of the English Wheat market has been so unsatisfactory of late that the present inactivity is not at all surprising. Ships are firmly held, however, and we hear of none that will be forced on the market. The berth for Liverpool is well filled both here and in the Columbia river, and large shipments of salmon are being made. At the close we have 38,760 tons in port disengaged, 8,866 tons miscellaneous and 8,679 tons for Wheat. The engagement for the week has been: *Norw ship Superb*, 887 tons, Wheat to Cork, U. K., £2 7s.

## Eastern Grain Markets.

NEW YORK, June 17th.—The Wheat market remains in a dull condition, with barely business enough to definitely establish values. Winter Wheat is lower, prime Red and Amber having been sold at \$1.75@1.85, and choice White at \$2.10. Spring is weak and lower to sell, the latest transactions in No. 2 having been at \$1.65@1.70. The supply being light, however, there is no pressure to sell. Corn has declined considerably, the export demand having fallen off, closing at 54@56c for ordinary to prime shipping. There are no established prices of Barley, now that the mowing season is over. Prime California is available at 90c. Flour has about held its own, with a very light trade. The National Millers' Association have resolved to raise a fund to fight patents of the new process method of making Flour, who, it is said, have sought to make millers in various sections pay them unjust tribute. Milling interests, which had for several years been much depressed by ill-timed competition, are reported to be improving, a great many weak concerns having been broken up.

CHICAGO, June 16th.—On 'Change this week prices have gone gradually and not very slowly down, with scarcely any exception in any article or day. The great crops which are reported as in good condition from all sections of this northwestern country, the good growing weather,

and the general depreciation of property, may be some of the causes for the decline, while the fact that very little Wheat is coming in and a goodly quantity is moving off, is the only possible reason, outside of the Eastern war, that can be given why prices do not further recede. The markets have been unusually dull with no new features. Wheat has sold for \$1.47 to \$1.55. The greatest variation in any one day was 4 cents. Corn sold from 44 1/2 to 46 1/2, the greatest daily variation being five-eighths of a cent. Oats have been very steady at 27 1/2@28 1/2. Pork sold from \$12.50 to \$12.90, and Lard from \$8.50 to \$8.55. These quotations are for cash, and hardly show the great variations which usually occur in the options. The closing prices were: Wheat, \$1.47 1/2; Corn, 44 1/2; Oats, 38 1/2; Pork, \$12.57 1/2; Lard, \$7.70. Whisky has been consistently at \$1.07. Receipts for the week are: Wheat, 29,000; Corn, 835,000; Oats, 227,000. Shipments—Wheat, 130,000; Corn, 872,000; Oats, 572,000.

## Eastern Wool Markets.

NEW YORK, June 17th.—The condition of the Wool market would be very satisfactory, provided there was sufficient stock on hand to invite inquiry from manufacturers. As it is, there is no difficulty experienced in disposing of all grades at very full and in some cases at advanced prices. The excitement continues in the West, and farmers have further advanced their views. In Ohio 42c and in some cases 45c is asked, and in Michigan 37c is demanded for lots as they run. These prices are altogether too high for Eastern dealers, and representative buyers have been instructed to cease purchasing until more moderate views are indulged in. Only one small lot of new Ohio has been received, and it will be a week or 10 days before the article will become any way plenty. The daily receipts of Spring California are eagerly taken, and in consequence there is little or no stock in store to select from. The prices realized are generally above those recently current. Fall California is to some extent in request, and at firm prices.

Sales for the week have been: 3,500 lbs Mexican, at 16 1/2; 305,000 lbs Spring California, 21@28c; 112,000 fall do, 16 1/2; 20,000 lbs Colorado, 19c; 45,000 lbs Eastern Texas, 24@29c; 77,000 lbs Western do, 11@16c; 65,000 lbs improved do, 21@28c; 40,500 lbs black do, 15c; 3,300 lbs Georgia, 30c; 30,000 lbs new Virginia combing, 33c; and 47,000 lbs Australian, 20,000 lbs Utah, 12,000 lbs improved Western Texas, 424 bags super and lambs' pulled, 50 do and do, 23 do No. 1 do, 21 do No. 2 do, 50,000 lbs new Virginia, and 60,000 lbs medium Ohio, on private terms.

Boston, June 15th.—Wool is in firm demand and active. The market is bare of washed fleeces, and sales in consequence have been limited. New Ohio is quoted at 41c; old Pennsylvania, 42c; old Michigan and New York, 39c. Combing and delaine are in demand. Sales of 181,000 lbs, including 130,000 lbs new Kentucky combing, at 35@41c; the balance were small lots of washed delaine and combing at 47@50c, and unwashed, 38@40c, including choice fat sheep combing. Pulled Wool continues in demand. The market is steady and firm. Sales of the week are: 261,000 lbs at 30@44c for super; 37 1/2@41c for X; 44@45c for combing. Pulled California Wool continues in demand. Sales of 818,000 lbs spring at 22@36c, including choice lots at 32@46c, and 19,850 lbs fall at 12@25c, mostly from 15@17c.

## Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. May 29.	WEEK. June 6.	WEEK. June 13.	WEEK. June 20.
Flour, quarter sacks.....	47,536	39,139	21,321	45,951
Wheat, centals.....	41,334	81,080	34,714	29,020
Barley, centals.....	5,014	7,206	5,411	4,243
Beans, sacks.....	1,164	1,094	677	439
Corn, centals.....	4,164	2,863	6,725	1,032
Oats, centals.....	3,129	8,957	1,428	7,739
Potatoes, sacks.....	9,238	9,653	7,008	10,641
Onions, sacks.....	636	1,080	609	578
Wool, bales.....	3,321	2,406	3,780	3,494
Hops, bales.....	—	13	—	42
Hay, bales.....	727	1,362	1,209	1,355

Bags—Dealers report the Bag market weak. It is rumored that some parties outside of the combination are anxious to dispose of their stock, and this, coupled with the limited demand from the interior, tends toward weakness.

Barley—Receipts of Barley have been smaller this week than for a long time. Sales have been toward our outside quotations. We note sales of 800 sks good Coast Feed, \$1.57 1/2, gold; 800 do good do, \$1.60, silver; 2,500 sks good Coast Feed, \$1.48 1/2; 250 sks Bay Chevalier, \$1.60; 2,200 do fair do, \$1.45; 600 do Bay Brewing, \$1.60 per cwt.

Beans—Beans are unchanged. Receipts have fallen off rapidly during the month.

Corn—Corn is firm. We note sales of 200 sks large Yellow at \$1.62 1/2, and 300 sks do do \$1.60 per cwt.

Dairy Produce—Dealers report large receipts of Butter. Packing operations in the country have somewhat ceased, as producers have laid away amounts they considered desirable. The increased supply in the city makes the trade dull, as the demand is reported slack. In Cheese there is a better feeling, and the lower grades have been disposed of at improved figures. The opinion prevails among city merchants that the production of California Cheese will be much short of the supply needed during the remainder of the season. They are beginning to talk again of bringing large quantities from the East. The railroad freight rates are now so high that our producers are somewhat protected; but the plan is to wait until the heavy production in Illinois and other Western States can be bought low so as to stand the freight charges. An improvement of Eastern prices would be the making of some of our Cheese makers who have feed left.

Eggs—Eggs are 1c better for fresh Californians.

Feed—Bran has advanced again to \$22.50 per ton. Cornmeal drops to \$36 and Straw does better than last week. Quite an event of the week was an excitement in Hay, by which prices were rushed up to \$26 for choice Wheat. Sales of new Wheat were made at \$22, \$33, \$25 and \$26. To-day prices have receded to last week's figures. We note sales during the week as follows: 14 tons fair Cow, \$16; 18 do good Oat, \$17.50; 10 do choice new Wheat, under active competition, \$24; 19 tons old Cow, \$15.50; 18 tons good old Chevalier Barley, \$20; 68 tons old Wheat and Oat, \$19.50; 23 do fair Stock, \$17.50; 46 do new Volunteer, \$14@15.

Fruit—The first Grapes, Black Julys, were received from Mrs. M. Pierson, of Vacaville, Solano county, and sold for 15c @ lb. Fruit prices for the week have undergone considerable change, as noted in our price-list below. Figs have become very plentiful. Limes and Lemons are scarce and have nearly doubled in price. Tahiti Oranges have improved a little and the few remaining of the California crop rule as high as \$25@34 1/2 @ M. Strawberries were received yesterday in excess of the demand and some went to the canners at \$5 @ chest.

Hops—A few bales of Hops were received this week.

We hear of nothing new in prices. There are rumors of an export of some hundreds of bales, but we do not believe that the movement is consummated. Emmet Wells reports the New York trade, for the week ending June 8th as follows:

The same general features which have characterized the trade for some time past still continue. Exporters take up all the choice lots offered and pay full prices, but anything off in quality is slow of sale. The copious rains of the past few days, if extended to the 11th districts of this State, must result in much good, and add new life to the vine. We believe the price here will be fixed and governed by the export demand from England, same as it now is. Germany may as well be counted out entirely, for that country will not use our Hops at any price, at least until our growers learn and act upon the necessity and importance of clean picking and proper curing. Quotations—New Yorks, choice to fancy, 15 to 17c; New Yorks, common to prime, 10 to 13c; Eastern, 10 to 13c; Wisconsin, 8 to 12c; Yearlings, 6 to 10c; Olds, all growths, 4 to 6c; Californians, nominal, 12 to 17c; Oregon, nominal, 12 to 17c.

Oats—Oats have sold within former range. We note sales: 125 sks choice Oregon from store, \$2.20; 215 sks ordinary Feed, \$1.75, silver.

Onions—Prices are unchanged.

Potatoes—A few old Humboldts are now bringing 75c per cwt. New Potatoes are now coming in in large amount. Prices are unchanged.

Provisions—The supply of fresh Meats is large. Prices are stationary, the better qualities being held down by the excess of lower grades. In cured Meats the market is only moderately active, and prices are unchanged since our last report.

Tallow—An active demand and a farther advance in price are reported.

Poultry and Game—The return of cooler weather has given more life to the Poultry trade, and our prices have been advanced for nearly all descriptions.

Vegetables—Numerous changes may be seen in our price list. There are still some receipts of large Asparagus which bring \$2 per box. Beets, Carrots and Summer Squash and Tomatoes are higher. The Sacramento river Tomatoes now lead the market. Some Green Corn from Alameda gains 25c per doz. Peas and String Beans are a little cheaper.

Wheat—Sales of Wheat have been few. A lower range has prevailed and shippers' bids are lower still. Holders are slow in making concessions. We note sales: The purchase of a lot of Shipping at \$2.17 1/2 is reported; 250 sks superfine Milling at \$2.15; 3,400 sks choice White Australia, \$2.40; 225 do do, \$2.35.

Wool—A steady Wool market is reported and a fractional increase in price for choice Northern is noted. One house reports to us sales of 409,000 lbs at a range of 14@25c. A large sale of Wool in Sonoma county is described in our "Agricultural Notes."

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., June 20, 1877.

BEANS.		HOPS.	
Baro, cts.....	4 50 @ 4 75	California.....	15 @ 20
Butter.....	2 00 @ —	NITS—Jobbing.....	—
Pea.....	3 25 @ —	Cal. Walnuts.....	9 @ 10
Red.....	4 00 @ —	Almonds, hd sh lb.....	7 @ —
Pink.....	4 00 @ —	Soft sh lb.....	15 @ 17
Sm'l White.....	2 75 @ 3 00	Brazil.....	14 @ 16
Lima.....	3 00 @ 3 25	Peanuts.....	17 @ 18
BROOM CORN.		Peanuts.....	4 @ 6
Common, lb.....	2 @ 2 1/2	Filberts.....	15 @ 16
Choice.....	3 @ 4	ONIONS.	
CHICORY.		Union City, cts.....	—
California.....	4 @ 4 1/2	Stockton.....	1 25 @ —
German.....	6 1/2 @ 7	Sacramento, New.....	—
COTTON.		POTATOES.	
Cotton, lb.....	15 @ 18	Petaluma, cts.....	—
Eastern.....	—	Humboldt.....	75 @ —
DAIRY PRODUCE, ETC.		Cutter Cove.....	—
BUTTER.		Early Rose, new.....	1 00 @ 1 50
Cal Fresh Roll, lb.....	25 @ 30	Sweet.....	—
Point Reyes.....	30 @ 32	POULTRY & GAME.	
Pickle Roll.....	30 @ 32	Hens, doz.....	7 00 @ 8 00
Firkin.....	27 1/2 @ 30	Roosters.....	6 00 @ 7 00
Western Reserve.....	16 @ 20	Broilers.....	3 00 @ 5 00
New York.....	20 @ 25	Ducks, tame.....	5 50 @ 7 00
CHEESE.		Cheese, pair.....	25 @ 27 1/2
Cheese, Cal, lb.....	13 @ 16	Wild Gray.....	1 50 @ 2 00
Old.....	12 @ 14	White.....	75 @ 1 00
N. Y. State.....	—	Turkeys.....	20 @ 22
EGGS.		Snipe, Eng.....	2 50 @ —
Cal fresh, doz.....	22 @ 25	do, Common.....	1 00 @ 1 25
Ducks.....	19 @ 20	Rabbits.....	1 00 @ 1 25
Oregon.....	20 @ 22	Hare.....	1 50 @ 2 00
Eastern.....	19 @ 21	PROVISIONS.	
FEE.		Cal. Bacon, L't, lb.....	14 @ 14 1/2
Bran, ton.....	22 50 @ —	Medium.....	13 @ 13 1/2
Corn Meal.....	36 00 @ —	Heavy.....	12 1/2 @ 13
Hay.....	15 00 @ 23 00	Lard.....	12 @ 14
Middlings.....	30 00 @ 32 50	Cal Smoked Beef.....	10 @ 11
Oil Cake Meal.....	40 00 @ —	Eastern.....	—
Straw, bale.....	80 @ 1 00	Hams, Cal.....	12 @ 13
FLOUR.		Armour.....	14 @ 14 1/2
Extra, bu.....	25 @ 27 1/2	Dupee's.....	15 @ 15 1/2
Superfine.....	6 50 @ 7 00	Davis Bros.....	14 1/2 @ 15
Graham.....	7 50 @ —	Magnolia.....	15 @ 15 1/2
FRESH MEAT.		SEEDS.	
Beef, 1st qual, lb.....	5 1/2 @ 6	Alfalfa, Cal.....	25 @ 27 1/2
Second.....	4 @ 5 1/2	Canary.....	10 @ 12 1/2
Third.....	2 @ 3 1/2	Clover, Red.....	25 @ —
Mutton.....	3 @ 4	White.....	50 @ 55
Spring Lamb.....	4 @ 5 1/2	Cotton.....	6 @ 10
Pork, undressed.....	4 1/2 @ 5	Flaxseed.....	3 1/2 @ —
Dressed.....	7 1/2 @ 8	Hemp.....	5 @ —
Veal.....	5 1/2 @ 6 1/2	Italian Rye Grass.....	35 @ —
Milk Calves.....	5 1/2 @ 6 1/2	Millet.....	10 @ 12
GRAIN, ETC.		Mustard, White.....	10 @ —
Barley, feed, cts.....	15 @ 16	Brown.....	3 1/2 @ 4
Brewing.....	1 60 @ 1 65	Rape.....	3 @ 4
Chevalier.....	1 70 @ —	Ky. Blue Grass.....	30 @ —
Buckwheat.....	1 60 @ —	2d quality.....	29 @ —
Corn, White.....	1 60 @ 1 70	Swet V Grass.....	75 @ —
Yellow.....	1 60 @ 1 70	Orchard.....	30 @ 35
Small Round.....	1 75 @ —	Red Top.....	25 @ —
Oats.....	1 70 @ 2 15	Hungarian.....	8 @ 12
Milling.....	2 25 @ —	Lawn.....	50 @ —
Rye.....	1 95 @ —	Mezquite.....	20 @ 25
Wheat, shipping.....	2 20 @ 2 30	Timothy.....	10 @ 10 1/2
Milling.....	2 30 @ 2 40	TALLOW.	
HIDES.		Cruda, lb.....	6 1/2 @ 7
Hides, dry.....	13 @ 18 1/2	Refined.....	8 1/2 @ 9
Wet salted.....	7 1/2 @ 9	WOOL, ETC.	
HONEY, ETC.		SPRING.	
Beeswax, lb.....	25 @ 27 1/2	Short Free, dusty.....	13 @ 15
Honey in comb.....	12 1/2 @ —	Good Southern.....	15 @ 18 1/2
do, No 2.....	10 @ —	Choice Northern.....	12 @ 15
Dark.....	8 @ —	Burnt.....	12 @ 16
Strained.....	6 @ 8	do, Northern.....	18 @ 23

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, June 20, 13 P. M.

LEGAL TENDERS IN S. F., 11 A. M., 95 1/2. SILVER, —@6 1/2. GOLD IN NEW YORK, 105 1/2.

GOLD BARS, 880@890. SILVER BARS, 10@15 1/2 cent. discount.

EXCHANGE ON NEW YORK, 50@55-100 cent. premium for gold; on London bankers, 4 1/2; Commercial, 4 1/2; Paris, 5 francs @ dollar; Mexican dollar, 24@25.

LONDON CONSOLS, 94 1/2. BONDS, 107 1/2.

QUICKSILVER IN S. F., by the disk 3 1/2 lb. 12@12 1/2.

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., June 20, 1877.

BAGS—Jobbing.		OILS.	
Eng Standard Wheat, 9 1/2 @ 10		Pacific Gne Co's.....	00 @ 90
Neville & Co's.....	10 @ 10 1/2	Neatfoot, No 1.....	1 00 @ 1 05
Hand Sewed, 22x36, 9 1/2 @ 10		Castor, No 1.....	1 05 @ —
24x36, 10 @ —		do, No 2.....	1 05 @ —
24x40, 11 @ —		Baker's A.....	1 25 @ 1 30
Machine Swd, 22x36, 9 1/2 @ —		Olive, Plagnoli.....	25 @ 75
Flour Sacks, halves.....	9 1/2 @ 11	Possel.....	75 @ 25
Quarters.....	6 @ 7	Palm, lb.....	9 @ —
Eightbbs.....	4 @ 5	Linsed, Raw, bbl.....	85 @ —
Hessian, 60 inch.....	13 1/2 @ 8	Bolled.....	90 @ —
45 inch.....	8 @ 8 1/2	Cocoonut.....	80 @ —
40 inch.....	7 1/2 @ 8	China nut, cs.....	60 @ 70
Wool Sacks.....		Opere.....	1 60 @ 65
Hand Sewed, 3 lb.....	50 @ —	Coast Whales.....	60 @ 65
Machine Sewed.....	55 @ —	Polar, refined.....	60 @ —
4 lb.....	50 @ —	Lard.....	1 10 @ 15
Standard Gunnies.....	13 1/2 @ 14	Oleophine.....	35 @ —
Bean Bags.....	7 @ 8	Devos's Brillt.....	30 @ 31
HANDLES.		White.....	50 @ —
Crystal Wax.....	19 @ 20	Nonparil.....	50 @ —
Eagle.....	12 1/2 @ —	Eureka.....	22 1/2 @ 25
Patent Sperm.....	28 @ 30	Barrel kerosene.....	30 @ —
CANNED GOODS.		Downer Ker.....	47 1/2 @ 50
Assorted Pie Fruits.....		Elaine.....	50 @ —
2 1/2 lb cans.....	2 75 @ 3 00	PAINTS.	
Table do.....	3 75 @ 4 25	Pure White Lead.....	9 1/2 @ 10
Jams and Jellies.....	4 25 @ —	Whiting.....	14 @ —
Peach, hf gal.....	3 50 @ —	Chalk.....	14 @ —
Sardines, qf box.....	1 65 @ 1 90	Paris White.....	24 @ —
Hf Bbs.....	3 00 @ —	Ochre.....	34 @ —
COAL—Jobbing.		Venetian Red.....	34 @ —
Australian, ton.....	9 00 @ 9 25	Averill Mixed.....	
Coco Bay.....	8 00 @ —	Palm, gal.....	65 @ 70
Bellingham Bay.....	8 00 @ —	Shale & tula.....	2 00 @ 2 40
Scottish.....	8 00 @ 9 00	Green, Blue &.....	
Cumberland.....	14 00 @ 17 00	Ch Yellow.....	3 00 @ 3 50
Mt Diablo.....	5 75 @ 7 75	Light Red.....	3 00 @ 3 50
Lehigh.....	22 00 @ —	Metallic Roof.....	1 30 @ 1 60
Liverpool.....	8 50 @ 9 00	RICE.	
West Hartley.....	14 00 @ 15 00	China No. 1, lb.....	5 1/2 @ 6
Scotch.....	7 50 @ 8 00	Hawaiian.....	4 25 @ —
Scotch.....	8 00 @ 11 00	SALE.	
Vancouver Id.....	10 50 @ 12 00	Cal. Bay, lb.....	13 00 @ 14 00
Charcoal, sack.....	75 @ —	Common.....	6 00 @ 8 00
Coke, bbl.....	60 @ —	Carmen Id.....	13 00 @ 14 00
COFFEE.		Liverpool fine.....	20 00 @ —
Sandwich Id, lb.....	21 1/2 @ —	SOAP.	
Costa Rica.....	18 @ 20 1/2	Castle, lb.....	10 @ 10 1/2
Guatemala.....	18 @ 20 1/2	Common brands.....	4 1/2 @ 7
Java.....	24 @ —	Fancy brand.....	7 @ 8
Manila.....	19 @ 19 1/2	SPICES.	
Ground, in.....	25 @ —	Cloves, lb.....	45 @ 50
FISH.		Cassia.....	22 1/2 @ 25
Sac'to Dry Cod.....	5 @ 6	Nutmegs.....	85 @ 90
Boneless.....	8 1/2 @ 10	Pepper Grain.....	15 @ 17
Eastern Cod.....	75 @ 8	Pimento.....	15 @ 16
Salmon, bbls.....	8 50 @ 9 50	Mustard.....	
Hf bbls.....	4 50 @ 5 00	1 lb glass.....	1 50 @ —
2 lb cans.....	3 00 @ —	SUGAR, ETC.	
Pkld Cod, bbls.....	22 00 @ —	Cal. Cube, lb.....	14 @ —
Hf bbl.....	11 00 @ —	Circle A crushed.....	13 @ —
Mackerel, No. 1.....		Powdered.....	14 1/2 @ —
Hf Bbls.....	14 00 @ 14 50	Fine crushed.....	14 @ —
In Kits.....	3 00 @ 3 25	Granulated.....	13 1/2 @ —
Ex Mess.....	3 50 @ 4 00	Hawaiian.....	11 1/2 @ 12
Pkld Herring, bx.....	3 00 @ 3 50	Golden C.....	10 @ 11
Boston Smk'd.....	40 @ 50	Cal. Syrup, kgs.....	75 @ —
LIME, Etc.		Hawaiian Molasses.....	25 @ 30
Lime, Sta Cruz.....		TEA.	
bbl.....	2 00 @ 2 25	Young Hyson.....	
Cement, Rosen- dale.....	2 75 @ 3 50	Moyune, etc.....	35 @ 50
Portland.....	4 75 @ 5 50	Country pkd Guu- gu.....	50 @ 60
Plaster, Golden City Mills.....	3 00 @ 3 25	perial.....	50 @ 60
Land Plaster, to 10 00.....	12 50 @ —	Hyson.....	30 @ 35
NAILS.		Fooo-Chow O.....	35 @ 60
Ass'ted sizes, keg 3 25 @ 4 00		Japan, 1st quality 2d quality.....	40 @ 50 25 @ 35

FRUITS AND VEGETABLES.

WHOLESALE.

WEDNESDAY M., June 20, 1877.

FRUIT MARKET.

Apples, box..... 75 @ 1 25

Apriots bx..... 50 @ 1 00

Bananas, bnch..... 2 50 @ 3 50

Blackberries..... @ —

Cherries, bk, lb..... 6 @ 18

do, Rose, lb..... 5 @ 18

Cherry Plums, bx..... 75 @ 1 00

Cocoanuts, 100..... 5 00 @ —

Currants, drwr..... 50 @ —

Figs, box..... 25 @ 50

Gooseberries..... 6 @ 12 1/2

Limes, Mex..... 20 @ 30

Pears, box..... 75 @ 1 00

Lemon, Cal M..... 25 @ 12 00

Stieley, bx..... 10 @ 12 00

Oranges, Mex..... @ —

M..... @ —

Tahiti..... 20 00 @ 25 00

Cal..... 25 00 @ 45 00

Peaches, box..... 1 50 @ 2 00

Pears, box..... 75 @ 1 00

Pineapples, doz..... 6 00 @ 8 00

Raspberries..... 10 @ 20

Strawber's, ch'st 5 @ 9 00

DRIED FRUIT.

Apples, lb..... 5 1/2 @ —

Apriots..... 10 @ 12 1/2

Citroos..... 25 @ 32 1/2

Pine Bk..... 5 @ 7

White..... 6 @ 8

Peaches..... 8 @ 10

Pears..... 9 @ 10

Plums..... 3 @ 4

Pitted..... 12 1/2 @ 14

Prunes..... 12 1/2 @ 17

Raisins, Cal, bx 1..... 50 @ 2 50

Hawaiian..... 3 00 @ 4 00

Zante p..... 9 @ 10

VEGETABLES.

Asparagus, bx..... 1 25 @ 2 00

Beets, ctl..... 75 @ —

Cabbage, 100 lbs..... 50 @ —

Carrots..... 75 @ —

Parsnips, doz..... 3 @ 60

Corn, doz..... 12 1/2 @ 30

Cucumbers, doz..... 20 @ 35

Garlic, New, lb..... 14 @ 2

Okra, lb..... 10 @ —

P'cas, Sweet..... 24 @ 3

Lettuce, doz..... 10 @ —

New Potatoes..... 3 @ —

Parsnips, lb..... 3 @ —

Peppers..... 7 @ 9

Rubbar..... 3 @ 3 1/2

Horseradish..... 6 @ —

Squash, Marrow-  
fat, tn..... 35 00 @ —

Summer, do, bx 1..... 1 00 @ 1 25

Stut Beans..... 24 @ 4

Tomat's, bx 30 lb..... 60 @ 75

Turnips, ctl..... 50 @ —

White..... 75 @ —

Wax Beans..... 24 @ —

LEATHER.

WHOLESALE.

WEDNESDAY M., June 20, 1877.

Sole Leather, heavy, lb..... 26 @ 24

Light..... 22 @ 24

Joe's Sheep, doz..... 48 00 @ 50 00

11 to 13 Kil..... 68 00 @ 70 00

14 to 19 Kil..... 82 00 @ 94 00

Second Choice, 11 to 16 Kil..... 57 @ 67 1/2

Cornellian, 12 to 16 Kil..... 57 @ 67 1/2

Fennalck, 12 to 13 Kil..... 57 @ 67 1/2

Robert Cal, 7 and 9 Kil..... 71 00 @ 76 50

Simon Ulmo, Females, 12 to 13 Kil..... 58 00 @ 62 00

14 to 15 Kil..... 66 00 @ 70 00

16 to 17 Kil..... 72 00 @ 74 00

Simon, 18 Kil..... 61 00 @ 63 00

20 Kil..... 65 00 @ 70 00

24 Kil..... 35 00 @ 47 00

Kipa, French, lb..... 1 00 @ 1 35

Cal, doz..... 40 00 @ 60 00

French Sheep, all colors..... 8 00 @ 15 00

Eastern Cal for Backs, lb..... 9 00 @ 13 00

Sheep Roans for Topping, all colors, doz..... 50 00 @ 50 10

For Linings..... 1 75 @ 4 50

Boot Legs, French Cal, pair..... 4 00 @ —

Good French Cal..... 4 00 @ 4 75

Best Jodot Cal..... 5 00 @ 5 25

Leather, Harness, lb..... 35 @ 38

Fair Bridle, doz..... 43 @ 37

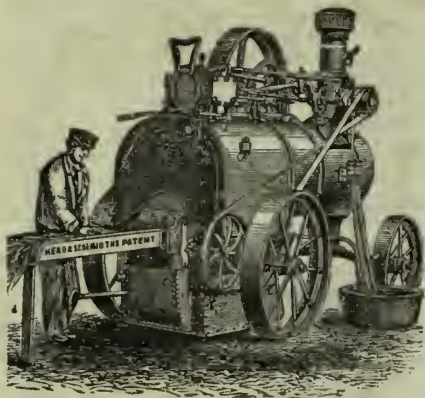
Skiirlnb, lb..... 30 00 @ 50 00

Buff, ft..... 18 @ 20

Wax Side..... 17 @ 20



## HEAD & SCHEMOITH'S STRAW-BURNING ENGINES



At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Felted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,  
10 Bush Street, S. F.

## The Famous "Enterprise"

(PERKINS' PATENT)

Self Regulating, Farm  
Pumping, Railroad  
and Power

## WINDMILLS,

Pumps & Fixtures,

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

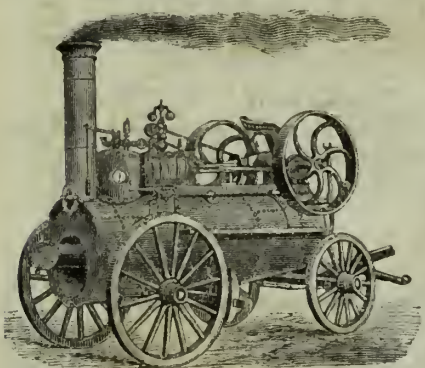
We are prepared to fill orders for all sizes, from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,

HORTON & KENNEDY,  
Managers for California and Pacific Coast.  
ALSO BEST FEED MILLS FOR SALE.  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

H. W. RICE,

MANUFACTURER OF THE RICE PATENT STRAW-BURNING ENGINES.



Portable and small engines for Pumping, Grinding, Sawing and all purposes. These engines burn less fuel than any engines in use. Wood-Burning Engines changed to Straw Burners, Saw-mill and Flour-mill Engines. Second-hand portable engines and boilers in good repair, cheaper than at any other place in the State. New boilers made to order, and repairs in the city or country done promptly. Repairs made on wood-working and fine machinery. Threshers and agricultural machinery made and repaired. ALL WORK WARRANTED. Office and works, No. 56 Bluxome Street, near Fifth, San Francisco, Cal.

MATTESON & WILLIAMSON'S



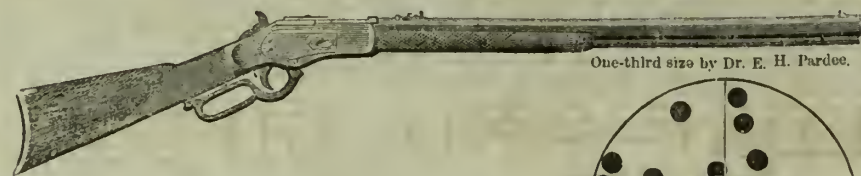
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

## Winchester Repeating Rifle

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

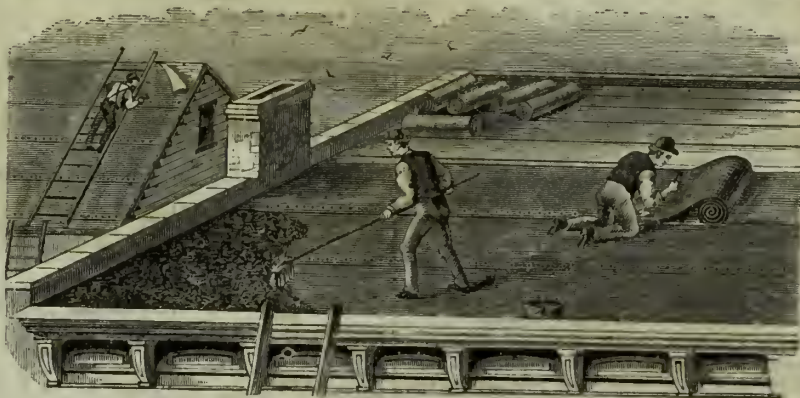
H. W. JOHNS' PATENT

ASBESTOS ROOFING AND ASBESTOS PAINTS,

ASBESTOS CEMENT FOR LEAKY ROOFS

Asbestos Roof Paints for Leaky Roofs,

ASBESTOS BOILER AND PIPE COVERINGS



FOR SALE BY ALL COUNTRY MERCHANTS.

Thompson & Upson, 5 First Street, near Market, S. F.,

EXCLUSIVE IMPORTERS FOR THE PACIFIC COAST.

TO FRUIT MEN.

LILLIES' FRUIT PITTEER,

Patented March 7th, 1876.



This machine pits all the different kinds of stoned fruits, (clinging-stones included) both rapidly and well, and without waste, and with entire satisfaction to all who have used it.

It is a perfect success, and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully.

For further particulars and terms, address

H. JONES, Sole Agent for California,  
419 and 421 Sansome Street, S. F.

BOUND VOLUMES of the PACIFIC RURAL PRESS, from Volume One, are for sale at this office; price, \$5 per volume for single volumes; unbound \$3. There are two volumes per year.

CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182; 67,117; 74,379; 84,062; 153,065; 157,124; 157,508; 164,181; 165,061; 172,760; 173,491; 173,067; 180,351; 181,433; 186,589; 187,126; 187,172; re-issue, Nos. 7,134; 6,976; 6,902; 7,035; 7,036; 6,913; 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

WASHBURN & MOEN MANUF'G CO.,

Worcester, Mass.

I. L. ELLWOOD & CO., DeKalb, Ill.

Dutcher's Lightning Fly-Killer.

Dutcher's Dead-Shot for Bed-Bugs.

Try them, and Sleep in Peace.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Flue Boilers. The United States Court has decided that Rice has a valid patent, and all infringements are liable.

MARCUS C. HAWLEY & CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual" Hay Presses, Etc.

301, 303, 305, 307 & 309 Market St.

SAN FRANCISCO.

43, 45 & 47 J Street,

SACRAMENTO.

MUSIC BOOKS

—FOR—

Schools, Academies & Seminaries

THE HIGH SCHOOL CHOIR, (\$1. or \$0.90 per doz.) is already a "proved and prized" book in a multitude of schools, and has songs in 2, 3 and 4 parts, by EMERSON & TILDEN.

Equally good are the older HOUR OF SINGING, (\$1.) by EMERSON & TILDEN, CHOICE TRIOS, (\$1.) for 3 female voices, by W. S. TILDEN, and DEEM'S SOLFEGGI, (75 cents) which has exercises in Italian style.

THE ENCORE, (75 cents, or \$7.50 per doz.) so successful as a Singing School book, is also a practically good class book for High Schools.

THE WHIPPOORWILL, (50 cents) by W. O. PERKINS, (author of the "Golden Robin") is filled with genial, pleasing songs for Common Schools.

AMERICAN SCHOOL MUSIC READERS, Book 1, (35 cents), Book 11 (50 cents), Book 111 (50 cents), are well-made graded note readers, by EMERSON & TILDEN.

As collections of cheerful sacred songs, such as now enter so gracefully into School Life, we commend three books of uncommon beauty, our Sabbath School Song Books, RIVER OF LIFE, (35 cents,) SHINING RIVER, (35 cents,) GOOD NEWS, (35 cents.)

Either book mailed, post-free, for Retail Price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & Co., J. E. DITSON & Co.,  
711 Broadway, New York. Successors to Lee & Walker,  
Philadelphia.

## Fraud! Fraud!!

COLLINS & CO'S

CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

COLLINS & CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

COLLINS & CO.,  
212 Water Street, New York.

HARRIS & BRADLEY,

31 and 33 Beale Street, San Francisco,

Manufacturers of Harris's

PATENT FRUIT DRIERS.

Patent Combination Heater and Cheese Vat, Patent Heater for Washing Churns, Pans, etc., Patent Heater for Steaming Feed for Stock, Patent Heater for washing or the Laundry.

Also, Windmills, which are made of Cast and Galvanized Iron, and warranted to work as well and last as long as these costing three times as much. All of the above machines are fully warranted. All that is asked is a fair trial, and if they do not give satisfaction the money will be refunded. All who wish a cheap, efficient Fruit Drier, should not fail to call and examine Harris's patent before purchasing any other make or style.

DON'T BUY ANY OTHER THAN

Walter's Patent

FRUIT DRIER AND PRESERVER,

Manufactured and for sale by the

Walter Fruit Drying and Preserving Co.,

315 DAVIS STREET, SAN FRANCISCO, CAL.



# AVERILL MIXED PAINT,

Was awarded the Highest

## MEDAL AND DIPLOMA

AT THE CENTENNIAL EXHIBITION FOR A READY MIXED PAINT

THIS CELEBRATED PAINT IS MANUFACTURED BY THE

## CALIFORNIA PAINT COMPANY.

THIS PAINT IS MIXED READY FOR USE.

**THE PUREST WHITE, AND OF ANY DESIRED SHADE OR COLOR.**

It will not peel, crack, nor chalk off, and will last twice as long as the best white lead, prepared in the ordinary way. Is cheaper, handsomer, more durable and elastic than the best of any other paint.

Extract From the REPORT OF THE CENTENNIAL COMMISSIONERS.

"This Paint is quite different from paints in general use. \* \* \* Work which has been done with it, some of it exposed for years to the moist atmosphere of the sea-shore, establishes its great durability. \* \* \* It is mixed ready for use, easily applied, of great beauty, and economical."

Extract From the REPORT OF THE FRENCH (CENTENNIAL) COMMISSION.

"It possesses merits unattainable by the old method of combining paint. \* \* \* It can be applied with great facility and perfect regularity; dries with a rich, glossy surface, and will not chalk or crack off. \* \* \* It never separates, is always ready for use, and will not spoil when exposed to the air. \* \* \* It can be applied by any one whether a practical painter or not."

For Sample Cards and Circulars, Address CALIFORNIA PAINT COMPANY, 27 Stevenson Street, S. F.

### H. H. H. HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

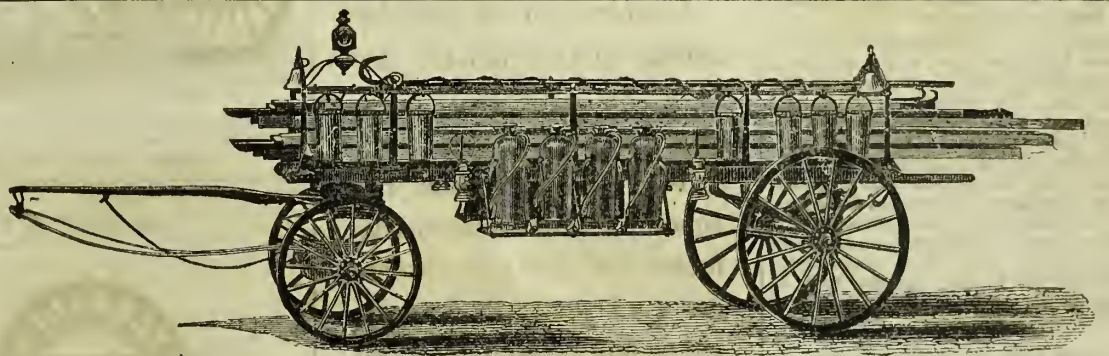
WILLIAMS & MOORE, Prop's,  
Stockton, Cal.



CALVERT'S CARBOLIC  
SHEEP WASH,  
\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

The BABCOCK.



The BABCOCK.

### Village Hook and Ladder Truck.

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

Address PARKE & LACY, 417 Market Street.

### THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING ROSES

Strong Pot Plants, suitable for immediate flowering, sent safely by mail, postpaid. 5 splendid varieties, your choice all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5. For 10 cents each additional, one Magnificent Premium Rose to every dollar's worth ordered. Send for our NEW GUIDE TO ROSE CULTURE, and choose from over 300 finest sorts. We make Roses a Great Specialty, and are the largest Rose-growers in America. Refer to 100,000 customers in the United States and Canada. THE DINGEE & CONARD CO., ROSE-GROWERS, West Grove, Chester Co., Pa.



HEADQUARTERS  
FOR THE  
PACIFIC COAST  
OF THE  
U. S. Camp Lounge  
COMPANY.

Price of Folding Cot, \$10, Lounge \$6 and \$8.  
AGENTS WANTED.—A liberal discount to the trade. Sent C. O. D., to any part of the coast. Also, rubber hose in variety and lengths to suit.

C. H. MOSELEY, Agt., 415 Sansome Street, S. F.

### ANTIOCH FERRY.

Notice to Stockmen and the public in general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville.

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

NO USE FOR ANY ANIMAL  
TO TRY  
THE GLIDDEN FENCE  
I CAN'T GET THROUGH



It makes the most durable, safe, and reliable fence in the world against stock of all ages.

About one-half the cost of any other good fence, and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire. 2. The only steel wire barb. 3. The only barb that cannot be displaced with thumb and finger or cattle's horns. 4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and never needs replacing. 5. The only coiled barb with broad base on main wire, which renders it immovable. 6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power. The only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place. 8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace the barbs. 9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS & CO., Pacific Coast General Agents, Sacramento, Cal.

Manufactured by Washburn & Moen Manufacturing Company.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents. YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. CLINTON BROS., Clintonville, Ct. STEVENS BROS., Northford, Conn.



DAVIS & SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

LANDSCAPE GARDENING.

CHAS. A. REED,

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.



## DEWEY & CO. American & Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

### Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

### Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

### Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

### Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

### DEWEY & CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.

## Superior Pianos for the People at Popular Cash Prices.

More than TEN THOUSAND prosperous families on this Coast need Ten Thousand GOLDEN PIANOS to make TEN THOUSAND HOMES MORE PLEASANT AND ATTRACTIVE.

Prices of good Pianos have long been too high. Our people could not afford to buy them. But many will find it not only pleasant but profitable to purchase

## The Brilliant and Durable GOLDEN PIANO

Which we now offer the readers of this paper

## At Greatly Reduced Popular Cash Prices.

We Guarantee them to be as represented, of superior tone, finish and durability.

Samples can be seen by calling at this office. We keep no expensive sales-rooms and attendants.

We shall sell none but superior and desirable instruments, but give our customers the benefit of prices far below any before offered on this side of the Continent.

## Prices of the Golden Piano:

	The Installment Plan Prices.	Our Reduced Cash Price.
The Golden Piano, \$500 (UPRIGHT—C.)		\$350
The Golden Piano, \$375 (SQUARE—No. 1.)		\$300
The Golden Piano, \$500 (SQUARE—No. 2.)		\$350
The Golden Piano, \$600 (SQUARE—No. 3.)		\$400
The Golden Piano, \$800 (SQUARE—No. 4.)		\$450

We invite our readers who wish to look at Pianos for themselves or friends, for immediate or future purchase, to call and examine our samples.

Those who cannot call will be given further information by consulting our agents or sending to this office.

## EDUCATIONAL.

WASHINGTON COLLEGE, Washington, Alameda County, Cal. For young men and young women. Full corps of able and experienced instructors. Address Rev. S. S. Harmon, Principal, New year will begin July 20th. Send for Catalogues.

## Buy the Best.

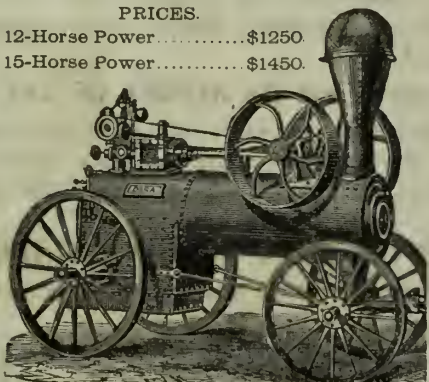
Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

## HOADLEY'S THRESHING ENGINES.

### PRICES.

12-Horse Power.....	\$1250
15-Horse Power.....	\$1450



We have a few of these Engines on hand, which we can offer at the above

### VERY LOW PRICES.

They are the latest style, and warranted to give the power represented. Call or address,

BERRY & PLACE,  
San Francisco.



**Constitutional Tendencies.** The way in which different individuals are affected by the same causes of disease depends upon the constitution and temperament. Some persons, for instance, are prone to fevers, some to bilious attacks, and others to nervous affections. In all cases where a peculiar susceptibility to any variety of disease exists, the toning, regulating and purifying operation of Tarrant's Effervescent Seltzer Aperient will be found the surest safeguard against an attack. Individuals of a bilious and constipated habit, or subject to dyspepsia, or whose nerves are easily excited, should frequently resort to this refreshing saline corrective, especially in warm weather. It is no less potent as a preventive than as a remedy.

### FOR SALE.

The Alfalfa Ranch, nine miles from the city of Los Angeles, bounded and fenced for one mile on the north by the Anaheim Railroad; east by San Gabriel (old) river, containing about 300 acres of land, all set with good grass, 60 acres alfalfa. Abundant water for irrigation and willow for fuel. Inquire on the ranch or by mail at Los Angeles.

IRA CARPENTER.

## PACIFIC RURAL PRESS,

A first-class 16-page Illustrated Agricultural Weekly, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

Our readers can see watches second to none of American make, by asking "the time o' day" when our agents call. They travel by the N. Y. watch, and are very proud of them.

## SEEDS. SEEDS.

### IMPORTED.

Crosby's Extra Early Marblehead Mammoth }  
Stowell's Evergreen } Sweet Corn.  
Mexican Sweet, New

Early Canada }  
Early Dutton } Yellow Flint Corn.  
Long Red Mangel Wurtzel }  
Yellow Globe } Beet Seed.  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,  
No. 317 Washington Street, San Francisco

R. J. TRUMBULL,  
Grower, Importer, Wholesale and Retail Dealer in

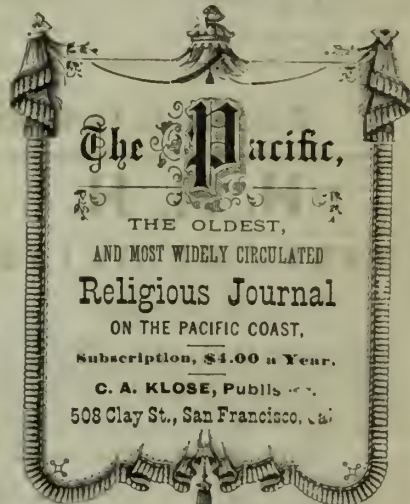


FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE TO ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.



## To Wine Manufacturers. GRAPE CRUSHER AND STEMMER

We would call your attention to the machine patented by C. Wadhaus. It has capacity—according to size—to crush and stem grapes for from 5,000 to 10,000 gallons of wine in ten hours. It can be worked by any motive power. It stems the grapes better than by hand, saving the labor of three men for every 1,000 gallons of wine, and does not crush or bruise the stems, from which so much deleterious matter comes. It causes the juice to fall through the air like rain, so as to absorb all the air in it that can be desired, increasing the temperature, and insuring a rapid and effective fermentation. It does not bruise or crush the seeds, nor does it even loosen the envelope of the seeds, which is astringent and greasy. It produces five per cent. more wine than by any other mode, because the grapes are crushed so completely that the liquid easily separates from the solid parts. In making red wine, the color of the skin dissolves much quicker, and the fermentation is perfected before the new wine has time to become too astringent by a prolonged contact with the marc. It crushes all the grapes evenly, the small and tough berries as well as the large and fleshy ones. The machine cannot easily get out of repair, being made strong and durable.

The above reasons were given by M. Keller, Los Angeles, after having made 200,000 gallons of wine with one machine, thoroughly testing its merits. In making 75,000 gallons it will save enough to pay for the machine and a horse power to run it, saying nothing of the five per cent. more wine saved.

WM. G. WENDELL & CO.,  
No. 321 California Street, San Francisco

## THOROUGHbred FOWLS, BRONZE TURKEYS, Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS Eggs Shipped to  
EGGS, \$6.50 per doz. Any part of the  
BRAHMAS } \$5.00 Coast to Hatch After Arrival.  
LEGHORNS }

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.  
Also, Thoroughbred Southdown Sheep.

25 FANCY CARDS, all styles, with name, 10c.; 25 Morning Glory Cards, with name, 20c.; 20 fancy Scroll Cards, all styles, no name, 10c., postpaid. J. E. HUSTED, Napa, Co. N. Y.





Volume XIII.]

SAN FRANCISCO, SATURDAY, JUNE 30, 1877.

[Number 26.]

### The Fourth of July.

We enter this year upon the second century of the Fourth of July. Thus the years are carrying us farther and farther away from the old heroic time when brave men unflinchingly placed their names to a document which would have cost them their lives had the oppressors triumphed, but which, as the right prevailed, gave them undying honor. We would not lose sight of these early, noble deeds. We would not forget that the Fourth of July is not a mere opportunity for fun and fireworks, but that the prototype of the day we celebrate was indeed the birthday of the nation.

To aid the thought in the recollection of the incidents of the brave Declaration, we give an engraving of the exterior and interior of the historic building which has been often called the "Cradle of Liberty." It is old Independence hall, in Philadelphia, of which and the deeds done therein the poet Taylor has written these stirring lines:

A century ago this royal Duke of Years,  
A hush fell down on Independence hall,  
No rounded phrase, no ringing roll of cheers,  
No clash of voices and no sound of feet,  
But whist as spiders on a cob-webbed wall  
Festooned with fabrics from their filmy loom,  
But whist as steals a mignonette perfume,  
But whist as surges when two shadows meet.  
The brown fly's drone that boomed around the room  
Like dream of drummer in a distant street,  
The rasping of a pen—and these were all  
But waiting breaths on any ear to fall.  
That pen was dipped in honor, not in ink,  
The men that used it stood on glory's brink.  
Name after name went down upon the roll  
And lent at last the declaration soul!  
Each signed the deed and passed the pen along,  
That bound for good and all three millions strong!  
That letter stands, I care not what you bring,  
Of all mere human words my Lord the King!

Within two thousand years one other thing  
Alone has roused the drowsy world and wrought  
A revolution grand in human thought,  
Endowed the truth with most puissant wing  
And Right with Might; the Sermon on the Mount,  
The Declaration scroll—the twain complete the count!

A painting hung behind the Speaker's chair  
But not more silent than the signers there.  
Then Franklin rose, that grand old king of types,  
Of fame enduring as the Stars and Stripes,  
And said: "I knew not what the artist meant,  
A morning sunrise or an evening set.  
I could not tell which way the shadows went—  
The deed we do this day has strangely lent  
A sight upon the scene no painter lent,  
See where the beams of morning westward run!  
The sun is ours! It is the rising sun!"

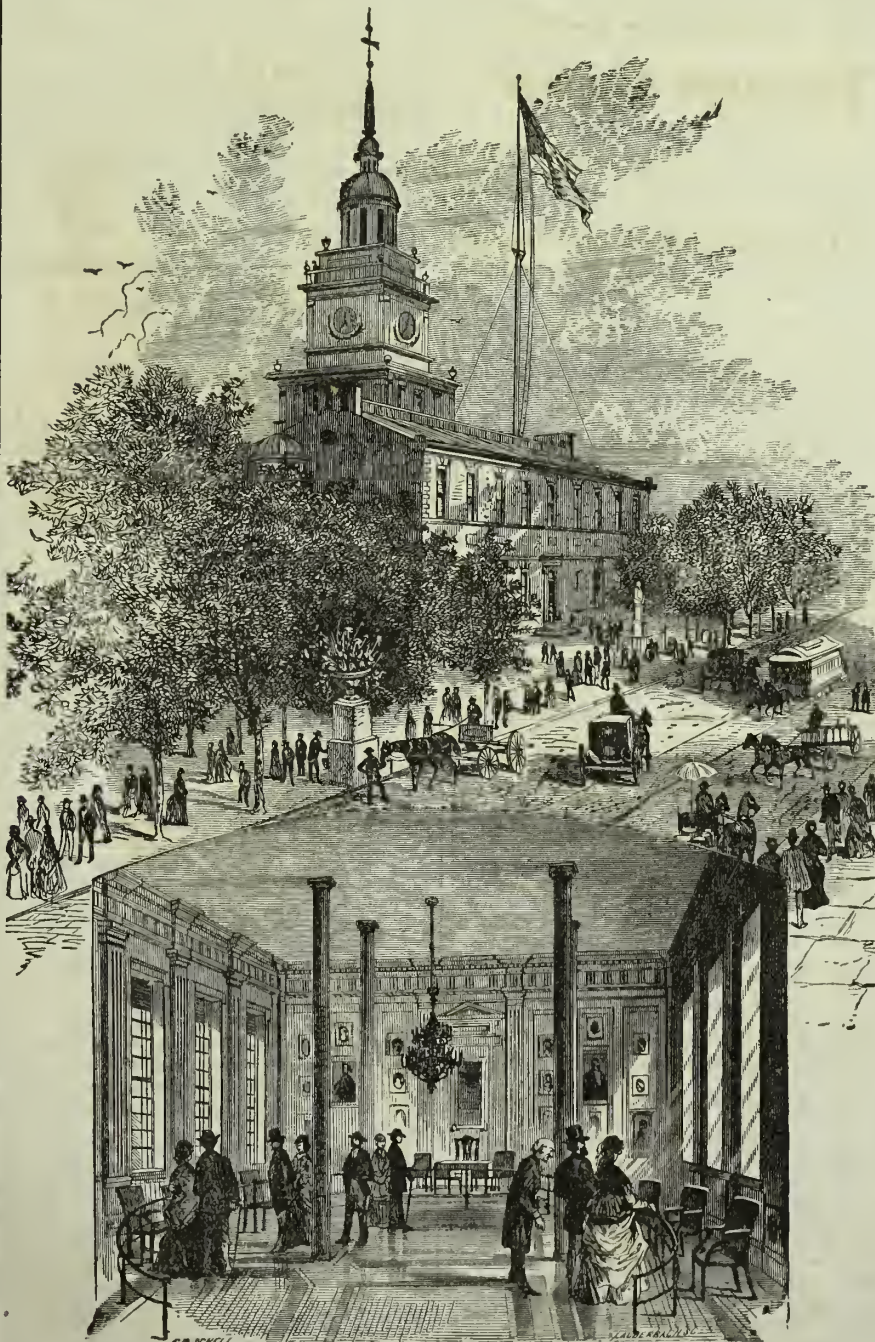
Independence hall is preserved with jealous care, so that coming generations may share with us the inspiration of entering its portals and recalling the old scenes. Interest centers on the building and its contents, and in connection with the engraving we give the following description from the pen of a recent visitor: The east hall has a goodly number of historic relics, most worthy of note among which is the famous old Liberty bell, which rang out melodies for the sons and daughters of the new land a hundred years ago, but now shows the fingers of time in a huge fissure. Here is the old front door belonging to the Chew mansion, which was battered and splintered at the siege of Germantown. Dresses of "ye olden time" are abundant, showing that loving descendants of the men and women of those days have guarded them carefully. A piece of one of "Lady Washington's" dresses is a flowered cambric—quite like the gay chintz so much in vogue for lounge coverings now. Here are portraits of all the signers of the Declaration, officers of the Continental army and members of the first Congress. The Georges are there, too. Is it prejudice, or do their faces look out from the canvas crafty, sensual and selfish? Jars and chairs and tables used by Gen. Washington, have a charm about them from the thought that they have been part and parcel of his plain household—a thought which redeems their excessive homeliness.

The original Declaration of Independence, with paper brown with age, ink faded and dim, has a mysterious awe about its immortal wording. Close by is the veritable inkstand into which those grand men dipped their quills, one after the other, as they traced those names which the tongue of history shall ever be proud to repeat. The inkstand is heavy and cumbersome, is made of solid silver, and bears the

maker's name—Philip Syng, 1752. The first draft of the Constitution hangs in a frame, a conspicuous object of attention.

There are several portraits of Washington, taken at different ages. William Penn is here, in company with his second wife—a wholesome, plain, sensible sort of a lady. The face of Francis Key, the author of the Star Spangled Banner, is sparkling and refined. Marquis de Lafayette, the noble Frenchman, is gentle, courteous and soldierly. In this hall, in a case, are

half-naked boys and girls, with their symmetrical limbs, are amusing themselves near. The figures are clear, bold and natural. Here, too, are many original letters of Benjamin Franklin, written in the troublous days of our country, when his heart was full of forebodings lest her leaders went not right. How his great soul would be troubled could he have a chance to observe them now! With a long look at the many treasures this room contains, I cross the hall to a room filled with old portraits of the



INDEPENDENCE HALL, PHILADELPHIA.

numerous articles of the toilet—dresses, stomachers, towels, stockings, high-heeled slippers, laces, over-dresses, ribbons, etc., all of great antiquity; also table articles, such as spoons, knives and forks, sugar bowls and similar things.

Here is the celebrated painting by Benjamin West, depicting Penn's treaty with the Indians. The subject is true to life. In the shade of the lofty woods, the Indians and whites have gathered to listen to their "pale brother," as he stands there, earnestly setting forth the conditions of the treaty. The old chiefs are gravely listening, while their eyes are turned calmly upon him, as he stands there, surrounded by his friends. The women of the tribe have drawn near to hear the "big talk," while the

prominent men of those days; look at some old, stiff and uninviting chairs and settees, and ascend to the two halls above, in which the present city council hold their sessions. Both these rooms are fitted up in modern style, with rows of desks and a few easy chairs. It was formerly one room, known as the banquet hall—where, on all state occasions, the festivals were held. Here Washington delivered his farewell address to the Continental Congress, whose deliberations took place in this hall. There is a splendid painting representing him in the act of making this last speech, which hangs over the very spot where he stood. The city of Philadelphia paid \$30,000 for it, and they claim that it is the most accurate likeness of him in existence.

### The Wheat Trade.

Just as our week closes there comes an improvement in the Liverpool wheat market, which gives a better tone to our local trade. The cable now reports the price at 12s and 12s 4d for average California, 12s 5d and 12s 10d for club. These figures are equivalent to \$2.25 to \$2.45 per cwt. for wheat in this market, after making all customary allowances for cost of transportation and commissions. The latest sale of shipping wheat of which we are informed was 6,000 sacks at \$2.17½; thus it appears that our shippers are only bidding figures a good deal lower than the equivalent of the Liverpool price. It is quite probable that while they do this they will find it difficult to get possession of very much grain, for our producers are impressed with the idea that the future chances of the market are in their favor, and will store the grain before making concessions. We hear already that more warehouse room will be required in some of the counties, because of the determination of farmers to test the future of the market.

These being the facts, we propose to give our readers the benefit of the latest English opinions on the wheat outlook. The Mark Lane report by telegraph will be found in its usual place in our market columns. From our files of English exchanges by mail we have advices down to the first week in June. The tone of them seems to be one of harmony as regards the prospect for the whole of the coming season. The facts and arguments which strengthen English producers' anticipations can have equal weight in tributary fields. Concerning the sharp turns which are likely to come upon the market because of the total absence of amounts held back to balance the trade, we find the following in the London Farmer: "A letter from Liverpool, *a propos* of Friday's recovery, says: 'It is no wonder that the declining tendency of the wheat market has been arrested, and has given place to a firmer and more confident feeling, as \* \* \* there can be no doubt whatever that we shall approach harvest with a supply and demand more critically balanced than it has been since 1867, and that the wheat markets of Europe will be extremely sensitive to weather influences.' These remarks are in strict accordance with the view of the situation taken in these columns at the commencement of the season, and subsequently expressed at the outbreak of the Russo-Turkish war."

The London Economist finds in this spring's rise in wheat prices a surety of returning prosperity to the home field. We read as follows: "With a short home crop and diminished foreign supplies, we held that there was no chance of any decline of prices and every probability of an increase, while in addition there was the contingency of war to take into account, which, if it should occur, would cause an enormous increase in the value of grain. It has happened so. Wheat under the legitimate influence of supply, crept up as we predicted, 10s per quarter during the season, amply repaying the farmer for holding his wheat, and, in addition, war has become an existing fact, and wheat has reached 70s per quarter. Present prices will, therefore, put a large sum of money over and above the amount expected into the hands of the wheat grower, and will be a boon to a branch of agriculture that has long been a suffering interest. For some years past the times have been cloudy and wheat growing, on lands where it was formerly held to be the paying crop, has been in a majority of years unprofitable."

The Mark Lane Express report in our market columns notes the fact that supplies are coming forward in unusual quantities from places thought to be but poorly supplied. This is but what might be expected when a rapid advance in price occurs. The result will be a good one, for it will reduce the stocks of old wheat to the lowest possible ebb and thus clear the way for the new crop.

A VERY destructive fire occurred at Marblehead, Mass., on Monday. Nearly the entire business portion of the town was destroyed. Loss about \$500,000.



## CORRESPONDENCE.

### Mendocino County Hop Growing.

EDITORS PRESS:—The grain crop in this county is much better than was anticipated some time ago, and I believe early grain will be above an average yield. The hay crop is also good. I have different reports on hops from different growers; some report good, some fair, and some report a very bad stand. So I presume there will be a fair average crop in comparison to last year.

Much has been said and many articles have appeared in newspapers and circulars in relation to hops, both in regard to price and production as well as qualities and modes of preparing for the market. Not many years ago a strong prejudice was entertained against California hops in the East, but as soon as a comparison began to be instituted between those raised in California and those of Eastern States, that prejudice fell and great demands were made in California for hops. In 1875 it seems English and German brewers were taking up all the hops of American growth they could get, and just as California hops superseded those of the East so are those of American growth taking the place of foreign. But last year the dealers reported German brewers in Europe as disliking our hops grown here in California. England kept up some trade; still, however, finding fault. It seems the complaint was caused by the growers themselves in picking and preparing for market. This shows the great necessity for care and a scientific knowledge of growing and preparing hops even from the time the roots are planted up to the time the hops go into the bale.

Mendocino county, or, more strictly speaking, these valleys of Russian river, have a climate well adapted to hop culture. There being no fogs to spot or rust the hops, all that is wanting to produce the best hops the State affords, is that the growers here exercise care in picking and drying; not crowd too many hops in their dry kilns at one time; nor too many in bulk on the cooling room floors.

Have the cooling room well ventilated and leave the hops to cure well if possible before baling.

Always pick at the proper time, not too green nor too ripe; pick clean of leaves or stems.

Never leave hops in the box or pile at noon to remain until the evening batch is taken up, lest the heat changes them to a dark color.

In sacking, do not press too many green hops in the sacks with your hands to bruise them while taking from the field, nor pile the sacks of hops in heaps at the dry kiln. Always set them up on end until ready for the dry-house floor, and when dry avoid stirring or breaking as much as possible, for it causes the lupulin to drop from the hop, which is the active principle.

There are different varieties to select plants from, to wit: Saaz, Bohemia; Spalt, Bavaria; and Goldings, England.

Statistics show not less than 1,351 acres of hops in seven counties of this State. Mendocino has 450 acres, more or less, being second to Sacramento.

Experiments have been made by old reliable growers as to shrinkage of the hops in drying. The loss varies according to the ripeness of the hops from two-thirds to three-fourths inches; in some cases a fraction over or near four-fifths. Ten years ago I obtained plants from a gentleman in Sacramento county. These I have planted and cultivated ever since, only replanting the missing hills each year.

J. H. BURKE.

Ukiah, Cal., June 23d.

[Our correspondent's notes are of much interest. His appeal to California hop growers to handle their product properly, because the price depends upon it, is of the chief importance. What have our hop-growing readers in other counties to say for themselves and their hops?—EDS. PRESS.]

### Alkali Soils and Drainage.

EDITORS PRESS:—In regard to the points made on this subject by Mr. Olden in your last issue, I regret that I should not have expressed myself with sufficient clearness concerning the uses of drainage and chemical neutralization, respectively, in the reclamation of alkaline soils. That drainage is the universal remedy, wherever practicable, is self evident; and I have recommended it, and known it to have been used successfully in hundreds of cases that have come before me in the Southern States, where these soils occur on uplands as well as in the low country. Yet it ordinarily takes several seasons to leach out all the alkali, and time and money is saved by the partial use of cheap neutralizers, such as lime or gypsum, according to the nature of the salts.

But when, as I am informed is the case in the Anaheim region under discussion, "permanent water exists at the depth of from three to four feet," (I quote the words of the committee transmitting the specimen examined,) relief by drain-

age is almost out of the question. No matter how many ditches you cut, or underdrains you lay, you cannot lower the general water table sufficiently to get the surface out of reach of the ascent of the alkali. Nor, on the other hand, can soils in which water lies at the depth of four feet, ordinarily be considered as suffering from excess of water. They certainly do not need irrigation; and I question whether such washing-out of the alkali as can, under these circumstances, be effected by irrigation (unless continued through the dry seasons) will pay better, or in the end cost less, than the remedies of deep tillage and neutralization recommended by me, on the basis of the information I have regarding the state of the water table, and in view of the porous nature of the soil.

Underdrainage is the natural and sufficient remedy for this, as well as for many others of the ills that soils are heir to. But it is a costly improvement, and I think it would be well to count the cost, especially as compared to that of habitual deep tillage, before recommending it for immediate introduction in regions where, from the lay of the land, it can produce but little effect.

The Westminster alkali soil sent me differs from most others on the coast in the very small amount of salts, whose extreme causticity alone can render them injurious to vegetation. In this case therefore the conversion of the saleratus and sal soda into inert glauber's salt is very likely to remove all trouble. But the same would not hold true of soils more heavily charged; although, I repeat, experience has shown in very many cases a great saving of time and money by using the neutralizers in aid of drainage and deep tillage. These are local questions, to be determined only by local experiment. Let the question be fairly tested by actual trial—that is both the scientific and the common-sense way of dealing with such problems.

E. W. HILGARD.

University of California, June 25th, 1877.

### Santa Cruz County.

EDITORS PRESS:—The amount of land cultivated in Santa Cruz county, as taken from the Assessor's books for 1875 and 1876, was in round numbers about 20,000 acres. The land devoted to the cereals comprised about 13,000 of these acres. Hay, corn, beans, and sugar beets occupied the largest portion of the remaining acres. The land cultivated for the year 1877 will not vary materially from the amount stated for the previous years. Of this amount, probably 12,000 acres lies in what is called the Pajaro valley. The remaining portion in the Santa Cruz valley and those other valleys and higher lands, comprising the northern and mountainous portions of this county. The Pajaro is supposed to comprise all the territory within the county limits east of the waters of the Aptos creek, and the cultivated lands of this valley are supposed to be the chief and best agricultural lands of the county. Taking 12,000 as the basis of our estimate, 2,000 acres will probably cover the acreage of grain cut for hay, and all the corn, beans, potatoes and beets planted within the valley—leaving 10,000 acres to represent the different grains yet to be harvested. From a careful observation and inquiry in regard to the probable average yield of these grains per acre, it is thought that six to eight sacks will safely cover the estimate, giving for the entire valley from 60,000 to 70,000 sacks as the probable yield. It is true there are lands which will produce from 35 to 40 sacks per acre this season—being a full, average crop in an ordinarily good year. But this yield is only on land cultivated in corn, potatoes and pumpkins the last year, while the land cropped in beans or grain will yield only from none to three and four sacks, and this the larger portion of the land. The grain sown in the other parts of the county before named is mostly cut for hay, yielding from two to four tons per acre. In some fields in this section the yield will be good in wheat, especially along the coast. But there will not be harvested here enough to supply the home consumption. To sum up the grain yield, there will not be much over a one-quarter crop, taking the average of all the acres which will be cut for grain.

Corn, where there is a stand, looks quite well at the present time. But there is a small acreage planted compared with usual years. Beans, but few planted, and not promising well. Potatoes, about 600 acres planted, with the present prospect of half a crop, although it is quite too early to make safe estimates of yield. Sugar beets, about 300 acres planted in Pajaro valley, outside those planted on the San Andreas ranch, the acreage of which and of their condition I am not informed. The beets comprised within the 300 acres are doing well, and no doubt will prove a profitable crop, as the dryness of the season will prevent those enormous growths which have in former years rendered the beets woolly and poor in saccharine matter.

Fruit in most parts of this county is a partial failure. Stone fruits of all kinds are almost an entire failure, especially plums and prunes. The only considerable exception to this statement exists in the peach orchards, on the summit of the Santa Cruz mountains, on the fruit ranch of J. B. Bnrrill, Esq. But even here the prunes and plums fail. The peaches, however, are a full crop. Apples will not average more than a third to half a crop in this county. The same difficulty experienced this year in all parts

of the State in regard to fruit trees, and described in the columns of the RURAL PRESS, exists in this county. Many trees are not yet leafed out, while others have half-grown fruit on their lower limbs, while the upper portions are just both blossoming and leafing out, the extreme tops seeming to be quite dead. Many trees have already died outright. The grape is injured in many portions of the county. Some varieties are an entire failure, while others will not produce more than a third or half a crop. Some vine dressers attribute this blasting to rain and frost, while others think that it is produced by some unknown disease of the foliage or of the fruit stems. I would add that a part of my grain statement includes that portion of Monterey county lying in the Pajaro valley, as well as that of Santa Cruz. I may find, as the season advances, it necessary to correct some statements made above. These corrections shall be duly made, and any new points which may present themselves shall also be given.

C. N. W.

Watsonville, June 24th.

### Harvest Notes from Napa County.

EDITORS PRESS:—Harvesting has now commenced in Berryessa valley, and the yield will be much better than was expected. Some of the grain is very short and difficult to reap, but the grain is nice, large, and plump.

In Pope valley the headers are yet in the barley fields. All kinds of grain looks well and promises Pope valley farmers a good yield. Chiles and Capell valleys, nothing but barley is yet in the stack. Wheat will not be cut yet for some ten days. The crops look well in each valley.

Farmers are now commencing to prospect about territory to farm upon next year. The prospect of a good price for wheat he has this year makes him eager to double team and work up on a much larger scale, and the cry comes from every quarter, have you any land to lease or rent? Indeed, Napa county is becoming such a favorable region for farming I think it will not be a great while before the last quarter section of chaparral will be cleared off and converted into a chicken ranch.

A. U. S.

Capell, June 17th.

## HORTICULTURE.

### The Fruit Tree Phenomena.

EDITORS PRESS:—In your last PRESS I observe several articles on the behavior of fruit trees in southern California. I have seen several strange things on my grounds. I have a row of yellow Newtown Pippin in my orchard that was bare of leaves as in December, except the half of one tree. I was burning some brush by the side of it in January last, and the wind changed after the fire started so as to draw the flames into the tree. I had some fears at the time that it would injure the tree, but it did not. The half next to the fire started in April, leafed out nicely, and had apples third grown, while the other half was dormant, as was the balance of the row until the heated term that commenced June 8th. Since that all apple trees have started.

My budded peaches are all dormant except some on the north side of a row of blue gums. The gums are about 60 feet high. The peach trees are 20 feet apart, running north from the gums. The first two trees leafed out at the regular time, except about two feet on top. They are full of fruit. The third has leaves about third up. The balance of the row north are dormant, also south of the gum trees, all being of the same variety. The neectarine acts the same as the peach. With the peach it seems to be confined to the budded ones. The seedlings are doing well and fruiting full. Some entertain fears that those trees which are dormant now will die; but mine acted the same in 1871, but came out in leaf in June and I didn't lose any.

Can you or any of your readers give the cause why a budded peach will lie dormant for three months, and a seedling by the side of it will leaf out and fruit nicely? And why a bud that should start in April will lie dormant until June, then start and make a good growth? And why a bud taken from seedling peaches will lie dormant the same as one taken from budded ones?

JOSEPH SEXTON.

Golcta, Santa Barbara Co., June 19th.

Fruit Trees at Riverside.

EDITORS PRESS:—Our trees have shown the same behavior as those at Santa Barbara. Plum trees, however, are beginning to leaf, owing perhaps to some foggy weather we have had recently, in addition to the showers of May 28th and 29th, for I think O. N. Cadwell's idea reasonable that the trees need wetting as well as the roots. Peach trees are beginning to leaf out even on the extreme limbs, but whether they will blossom any more this season I am doubtful. Tardy apple trees are beginning to blossom. I do not think the cause of the general delay was altogether the dryness of the ground, for this was not universal here. Have not electrical conditions peculiar to the past season had to do with the paralytic state of our trees? At Santa Ana our seedling peaches

promise well. We had more north wind than usual during the winter—enough to sicken human beings and perhaps trees. We had less rain, of course. Our grapevines started well and promise abundant fruit.

J. HALL.

Riverside, Cal., June 21st.

(The phenomena which our correspondents describe still invite the consideration of the wise and the observing.—EDS. PRESS.)

FLORIDA PINK-APPLES.—J. E. Borden writes to the *Florida Agriculturist* as follows: The pine-apple is propagated from sprouts taken from the ripe fruit and snickers from the stalk, and is generally planted in the spring, but will do at any time when the fruit is ripe. The land should be thoroughly broken up both ways, so that the soil will be well pulverized. Then lay off the rows four feet one way, and cross the rows two and one-half feet; plant in the checks. The rows must be wide one way so that they can be plowed after the plants are growing, but should be shallow. The sand must be washed out of the buds whenever the rain beats it in, as it checks the growth. It can be washed out by pouring water in the bud. The land must be kept clean of weeds and grass. The Sugar-loaf pine is the largest and best variety to plant. They grow well on the lakes, but in a severe winter like the last it would be best to cover them. In two years one acre in pine-apples, well cultivated, will bear 4,500 apples, worth \$1,000, and will continue to produce four or five years. The fruit is much more delicious when allowed to ripen on the stalk than it is when gathered before it is ripe, like the pines we get from the West Indies. Any person, with a little trouble, can raise enough for family use. Capt. Haines has raised them successfully on Lake Harris, and they are doing well on Lake Griffin.

FIGS.—We came across an old work, says the *Florida Agriculturist*, from which we take the following extract, as it may be of service to our fig growers: The best soil for figs is a strongish hazel loam on a dry bottom, but they thrive in any good garden soil. Much depends on pruning; the young shoots produced in the spring do not ripen fruit, but if these shoots be stopped by breaking off the point as soon as they are from four to six inches long, they will produce other shoots which will bear plentifully, and ripen fruit in the autumn of the next year. So that keeping the tree free from old branches, and stopping the spring shoots every year about midsummer, will keep a constant supply of bearing wood to be depended on. Large fig trees on walls managed in this manner are well worth defending from frost by woolen netting, or some other temporary curtain, to be let down or put up when necessary. All the fruit produced on the spring shoots, and which never ripen, should be pulled off the tree in September, causing very frequently other young fruit to come forth on one or both sides of the place where the first grew. This second birth are sure to ripen in the following summer.

## ARBORICULTURE.

### Durability of Timber.

The durability of timber is almost incredible. The following are a few examples for illustration, selected for the *Railway Age*, from various sources, and vouched for by scientific men.

The piles of a bridge built by Trajan, after having been driven more than 1,600 years, were found to be petrified four inches, the rest of the wood being in its ordinary condition.

The elm piles under the piers of London bridge have been in use more than 700 years, and are not yet materially decayed.

Beneath the foundation of Savoy place, London, oak, elm, beech and chestnut piles and planks were found in a state of perfect preservation, after having been there for 650 years.

While taking down the old walls of Tunbridge castle, Kent, there was found in the middle of a thick stone wall a timber curb, which had been enclosed for 700 years.

Some timber of an old bridge was discovered while digging for the foundations of a house at Ditton park, Windsor, which ancient records incline us to believe were placed there prior to the year 1396.

The durability of timber out of ground is even greater still. The roof of the basilica of St. Paul, at Rome, was framed in the year 816, and now, after more than 1,000 years, it is still sound, and the original cypress-wood doors of the same building, after being in use more than 600 years, were, when replaced by others of brass, perfectly free from rot or decay, the wood retaining its original odor. The timber dome of St. Mark, at Venice, is still good, though more than 850 years old. The roof of the Jacobin convent, at Paris, which is of fir, was executed more than 450 years ago.

The age of our country's settlement does not enable us to refer to examples of like antiquity; but no good reason appears to exist why timber may not be as durable in America as in Europe. Many old white-pine cornices here exist, which, having been kept properly painted, have been exposed to the storms of more than 150 years. The wood is still sound, and the arisars are as good as when they were made; while freestone, in the same neighborhood, has decayed badly in less than 50 years.



## THE STABLE.

### Breeding Horses for the Market.

The New York Farmers' Club has continued to listen to the addresses on the horse question delivered by gentlemen who were invited to the task by the club. We propose to take a few paragraphs from the address of H. G. Crickmore, of the New York *World*. He said:

"Breeding for profit," is a subject to which I think every farmer in the United States should give most careful and thoughtful attention, more especially that class owning or working a farm for which is required the labor of four, six or eight horses, half of which should be mares. In the little travel I have had during the last few years, I have often noticed that very many farmers possess fine-looking, big-bodied mares, many perhaps a trifle coarse to critical eyes, but not one of which could not, with a little care and some judgment, be made to produce a good percentage on the capital invested in her without any great loss of time as far as usefulness is concerned.

The natural tendency of the wealthy classes of our large cities since the war has been for show and display in horses and equipages. The light skeleton wagon is rapidly giving way to the heavy phaetons and dog-carts for gentlemen and to stylish carriages and coupes for ladies. Already we have a four-in-hand club, one member of which followed the English style of driving a public route, nearly the whole summer season, with a fair promise that he will do the same this summer, with more or less opposition from others anxious to shine in the same sphere. Now, while these may be luxuries that our fore-fathers would scarcely think conducive to a republican form of government, it is a state of affairs that every farmer possessing the means should assist all in his power, for it not only means horseflesh, but it means an increased demand for hay, oats, corn and other products of the earth.

Of course, this is no defense of the system from a political standpoint. All such aristocratic notions mean, of course, a centralization of money, to the advantage of the rich and to the injury of the poor. But that the fact exists there can be no denial, and that it will continue to exist to the end of time is nearly as certain. Consequently, it behooves those in a position to benefit by such ideas to make the most of the fashion by raising horses fit for the work, and he who excels will be the one to make the most money by it.

Another feature of this breeding interest should not be overlooked, and that is the chances this country affords for being the basis of supplies for European governments, to obtain horses both for cavalry and artillery purposes. Horses have recently been shipped from Canada to England for domestic purposes. They found a ready sale, and were much admired; and no longer ago than last autumn that distinguished young statesman and turfite, Lord Rosebery, said in my presence that he thought the domestic horses of the United States were among the best that he had ever seen, and that he thought eventually there would be a great demand for them. This must be taken in connection with the fact that he was one of the original movers for the investigation as to the deterioration of horses in Great Britain, and wrote the report made to the House of Lords on the subject. I know him to be an admirer of the products and industries of the United States, and that the country has in him a friend who will not hesitate a moment to call the government's attention to the markets of the United States, should England ever need horseflesh for her cavalry, artillery or transportation corps. That the continental governments may eventually be compelled to look to us for the same material of war is not unlikely, although, as a whole, they are at the present time better supplied with horses than England, having given due attention to the subject of breeding horses some years ago.

Having thus endeavored to show that there is a market for our horses, the next is to show how the market can be supplied, and in this respect I must crave your attention for a moment and travel directly from the subject matter of this paper. As a turf reporter it has long seemed to me that nearly all the State and county agricultural societies have been somewhat neglectful of their true interests, and instead of encouraging the breeding of useful animals in their immediate district by offering encouraging premiums for young stock, brood mares and stallions, they have offered a few cheap medals with little or no attention or accommodation to exhibitors or the exhibited. At the same time they have paid too much attention to the trotting of a lot of worthless geldings, which for any real use were not worth their shoes. Instead of risking so much money on "exhibitions of speed," the societies should buy a half or quarter Hambletonian stallion, or a thoroughbred stallion—the get of Lexington, Australian, or in fact any well-bred stallion—possessing bone and substance, with good trotting action if a trotter—a horse with intelligence that would at once win the eye, and if necessary pass the inspection by a German or Russian government inspector. Any association adopting such a course, with the presumption that the horse would be in the hands of an honest, capable man devoted to his business,

would in a few years introduce a new source of wealth to their members, instead of their mares, as is now often the case, dropping worthless colts and fillies, possessing neither shape nor strength, and often inheriting diseases rendering them at five years old only fit to drag out a miserable existence in a brick yard. Such an association would accomplish at least one object for which it was organized. Not only would the members of the association benefit by the services of their stallion, but new interests would spring up in the vicinity. Every breeder would naturally endeavor to show the best stock, and in course of time "horse fairs" would become one of our most interesting spring and autumn holidays. Buyers would be attracted to the neighborhoods that excelled in any special breeds. Some counties would excel in carriage horses; others in saddle-horses. One would become famous for its chestnuts; another for hays, blacks or grays, as Lincolnshire in England is famous for its roans.

## THE STOCK YARD.

### The Herefords in Colorado.

We notice that Colorado breeders are paying due attention to the Hereford, the great competitor of the Short Horn. As we have had little to say of late of this breed, we quote an article prepared for the *Colorado Farmer* by T. L. Miller. His article is in part local, concerning the introduction of the stock into Colorado, and general, on the qualities of the breed: The Hereford cattle have stood in the English market for 100 years as the best cattle, commanding the highest prices. Yotatt says of them, they fatten speedily at an early age, and few cattle are more highly prized in English markets. At the Smithfield show they have taken more premiums than any other breed. They show the best weight and highest quality.

The Hereford steer stands pre-eminently above all other beef steers. The object of the Hereford breeder has been to produce a steer that should excel. The trade that has now opened with England for beef, with the new grazing ranges of the West that have lately been opened, have perfected the Herefords' opportunity in this country.

They are highly prized in the English markets. They are especially adapted to the grazing of the vast plains of the West, being the best grazing cattle in the world. For several years Mr. Church, near Denver, Colorado, has bred and shipped Hereford grade steers. One lot of steers was sold in Buffalo, N. Y., in the fall of 1874, at seven cents, live weight, weighing 1,250 pounds, at three years old, and never having been fed. At the time these steers were sold the best stall-fed steers were worth seven to seven and one-half cents in Chicago. Mr. Church and others have shipped grade Herefords from Colorado, and they have brought from one cent to one and one-half cents per pound more than other steers of the same age, and weighed from 100 to 150 pounds more per carcass. The three-year-old grade Hereford from the plains will make, on a fair range, over 1,250 pounds. The four-year-olds will, under same circumstances, average 1,400, and will be on the Chicago market what are termed choice beefs.

The Hereford, as an improver of the native stock as found in Colorado and Texas, excels all other breeds in stamping his own character upon his produce—producing a close, compact, smooth steer, uniform in appearance, perfecting most thoroughly on the range, and carrying his meat to the market with less loss, and in better condition, than any other.

Chicago is the leading place for beef. In 1857, there were received at Chicago 48,524 head. In 1876, 1,098,206, with a range of prices from two and one-half cents to seven cents. The Texas and Colorado cattle comprise about one-third of the receipts; ranging in price from two and one-half cents to four cents—the larger portion from two and one-half cents to three cents—and average weight rather under than over 1,000 pounds, making the average price under \$30. Estimating the number at 300,000 at \$30, is \$9,000,000. If the average weights may be raised to 1,250 pounds, and the average price to three and one-half cents and four and one-half cents, the value of 300,000 steers would be \$15,000,000, a gain of \$6,000,000, or over 66 per cent. Hereford grade steers were sold the last season, at the Union stock yards, Chicago, from the range at four and one-half cents.

The Hereford as a grazer is admitted to stand in the front rank of beef cattle; it is admitted that he is hardy and of fine quality. One of the large demands at Chicago is for what is termed "stockers"—cattle to be fed at the distilleries and by the farmer. They meet this want. In Herefordshire, England, the home of the Herefords, very few of the cattle are fed—Herefordshire being more of a breeding than a feeding country. Mr. Duckham says, there is no finer sight for the admirer of cattle than the annual October fair at Hereford, which takes place on the third Wednesday and preceding day of that month, where several thousand steers pass from their breeders to the graziers. Their present uniform appearance cannot fail to impress those who visit that fair for the first time, with a degree of surprise and admiration, in their walk through the streets of the city, to see line after line of them, all displaying a sim-

ilarity of character, and at once claiming each other as one of the family. Mr. Allen, publisher of the American Short Horn Herd Book and of Allen's "American Cattle," says of the Herefords: As a beef animal he is superior; they feed kindly, are thrifty in growth, and mature early. He says, we might show recorded tables of their trials in England with the Short Horns, and the relative profits of their feeding for market, in which the Herefords gained an advantage, on the score of economy. He says of the Short Horns:

There is a question, however, with him who breeds or grazes the Short Horn that must be considered, notwithstanding his aptitude for early maturity. They must have abundant feed and good pasturage. Broken lands with short grasses do not so well suit them. We have immense tracts of lean and hungry soils, with scanty herbage, where we would not recommend the Short Horn to go.

The weights in England of Hereford steers may be stated at about the following: For steers under two years six months, from 1,500 to 1,800 pounds; steers under three years three months, from 1,800 to 2,200 pounds; steers over three years three months, from 2,300 to 2,800 pounds. The Hereford, then, stands unrivaled as a grazing and feeding steer; and, when generally adopted into the herds of Texas, Colorado, and New Mexico, Wyoming and Montana, the plains will raise and ship steers that will fill the entire demand of the Eastern markets.

## THE VINEYARD.

### Shipping Wine.

The wine market was never so dull as now, and the wine made in Sonoma county was never so good as it now is. Many foreign wine varieties of grapes each year come into bearing. The product of these vines if manufactured and kept separate equals in flavor and aroma the best foreign varieties. Of this there is no question. The claret wine made of the Zinfandel grape is light, highly flavored with an agreeable bouquet peculiar to the grape. It is entirely free of the rough taste which is a peculiarity of wine made from the Mission grape. This unpleasant roughness first gave our wine a bad name, from which it has not yet recovered. It has been proven beyond question that with the proper varieties of grape a wine equal to any in the world may be produced in Sonoma county. Having satisfactorily determined this point, another difficulty meets the vine grower, and that is, how he can ship his wine to the Eastern States and to foreign markets. Repeated experiments have proven that in shipping by sea or by rail our delicate wine, from some chemical change which takes place in transit, loses its flavor and bouquet; in fact, in some instances it entirely changes its character. A large vine grower of this county took with him to the East a cask of Zinfandel wine and tested this matter thoroughly. He found on opening the cask that the wine had altered its character to such a degree that, could such a thing have been possible, he would have thought that it had been changed on him. Others have had a similar experience, and we are informed that for a long time the same trouble was experienced in shipping French wines. Ordinary wines only could be shipped without injury. By some means this difficulty was overcome by the foreign wine makers or merchants. A leading wine manufacturer in Sonoma is experimenting in this direction. He has a process for instantaneously heating and cooling his wine, which, it is claimed, destroys all germs held in the wine, producing the best authorities think, the change which takes place in shipping. The wine is heated and cooled in an instant, avoiding the objectionable cooked taste which comes from slow heating. It is further claimed for this process that it thoroughly cures the wine, which will keep sweet without the trouble and expense required to keep the casks filled, in wine not treated by the process described. We shall watch the result of the experiment with interest. If the wine of Sonoma can be put upon the Eastern or foreign market in the same condition and with the same flavor that it leaves the cellars of Sonoma, it would command double the price now paid, and find a ready market for all that could be shipped.—*Sonoma Democrat*.

THE SPANISH RAISIN CROP OF 1877.—Prices of Spanish raisins in New York during the past year ruled unusually low in consequence of the large crop and unprecedented importations. This had much to do with the low rates realized and the difficulty found in disposing of the California crop. According to present advices it seems that there is reason for expecting another season of low prices. The following letter to the *American Grocer*, New York, will be of interest to producers:

As it may be of interest to you, our reports about the present course of our vines, we beg to inform you that, notwithstanding the serious drought experienced since last November, the prospects of the coming crop of raisins seems to be prosperous. Abundant and thriving grapes, at present in blossom, will soon set in grain under a favorable dry weather, which, on the other hand, has spoiled all the other crops. We doubt not that under such good auspices, yet deprived of rain, the vines will season the fruit, as old experience has given us the evidence in similar instances. We are therefore inclined to believe that the crop will result in a very large one, and if the hard circumstances through which this business has passed by, have any weight or influence on the mind of speculators, low rates must be anticipated.—V. ROMANY & SONS, Denia, Spain.

## THE DAIRY.

### Dairying and Fertility.

Prof. E. W. Stewart, at the spring convention of the American Dairymen's Association in Canada, read a paper on the above subject, of which we subjoin a synopsis. The speaker showed the relation of the manufacture of butter and cheese to the fattening of stock, and the sale of milk to the richness of fertility of the soil. He said that if the product of the food eaten by the cow is all returned to the soil, it will become more fertile than before; but if the product is largely carried off, the soil will become impoverished to that extent. A thousand pounds of milk would contain six pounds of ash, which is composed of phosphate of lime, carbonate of lime, soda, sulphur, magnesia, etc. A cow, therefore, that gives 4,000 pounds of milk while in pasture, would remove from the soil 24 pounds of these mineral constituents. If a steer is fattened during the same time, and gains in live weight 300 pounds, his flesh so put on will contain two per cent. of ash, or six pounds of mineral matter—only one-fourth as much as the cow carries off in her milk alone. As to the other important fertilizing matters in the milk—the albuminoids—the casein contains 25.6 pounds of pure nitrogen, while the 300 pounds of flesh put on the steer would contain only about ten per cent., or 30 pounds of albuminoids, or 4.8 pounds of pure nitrogen, or less than one-fifth as much as the milk of the cow. If, then, we suppose the waste in the system of cow and steer to be the same, the cow will carry off in mineral constituents four times, and in albuminoids five times as much as the steer, or as the cow, if not giving milk. No account is taken in either case of the amount of carbon-hydrates carried off. These being composed of carbon and water, may be derived from the atmosphere. It will thus appear that when the milk is sold the cow is much more depleting to the soil than the beef animal. The effect of butter-making upon the soil was then explained. While butter forms four-fifths of the marketable product of the dairy, it contains no mineral matter. It is composed wholly of carbon and water, and if pure is entirely combustible, taking no valuable constituents from the soil. All its elements may be derived from the atmosphere. This kind of dairying, then, does not impoverish; but when the refuse milk is fed to animals, the mineral constituents nearly all go back to the soil in a higher state of organization, and may even increase its fertility.

The effect of feeding refuse milk to pigs was considered. The pig has the least weight of bone in proportion to weight of carcass, and it is therefore better for the soil to feed the refuse milk to pigs, for then the least phosphate of lime is sold; but even when the skimmed milk is only fed to calves, only a small proportion of the constituents of the milk is sold, yet it is not so profitable to feed calves (except such heifer calves as are necessary to replenish the dairy) as to feed pigs; for the same quantity of skimmed milk will make more pounds live weight upon pigs than calves, and the pigs are usually worth more per live weight than calves. Sixteen pounds of skimmed milk will make a pound of dressed pork on pigs from 4 to 26 weeks old; and if worth 8 cents per pound, will pay one-half cent per pound for the refuse milk, thus yielding an increase of \$20 per cow for the season. The manure made from pigs fed upon milk is very rich, and when this is properly deodorized with muck, and reapplied to the soil, there will be little loss of fertility by dairying. But if the milk is sold, all the mineral and nitrogenous constituents of the milk are lost to the soil, except the indigestible and unassimilated portions of the cow's food, together with the constant waste of her system, and this return of food to the soil does not exceed one-third of the food eaten by a vigorous and large yielding cow. Hence, two-thirds of what the cow consumes is carried off and lost. If the steer lays on 300 pounds of live weight during the pasturing season, 25 per cent. of this is dry substance, and 75 per cent. water. The steer will thus store up 75 pounds of dry substance. Two pounds of milk contain as much dry substance as one pound of live beef. If, then, a cow yields 4,000 pounds of milk during the pasturing season, it would contain 500 pounds of dry substance; and this is, of course, obtained from the grass she eats. Hence the ultimate impoverishment of the soil must ensue. The relation of factory cheese-making to fertility was next taken up. The factoryman takes his milk to the factory and brings back only the whey or milk sugar. Whey is simple carbon and water, containing no mineral elements, save the small amount of casein and albumen that may have floated off in it. When the milk contains albumen, this passes off in the whey, and adds so much to its value as a food and as a fertilizer. Whey has very little mineral value. Its only office is to supply animal heat and produce fat. The casein of the curd contains nearly all the mineral matter, and is sold in the cheese—the soil gaining next to nothing. Cheese dairying is practically the same as selling milk, so far as loss of the fertilizing constituents of the soil are concerned. In the discussion which followed this paper, Prof. Stewart said that the sum of \$2 per cow, expended in the purchase of German potash salts and of 50 pounds of ground bone, to the acre, would restore all fertility lost by dairying.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

THE HEADQUARTERS of the California State Grange are in the Grangers' Building, northeast corner of California and Davis Streets, over the Grangers' Bank of California and California Farmers' Mutual Fire Insurance Association. Master, J. V. WEBSTER; Secretary, AMOS ADAMS.

The Grangers' Business Association of California is in Davis Street, northeast corner of California.

### Worthy Lecturer's Visits.

EDITORS PRESS:—To-day, Wednesday June 13th, we are comfortably ensconced in the El Capitan hotel at

#### Merced.

This beautifully located capital of Merced county is the center of the great wheat growing region of the San Joaquin and Merced valleys, and the great natural off-shoot to the famed Mariposa Big Trees and the noted Yosemite valley, is a good type of what a rapid growth great and good surroundings will give to a noted center. But a few years have passed since this town, called into existence by force of circumstances, was a thing of the future. Now it is a noted and most interesting and practical fact of the present, with a prospect before it of becoming not only populous, but should their now mooted irrigation schemes succeed, swelling to a city of great inland importance. The hotel (El Capitan) forms to the stranger, at first sight, a surprise to see so large, commodious and well-appointed house for the public, furnished as it is with all the comforts and delicacies of a first-class hotel in San Francisco, but upon being informed that here the elite of the world rest for a night before taking stage for Big Trees and Yosemite, and that in the building are the telegraph and postoffice, where all conveniences are afforded the tourist before leaving civilization to address a word or note to his home or friends, or from which to hear from the same, he will at once appreciate the necessity of just such a house, and then to also find that "mine host" hereof is the world or California famed Capt. Bloss, is sufficient to assure every visitor that he will be made comfortable. But to the lecture field again: After a comfortable night's rest, and having attended to our large correspondence, we strolled out to find the Grange hall or a Granger, and, knowing that here was a Grange warehouse, we soon felt ourselves perfectly at home in the company of Bro. Turner, who has in charge the Grange warehouse, and also Bro. Clay, the Master of Merced Grange, who received us most heartily and made us feel truly among friends. The Grange warehouse here has been a very great benefit, not to the Grangers only, but even more to all the farmers, in furnishing ample storage at the low cost of \$1 per ton, and only 20 cts. for delivering, instead of previous rates of \$2.50 per ton and 50 cts. for delivering.

This unusual dry season has greatly affected the Grange here in point of numbers, for the present, as all having any amount of stock have to take it somewhere else for pasture. This has, consequently, greatly lessened their numbers, but truer and more determined men to carry out the Grange work practically I have found nowhere. Here, the Grange being posted in the appointments, the hour for lecture was set for 2 p. m., in the Grange hall, where a full attendance of all, both brothers and sisters, belonging to Merced Grange, remaining in the neighborhood, were out in force, and also a large portion of farmers and citizens, not Grangers were also present to hear what the State Lecturer had to say. At the hour appointed we were, after a good Grange song, well rendered by the Grange choir, most happily introduced by Bro. Clay, Worthy Master of Merced Grange, and listened to for one and a half hours with perfect attention, and after the lecture, as part of it referred to the necessity for Merced farmers to adopt some plan of irrigation to insure themselves against dry seasons, Mr. Aldrich, of San Francisco, was called on to give his plans and policy for the same, which he did in a long account of what they had already done to start such a company for Merced, and what was yet wanted to complete the same. After this all present were invited to stay and partake of some refreshments, provided by the good sisterhood of Merced Grange. For some two hours longer we were made to feel truly at home, with a good social time in partaking of a harvest feast at which ice cream abounded, and the weather being by thermometer about 108°, made the ice cream so plentifully provided a genuine luxury. Merced Grange, though lessened just now in numbers, is in good condition, and made up of the right kind of material, and ready to assist the farm movement in every good work, whether legislative or otherwise. With such Granges through all the State we are becoming not only a name but a power for great good to the future of the farm interest.

Leaving Merced by railroad train at ten o'clock at night, our next station was

#### Fresno.

Where we arrived at two o'clock A. M., and be-

ing conveyed to the Morrow house by omnibus, were well cared for with a comfortable rest and sleep till nine o'clock in the morning, thus making up for the extreme travel and fatigue of the day, and there coming on quite a cool change in the weather we were again refreshed, and ready for our work at Fresno. After breakfast we found that Bro. Marks, Master of Raisina Grange, was in search of us and would be ready after dinner to take us to the Central colony, where the Grange was located and where our appointment was for eight o'clock in the evening. Fresno is another place like Merced, a new capital of Fresno county, built up rapidly by becoming a shipping point on the railroad. It is surrounded by a rich grain growing country, when there is moisture enough to insure crops, but for want of such continued assurance irrigation colonies are being built up all around within a few miles' distance, with a prospect of eventual success. These colonies, like the Central colony of California, which is some three miles from Fresno, are divided into 20-acre lots and sold out to purchasers for homes. One lot being deemed sufficient for a small family to live upon, when thoroughly utilized with such fruits and otherwise paying crops as the abundant water for irrigation together with all the conveniences provided by the canal company are practically made use of. As it will take time to demonstrate this fact, we can only speak of what they hope to do and the success of the same must depend greatly upon the wise and practical manner the colonists carry out their work. It is patent to every one visiting this colony that the soil is suitable for irrigation. Containing so large a portion of sand as it does, it is peculiarly adapted to that work here; also that it is, with wise and judicious irrigation, capable of raising all the fruits known to the semi-tropics of California, oranges, lemons and limes, also the varied classes of nuts, supposed to be so profitable a crop. But upon 20-acre lots variety will have to give way to specialty, and fruits for drying and canning form the staple product of the colony for commercial purposes. For any one desiring to become interested in this colony, we say visit it for yourselves—thoroughly investigate, and if you can, rent and cultivate a lot for a year to make sure you know what you want before purchasing.

At eight o'clock P. M. we found assembled at their colony school-house enough to find sitting room, not all Grangers, but many, both men and women, not Grangers, for strange to say, here are intelligent women upon 20-acre lots all alone, working out with their own hands the problem the whole colony are at work to solve, to wit: whether 20 acres is enough for a home.

We addressed this mixed meeting of intelligent men and women for one and one-half hours on our Grange work, and were so far appreciated as to be asked to continue our lecture for one night longer, at which we were promised a larger audience, and as we had the time, on account of finding that our visit to Centerville was deemed unnecessary, we consented to do so and were, as they promised, well repaid by the interest taken in our lectures, which were varied to especially suit their immediate wants. Receiving the congratulations of all and the kind and special attention of Bro. Marks and his genuine co-laborer and equally good Granger wife, we left by the one o'clock night train for Kingsburg, where we had an appointment for the next day, June 16th, at two o'clock P. M.

#### Kingsburg.

Arrived at Kingsburg, Past Master Bro. Sanders had provided that the landlord of the Draper house at Kingsburg should be in waiting for us, to which hotel we were at once conducted and furnished with comfortable quarters in which to become rested and prepared for our work at that place. The hour of two o'clock P. M. arriving, a respectable number of Grangers and citizens were assembled before Bro. Sanders arrived, as this being a busy time, he was somewhat delayed. The meeting was also less in numbers on account of the Worthy Master and other members and farmers belonging to the religious denomination called Adventists, who do not attend any other meeting or attend to any other work but their special religious exercises on this day (Saturday), believing as they do that this is the Christian Sabbath. We were, however, well repaid for our visit here, for a more appreciative audience, though small, we never addressed nor left with more satisfactory work being done. Lecture being over, our work for the day and week was not done, as we found among the audience Bro. Morton, Master of Franklin Grange, at Grangeville, who had driven that morning over 35 miles to secure our attendance upon

#### Franklin Grange

That night, as notwithstanding our appointment at Grangeville for Monday, the 18th inst., a change had been agreed upon to Lemoore, a more central point. But Franklin Grange, also desirous of our services there, provided for it by Bro. Morton being in readiness with a suitable conveyance and a splendid span of roadsters to that night or evening convey us 20 miles to the Franklin Grange, where for one and a half hours we addressed an appreciative audience of Grangers and citizens, all greatly interested in our Grange work. Saturday night, Sunday and Sunday night, all ready, or getting rested to become ready for our work on Monday at Lemoore, we are enjoying the good company and hospitality of Brother and Sister Morton and their pleasant little family—a rest greatly needed and as greatly appreciated, for we could not be made more at home or to feel more welcome, for truly the Grange, with Brother and Sister

Morton as well as all co-workers therein, are most thoroughly appreciated. With such an element so constantly at work and so willing and ready to perform their part, the Grange interest cannot die out, but must in due time culminate in success.

We must not close this account of our week's Grange work without saying something of the country around Kingsburg and Grangeville. Through here the famous Kings river runs, from which the various irrigation companies are taking and expecting to take their water to make this country, once thought not worth government price, blossom as the rose, and to yet become when prepared for irrigation and sufficiently improved, worth \$50 an acre—and instead of a sparse population as now, their numbers made to count thousands where they now count twenties. They have the soil, the water, the railroad communication and the evident desire and knowledge to secure it, and are, as fast as time will allow, bringing to bear the capital and labor to accomplish the same. There is undoubtedly a great outcome to this once thought to be swamp country, and the stock men having left it and yielded the palm to the sturdy farmer and cultivator, it will now flourish and become densely settled and cultivated. Such is the condition of not only this particular portion, but equally so of all this Kings river country.

B. PILKINGTON, State Lecturer.

Grangeville, June 18th, 1877.

### Industrial Education and Industrialists.

[From J. W. A. WRIGHT'S May Day Address at Colusa.]

To urge the great importance of more industrial education—strictly so-called—in our public system of education, Mr. Wright made some pointed statements, carefully compiled by him from the census. He said the figures given also prove how great would be the influence on this and other interests of the industrial classes, if they would only realize their strength, unite and work in harmony for their common welfare; that they show how necessary, for the good of our commonwealth, is a proper supervision of expenditures and results, in our educational system. We need more of that industrial education which tends to fit our boys and girls to earn an honest living. He stated that, as will be shown by the report soon to be made to the Educational Convention, called for by Golden Gate Grange, the sum donated or expended in California public education during the past twenty-five years is nearly \$32,000,000, not including cost of text-books. He then proceeded as follows:

The question naturally arises, is there any way of determining the kind and value of the returns from this vast outlay? We should expect more general intelligence, civic ability and industrial skill—the latter certainly, since the masses who provide the means are industrialists.

To prove that the great majority of tax-payers, who furnish the money for our public schools and other purposes, are engaged in industrial pursuits; and to show how clearly is their right and duty to have some voice in deciding upon the character of the education furnished their children in our State schools, we will examine some figures, collected from the United States census of 1870, our latest data.

The total population of California at that time was 560,247, those ten years old and upward numbering 430,444. The number having specific occupations was 238,648. The latter were divided among various pursuits as follows:

In agricultural industries.....	47,863, or 20.05%
In manufacturing, mechanical and mining industries.....	81,508, or 34.15%
In trade and transportation.....	33,165, or 13.90%
In personal service of various kinds, chiefly laborers and domestics.....	70,750, or 29.65%
In what are called learned professions, including teachers.....	5,362, or 2.25%
Total as stated.....	238,648, or 100.00%

The last class comprised 2,212 teachers, 209 journalists, 569 clergymen, 1,115 lawyers and 1,257 physicians and surgeons. If we deduct our teachers, the remainder make 3,150, or 1.32%; that is, about 1 1/2% of the entire number engaged in specific occupations, were among those usually classed in the learned professions. Query: Why, then, should so much of our whole educational system look only to preparation for the learned professions, as it certainly does? The cry is, that these are over-crowded already.

The above statement may be placed in this form, that all may readily comprehend it. Out of every 100 persons with occupation, about 20 were in agricultural pursuits; 34 in mechanical, etc.; 14 in trade and transportation; about 29 in personal service; about 1 a teacher; 1/2 a man a doctor; less than 1/2 a man a lawyer; less than 1/2 of a man a minister, and less than 1-10 of a man a journalist. This not only proves how great would be the strength of the industrial classes, united, but forcibly illustrates the truism, "Knowledge is power."

It will be seen, then, that omitting those engaged in the learned professions, and in trade and transportation, there were about 84% of the working population of California engaged in industrial pursuits. Then when we remember that we may truly class many engaged in trade and transportation, and a large part of our teachers, as industrialists, it will be far from exaggeration to claim at least 90%, or 9 in every 10 of our people as belonging to the industrial classes—to say nothing of many others even in

the learned professions, who are in full sympathy with the industrial classes, and are ready to advocate our interests with us, and who also desire more of that education in our public system, which will prepare the sons and daughters of our people for industrial pursuits, and the realities of life.

Though the population of our State has largely increased during the seven years since the census, it is highly probable that these proportions are but little changed. Whatever the change, the tendency has been to increase rather than to lessen the proportion of industrialists.

On examination, we find there were over 45,000 males, above 16 years of age, engaged in agricultural pursuits at that time in our State. Certainly 60,000 so engaged now is a small estimate. Suppose even half of these should unite and work together in harmony for their common good and the general prosperity of the State. Then add even half of those engaged in other industrial pursuits. What power could defeat their united action to protect and advance the interests of our zealous working men and women?

The following figures are selected from the census, that a similar estimate may be made for our whole country: Number of persons, in the United States, of all occupations, in 1870, 12,505,923; of these, 5,922,471 were in agricultural occupations, that is 47.35%; 2,707,421 in manufacturing, mechanical and mining industries, that is, 21.65%; 1,191,230 in trade and transportation, or 9.52%. These reliable figures give 69% in the first two classes named.

### The Opportunity.

The meeting of wheat growers at the Grange hall in San Francisco, on July 12th, 1877, will be of greater importance than any convention ever held by the farmers of this State. The farmers will determine in what way they will utilize their victory over the wheat, sack and freight rings. There seems to be but one way, however; and that is to adopt the same business principles that have led all enterprises to success, namely, combination or co-operation; for wheat growing must be considered one of the leading enterprises of the State. Therefore the same business principle must be brought into operation in disposing of the wheat crop, that the manufacturers of the leading agricultural implements pursue in the sale of the mower, header and separator. They have but one agent in the State, and he appoints sub-agents; the principal fixes the price at which any given machine may be sold, and no deviation is made. The dozen Eastern manufacturers have their dozen agents here, and they meet and fix pieces for their wares, which are as unalterable as were "the laws of the Medes and Persians."

What would be thought of the manufacturers of the McCormick reaper, or the Buckeye mower, if it should appoint ten or a dozen agents, to compete with each other in the sale of their wares? Everybody would condemn them as pursuing a course that would ultimately bankrupt them. If the farmers persist in coming in competition with each other in the sale of their crops, can they expect success? The price of wheat ought to be controlled by the price in Liverpool, less freight, insurance and small commission, but that has not always been the case; a large profit has been added. It is now in the power of the wheat growers by concert of action to utilize the victory the Grange has won over the various rings that have oppressed the farmer. Will they seize the opportunity? Will they co-operate with each other in fixing a price on their products? Or will they pursue the suicidal policy of competing with each other and with themselves, and allow the buyer to fix the price on what they have to sell? These questions the Grangers will be called upon to decide, by their action at the 12th of July convention, or by their non-action at home. The success which attended the wheat meetings of last year, leads us to believe there will not only a large attendance, but that their deliberations will be attended with success.—California Patron.

### Open Grange Meetings

For Stanislaus, Merced, Fresno, Tulare, Kern, Los Angeles, San Bernardino and San Diego Counties.

Bro. Pilkington, Worthy Lecturer of the State Grange, will hold open meetings at the places and time indicated below:

Los Angeles, Los Angeles County.....	Monday, July 2d.
Compton, Los Angeles County.....	Tuesday, July 3d.
Anaheim, Los Angeles County.....	Wednesday, July 4th.
Westminster, Los Angeles County.....	Thursday, July 5th.
Azusa, Los Angeles County.....	Saturday, July 7th.
Rincon, San Bernardino County.....	Tuesday, July 10th.
Riverside, San Bernardino County.....	Thursday, July 12th.
San Bernardino, San Bernardino Co.....	Saturday, July 14th.
San Luis Rey, San Diego County.....	Tuesday, July 17th.
Poway, San Diego County.....	Thursday, July 19th.
San Pasqual, San Diego County.....	Saturday, July 21st.
Bear Valley, San Diego County.....	Monday, July 23d.
National City, San Diego County.....	Thursday, July 26th.

Appointments for Santa Barbara, Ventura, San Luis Obispo and Monterey will be made in a few days.

Bro. Pilkington is an able and interesting speaker and no farmer, or friend of the farmers, should fail to attend his meetings.

AMOS ADAMS, Sec'y State Grange.

June 6th, 1877.



## AGRICULTURAL NOTES.

## California.

## ALAMEDA.

**CROPS.**—*Transcript*, June 23: The harvest season is at hand, and already the reaper and scythe are leveling the grass and yellow grain. An old wheat grower who has for years past raised plenteous crops of wheat in Murray township, near Dublin, stated yesterday that the grain yield all through that section will be insignificant as compared with former years. He says the chief yield of wheat will be in Eden and Brooklyn townships, localities formally affected by fogs, moist winds, and in the immediate influence of salt water. In some portions of Washington township also the yield of wheat, oats, barley and hay will be fair. But our informant speaks discouragingly of the outlook as contrasted with the big cereal crops of last season, and compared with the large yields of former years.

## CALAVERAS.

**RETURNING.**—*Citizen*, June 23: A large band of sheep passed through here during the week, on their way to the tules. They have been over the mountains and could not find grass enough to subsist upon. The owner stated that there had been so many sheep rushed into the mountains that what feed there was had been all used up, and as a final resort they would have to be taken to the tules or left to die of starvation.

**TALL OATS.**—John Chase, Esq., brought into this office one day this week a specimen of Norway oats nine feet and 10 inches in length. The land on which it grew turned off six tons of hay to the acre this season—and it wasn't a very favorable season either, as the valley farmers can testify. Were it not for the fact that Mr. Chase occupies one of the poor, sterile ranches in the mountainous foothills, which immigrants have taken great pains to avoid, we might be inclined to "blowiate" on his oats, but as it is we just make an oat of it.

## COLUSA.

**MOWING WHEAT.**—*Sun*, June 23: We have been gathering up experiments tried on either mowing or grazing wheat in the spring, when the straw was likely to be rank. In this country, the condition of the ground, the direction of the wind, the state of the atmosphere, all has much to do with either sowing, mowing or even plowing. We wish more farmers would keep a record of the state of the weather, as well as the dates of plowing, sowing, cutting, etc. As we mentioned last week, J. S. Black, residing at Butte creek, tried the experiment of mowing his wheat, and now sends us the state of the ground and weather at each cutting, with present length of straw: Feb. 14th, surface of ground wet; light north wind; length of straw, three feet one inch. March 1st, ground in good plowing condition; wind, southeast, rained same day; length of straw, three feet 10 inches. March 7th, ground wet; plowing light; wind, northwest; length of straw, three feet one inch; March 15th, foggy; ground in good condition; wind, variable; length of straw, three feet eight inches. March 22d, ground in good plowing order; no wind; length of straw, two feet one inch. This record, together with the samples left at our office, leave us to conclude that it is best to mow wheat when the wind is in a rainy quarter. Mr. Black's wheat this year was better where he did not mow it all, but had the spring been wet it would have been quite the reverse. His experiments show at least that there is no danger in cutting wheat when the ground is wet. Any of his that was cut would have made fair wheat even this dry season. Here is a record worth something. Won't others of our farmers follow the good example set?

## CONTRA COSTA.

**THE HARVEST.**—*Gazette*, June 23: This season the grain harvest is a small one at best, but it is now in progress, and, as "a short horse is soon curried," it will soon be finished and we shall be getting some reports of the results. So far as heard from the barley is turning out well, and we are told that Mr. R. O. Baldwin, of San Ramon, has had the remarkably good yield of 25 sacks per acre from a piece of wheat threshed this week. We do not expect a good report of the yield from any considerable area this season, and a large portion of that which will be harvested has suffered some shrinkage from effects of the hot weather week before last.

## FRESNO.

**DISASTER IN THE MOUNTAINS.**—*Republican*, June 23: Grass is short in the mountains, and the losses of sheep have been great. Many bands have been mixed greatly, but there have been rodeos and the stray sheep collected by their owners. The water in the rivers is becoming low; the snow in the mountains is mostly gone. Sheep men are driving their bands further back in the mountains than ever before, and many are going over the mountains to Nevada for the year.

## LOS ANGELES.

**GRASS SEED FOR LAWNS.**—*Cor. Express*: It will be recognized by our good housewives how difficult it is to keep up a green lawn as long as we continue to use the Kentucky blue grass. It is the product of a moist climate, where it receives almost daily showers, and is aided by a humid atmosphere. With us the reverse is the rule—a dry atmosphere and rapid evaporation making the task of keeping the blue grass in its

verdant luster an impossibility. Every native grass whose seeds are brought to the lawn through the water pipes supplants it. There is a substitute for it. The native California rye grass, a vigorous grower, will make a fine sod, and with trimming will make a bright and pleasing surface with one-tenth the water required for the blue grass. We see it in half moist localities keep green the whole year, and forming a solid and substantial sod. This is written in a suggestive way, and may be of great use hereafter.

**FRUIT GROWERS' ASSOCIATION.**—The called meeting of the Southern California Horticultural Society, for the purpose of adopting by-laws and effecting a permanent organization, was held at Good Templar hall Saturday at 11 o'clock and lasting, with a short recess for lunch, until 5 p. m. The afternoon session was a meeting of the Board of Directors to organize and attend to the business portion of the programme. The following officers were elected: President, J. de Barth Shorb, of San Gabriel Mission; First Vice-President, Thos. A. Garey, of Los Angeles; Secretary, L. M. Holt, of Pomona; Treasurer, Milton Thomas, of Los Angeles. After a lengthy discussion it was determined to take the necessary steps to hold a horticultural, pomological and agricultural fair the coming fall, and a further discussion of the question and detailed arrangements were referred to the next meeting of the Society, to be held at Los Angeles on Saturday, July 14th. The question selected for discussion at the next meeting is, "Will it pay to bud the orange and will it pay to bud bearing trees?" This is virtually a continuation of the discussion commenced at the first meeting of the fruit growers, and one which cannot be easily exhausted. The best and most experienced men of the county have been invited to prepare papers on this subject, and as soon as the programme of exercises has been definitely settled for the next meeting, the same will be made public through the press. For the August meeting the subject of irrigation is selected, and invitations are being sent to the most practical men of Southern California to give their views on this most important and practical question.

## MARIN.

**CHAS. WEBB HOWARD'S IMPROVEMENTS.**—*Journal*, June 23: All the dairy buildings on Point Reyes are being newly painted white. The Averill chemical paint is used. Mr. Howard's mammoth barn, at Olema, is well under way. It is 250 feet long, three stories high, and nicely finished. It will be supplied with a steam engine, for cutting and steaming feed, grinding grain, lifting hay, cutting wood, pumping, etc. Water on Point Reyes is lower this season than ever before. The yield on Brayton's dairy fell in one week from 100 to 60 pounds of butter, owing to the scarcity of water. Artesian wells are talked of, though cleansing out and timbering the springs will greatly increase the supply.

**GRASSHOPPERS.**—Grasshoppers are very thick in the vicinity of San Antonio creek, and are doing great damage there. Mr. William Lewis tells us that in some places, if they were quiet on the ground, they would touch each other. Many oat fields have been entirely denuded of grain by them, and considerable barley has been consumed. They do great damage to pasture fields, eating all the tender and juicy feed. Owing to the grasshoppers and the hot spell, the dairy product has run down to one-half what it was at this time last year.

## NAPA.

**A BIG YIELD OF HAY.**—*Register*, June 23: John Custer has just finished baling the hay which he harvested from 32 acres on what is known as "the Big ranch," a short distance up the valley, and by actual weight the yield was found to be four and one-half tons to the acre. On one measured acre the yield was six and one-half tons. As two tons to the acre is a very fair yield this crop may be set down as a "premium" one. It was wheat hay.

**BLACKBERRIES.**—The Trubody brothers, who own a blackberry farm a short distance above Napa, say they will have about three-fourths of an average crop this year. Their berries will begin to ripen by the first of July—about a week later than last season. The Trubodys have some 15 acres in blackberry vines, and usually employ, during the picking and shipping season, from six to 45 men.

## SACRAMENTO.

**HOP CROP.**—*Record-Union*, June 23: We are informed that the hop crop in this county this year will be much smaller than that of the last two seasons, owing probably to the drouth in great part, and also to the depredations of a voracious bug which has attacked the vines in some fields.

**THRESHING CUSTOMS.**—Threshers have fairly commenced the season's work. A thresher now running on the Sacramento river, in Yolo county, above Sacramento, on barley, is finding all the hands and teams and putting the barley into the sacks for 10 cents a hundred, payable in gold. Barley is turning out well in that district—better than was anticipated. The berry is very plump, and the barley is, as a general thing, very clean of weed seed and all other foul stuff. We should mention that the barley being threshed on the terms named is headed barley. That cut with longer straw has to pay a little higher rates for threshing.

## SANTA BARBARA.

**BEARING WALNUTS.**—*Press*, June 23: The *News* reports that a Riverside walnut-grower 'has just discovered some two dozen English

walnuts on one of his seven-year old trees—first instalment of this valuable nut in Riverside." The early bearing qualities of this valuable tree in California is a matter of astonishment to Europeans familiar with the slow development of its fruit in England and Italy. Six-year-old walnut trees in Santa Barbara county have already borne fruit; and Russel Heath's 20-year-old trees bear nuts by the wagon-load.

## SAN JOAQUIN.

**STOCK FOR ROBERTS ISLAND.**—*Herald*, June 23d: We are pleased to be able to give our readers some account of the stock lately imported from England by Mr. Morton C. Fisher, which has been comfortably domiciled at the headquarters on Roberts island: The racing stallion, "Young Prince," is a beautiful dark bay, 16½ hands high, with fine knee action, and very fast. He is by "Knowsley," out of "Queen of Spain," "Knowsley" being a son of the world-renowned "Stockwell," and "Queen of Spain," a daughter of the best of good horses, "King Tom." In this horse, therefore, are combined two of the best strains of blood upon the English turf, and his stock, if mated with suitable mares, cannot fail to be valuable. He is a horse of great size, fine action, good temper, very high pedigree, and without unsoundness of any kind. The Clydesdale colt, not yet two years old, but weighing 1,500 pounds, gives promise of great size and strength, combined with action and courage. It may interest our friends who hail from the "land o' cakes" to know that he is by "Cummock Jock" by "Farmer's Glory," two names which are, we believe, household words in Scotland. The colt will undoubtedly prove no unworthy son of such ancestors. The poultry, we can safely say, can not be excelled on this side of the Atlantic. It comprises a pen each of Black Red Game, Duck-wig Game, Black Spanish, Grey Dorkings, Golden Spangled Hamburg and English Pheasants. These birds have all of them taken first prizes at recent English poultry shows, notably the Golden Spangled Hamburgs first prize at Edinburgh this spring, the Games first prize at Glasgow Agricultural Society's show in May of this year, etc. The dogs comprise a pair each of Black Retrievers, Colleys (Shepherds), Stag-hounds, Bull-terriers, Scotch Terriers, and Dandy Dimonts. The dogs have all been selected with great care and judgment, and regardless of expense. They are all severally as good as could be had of their various strains. A collection of cuttings of about thirty varieties of the choicest kinds of grapes arrived in excellent condition, and with the large assortment of seeds of all kinds (all imported), should presently help to make Roberts island one of the features and attractions of that part of the country. One piece of very bad fortune befell the consignment. A third horse, three years old, a Clydesdale stallion, got cast in his box during a violent storm at sea and was so seriously injured that he died when crossing the plains. Mr. Fisher has christened the settlement where the stock is located, and which is about three miles from Stockton, St. Catherine's, and he proposes to make this the principal center of his property.

**SANTA CLARA.**  
**CROPS.**—*Mercury*, June 20: From a gentleman lately returned from a trip south we are informed that crops in that portion of the State never looked so gloomy as now. Even in this county they are no better. At Sargent's station, a few miles south of Gilroy, one man who sowed 400 acres of wheat has realized just one ton of hay from the whole. Others this side of Gilroy have not been able to cut enough to feed their stock. As before stated, a few patches of wheat along the foothills promise reasonably well, though they are by no means uniform even in these localities, while the average yield in the county will exceed our expectations if the seed sown is recovered.

## SAN DIEGO.

**THE HONEY CROP.**—*Union*, June 21: The honey crop of 1877 will be almost a total failure. San Diego county, which produces by far the largest portion of the honey crop of the State (her product last year was 1,277,155, of which 800,000 pounds were exported hence by steamer,) has suffered less than neighboring counties; but here the exceptions to the general rule of the season will be few and marked. The extreme dryness of the winter, the cold and late spring, and finally the recent extraordinary heated term, have nearly destroyed the bee-food throughout the county. In the range extending from the coast back to the base of the Cuyamaca mountains, from San Luis Rey river south in the greater number of apiaries the bees are liable to want food, unless supplied by their keepers. Some of the apiarists have been feeding their bees and others have lost largely. The present outlook is that no small proportion of the bees in this range will perish for lack of food. In the mountain range in the vicinity of Julian, the Cuyamaca, etc., where there have been good winter rains, the bees will make a small amount of surplus honey. At Major Utt's, Jacob Bergman's and in Vallecitos, near Temecula, the prospects are better. Major Utt expected a short time ago to have two car-loads of surplus honey for shipment. In the Fallbrook district, Bear valley and the region between the coast country and the mountains, the bees will make enough honey to support themselves, and there may be a little surplus, but very small. Out at Campo and the eastern ranges reports have lately been received that the bees have taken a fresh start and are doing well; it is hoped that the result of the season may fulfill present indications. Throughout the en-

tire country, with some slight exceptions, the spring flowers and white sage are a total failure; there will be little or no sage honey for export. The sumac and greasewood, now coming in bloom, will be the only dependence in the way of natural feed for carrying bees through the season. We may safely predict that the California honey crop for 1877 will hardly yield a surplus sufficient to supply the San Francisco market, leaving the Eastern markets wholly out of the question.

## PLACER.

**FRUIT.**—*Argus*, June 23: A great deal of fruit in the vicinity of Auburn was sunburned during the recent warm weather, and some of it dried up and destroyed by the heat. A description of the effect in one orchard will suffice for all. A visit to the extensive grounds of Mr. Charles Gould, of Newcastle, was made by an attache of the *Argus* a few days since. Certain varieties of plum have suffered severely, especially the red plum and the pound seedling; while other sorts escaped, owing probably to the thickness of the foliage. Apples would have been a poor crop, without this last setback. Many of the trees bore no fruit, and, of those which were well covered, some were almost bare of leaves. For some reason a large proportion of the trees did not leave out properly, consequently the fruit was exposed to the full force of the sun. There will not be more than half a crop. Gooseberries on Mr. Gould's ranch are ruined. The berries are shriveled and dried up. Grapes are not injured, and look exceedingly fine. Raspberries were dried on the vines, but new ones will come out. Blackberries have begun to turn red before getting their growth. The crop will be one-fourth less than would have been the yield with favorable weather. Strawberries are not materially injured. Similar statements might be made of nearly all the orchards in the vicinity of Newcastle, Ophir, and Auburn.

## SAN MATEO.

**GRAIN.**—*Gazette*, June 23: The Durham Bros., owing to the prevalence of rust, will have only a two-thirds crop of oats and about one-half a crop of hay. The Downing Bros., on an adjoining farm, will have only half a crop of oats, though barley and late potatoes indicate, with them, a good yield. Mr. Coony, on the La Honda road near the summit, put in his crop of grain between the 10th of November and the 10th of January last. His wheat, barley and oats are as thick as they can stand. The wheat and barley will average over six feet in height, and will doubtless yield over 25 sacks to the acre. The oats will produce a little less, but will be nearly an average crop. L. Kelly, in the same neighborhood, will also have a fine crop of grain. Mr. Kelly says the late rains did considerable good, washing off the rust and so giving the grain a fresh start.

## SONOMA.

**THE CROPS.**—*Flag*, June 22: The harvest is now so well advanced in this section that the farmers can tell with more certainty the condition of their crops. The grain is generally good. J. H. Curtiss has just finished cutting one field of wheat which he is confident will turn off 40 bushels to the acre. Some complaint is made of shrinkage in the kernel caused by the north wind and protracted spell of hot weather, but the cool breeze and fog of the past few days have helped the wheat out wonderfully. H. M. Willson has one field on which he estimates the loss caused by hot weather at ten bushels to the acre; still the actual loss may not be so much when threshing time comes. Wheat that was rusted seems to be affected the worst by the heat.

## SUTTER.

**GRAIN SEPARATOR.**—*Banner*, June 23: We were shown a sample of wheat this week from the ranch of B. F. Stoker, which was threshed by the Gold Medal separator, a machine invented by Mr. Rose, whose experience in this line has enabled him to place in the field a first-class machine, and one which, judging from the sample before us, does excellent work. The grain is perfectly clean and not a grain cracked. Mr. Rose went East last fall to have the separator made for this season, and has put into the field a machine he may justly feel proud of.

**COMING IN.**—Grain is coming into the Farmers' Warehouse in considerable quantities, although the receipts per day now do not compare with what they will be about the middle of next week, and from that on until it is all in. It is very confidently expected that the storing capacity of the warehouse will have to be enlarged by the erection of an additional building, as it is thought that a large amount will be stored. Last week we reported the hauling of a large load by Harkey's team, which has been exceeded this week—on Wednesday last—by that same team, which hauled 143 sacks, or a little over 20,000 pounds, of very nice looking grain.

## YOLO.

**WHEAT YIELD.**—*Democrat*, June 16: Wheat is turning out remarkably well in Yolo county this year, better than it was thought it would before threshing. Mr. F. S. Freeman informs us that he has a field of 400 acres from which he expected not more than 20 to 25 bushels an acre, but that it is yielding from the thresher fully 30 bushels; and that probably others will be similarly disappointed. Mr. Freeman has dealt largely in wheat for many years, and buys heavily. He estimates that this county will produce this season 30,000 tons, and as she will only require about 10,000 tons for bread, seed and emergencies, she will still have for shipment 20,000 tons.





### The Greatness of Washington.

The coming of the national holiday recalls the mind to the contemplation of the careers of our revolutionary heroes. Volumes have been written concerning the character and attributes of Washington, his generalship, his unswerving devotion to a purpose, his truth and wisdom as a statesman—all these have been themes for poets, orators and essayists. We would at this time make special allusion to the disinterestedness of Washington. In these later days it has come to be greatly doubted whether the quality of noble disinterest, of generous self-forgetfulness, is really still in existence in the hearts of men. So many of our officials have turned their offices into means for self-aggrandizement and so many apparently high-minded men have espoused causes and urged reforms simply to gain the popular attention for their own advancement, that it has come to be denied that the spirit of unselfish patriotism still lived. In the midst of this feeling, though it may not be a true perception to the extent to which some would think, it is nevertheless well to give a thought to the crowning greatness of Washington. It was he who created a nation and yet had strength to deny the gift of kingdom which was freely offered him. He it was who understood all, endured all and conquered all merely by and for the love of truth and liberty which ruled his soul and purpose. His it was when the glorious deeds were done, to lay down the insignia of warfare and conquest, and, accepting the simple palm of a nation's gratitude, give to others the treasure which his valor won.

Our illustration on this page fitly conveys the lesson which we would impress at this time. It is a scene such as would come to one in a dream and yet its truth is plain to waking senses. It is the noble patriot laying his greatest service as a free will-offering on the altar of his country. This sublime act of Washington has done more to ensure his undying name than any other act of his life, because it taught a new doctrine of conquest and brought to light a new order of patriotism. Concerning this aspect of the life of Washington, we cannot do better than to quote a few sentences from the writings of Robert Treat Paine, as follows:

To the pen of the historian must be resigned the more arduous and elaborate tribute of justice to those efforts of heroic and political virtue which conducted the American people to peace and liberty. The vanquished foe retired from our shores, and left to the controlling genius who repelled them the gratitude of his own country, and the admiration of the world. The time had now arrived which was to apply the touchstone to his integrity—which was to assay the affluity of his principles to the standard of immutable right. On the one hand, a realm, to which he was endeared by his services, almost invited him to empire; on the other, the liberty to whose protection his life had been devoted, was the ornament and boon of human nature. Washington could not depart from his own great self. His country was free—he was no longer a general. Sublime spectacle! more elevating to the pride of virtue than the sovereignty of the globe united to the scepter of ages! Enthroned in the hearts of his countrymen, the gorgeous pageantry of prerogative was unworthy the majesty of his dominion. That effulgence of military character which in ancient states has blasted the rights of the people whose renown it had brightened, was not here permitted, by the hero from whom it emanated, to shine with so destructive a luster. Its beams, though intensely resplendent, did not wither the young blossoms of our independence; and liberty, like the burning bush, flourished unconsumed by the glory which surrounded it.

RESEARCHES.—Forty-five scientific expeditions were fitted out during the year 1876. Of these, 24 had their field in Europe, seven in Africa, five in America and two in Oceania. The objects of the researches included archaeology, natural history, anthropology, medicine, statistics, comparative legislation, comparative history of religions, geography, and astronomy.

### The Peterkins Celebrate the 4th of July.

The day began early. A compact had been made with the little boys the evening before.

They were to be allowed to usher in the glorious day by the blowing of horns exactly at sunrise. But they were to blow them for precisely five minutes only, and no sound of the horns should be heard afterward till the family were down stairs.

It was thought that a peace might thus be bought by a short though crowded period of noise.

The morning came. Even before the morning, at half-past three o'clock, a terrible blast of the horns aroused the whole family.

Mrs. Peterkin clasped her hand to her head and exclaimed: "I am thankful the lady from Philadelphia is not here!" For she had been invited to stay a week, but had declined to come before the Fourth of July, as she was not well and her doctor had prescribed quiet.

permission to have the boys the whole day, and they understood the day as beginning when they went to bed the night before. This accounted for the number of horns.

It would have been impossible to hear any explanation; but the five minutes were over, and the horns had ceased, and there remained only the noise of a singular leaping of feet, explained perhaps by a possible pillow-fight, that kept the family below partially awake until the bells and cannon made known the dawning of the glorious day—the sunrise, or "the rising of sons," as Mr. Peterkin jocosely called it, when they heard the little boys and their friends clattering down the stairs to begin the outside festivities.

They were bound first for the swamp, for Elizabeth Eliza, at the suggestion of the lady from Philadelphia, had advised them to hang some flags around the pillars of the piazza. Now the little boys knew of a place in the swamp where they had been in the habit of digging for "flag-root," and where they might find plenty of flag flowers. They did bring

afraid of torpedoes; they looked so much like sugar-plums, she was sure some of the children would swallow them, and explode before anybody knew it.

She was very timid about other things. She was not sure even about pea-nuts. Everybody exclaimed over this: "Surely there was no danger in pea-nuts!" But Mrs. Peterkin declared she had been very much alarmed at the exhibition, and in the crowded corners of the streets in Boston, at the pea-nut stands, where they had machines to roast pea-nuts. She did not think it was safe. They might go off any time, in the midst of a crowd of people, too!

Mr. Peterkin thought there was actually no danger, and he should be sorry to give up the pea-nut. He thought it an American institution, something really belonging to the Fourth of July. He even confessed to a quiet pleasure in crushing the empty shells with his feet on the sidewalks as he went along the streets.

Agamemnon thought it a simple joy. In consideration, however, of the fact that they had no real celebration of the Fourth the

last year, Mrs. Peterkin had consented to give over the day, this year, to the amusement of the family as a Centennial celebration. She would prepare herself for a terrible noise—only she did not want any gunpowder brought into the house.

The little boys had begun by firing some torpedoes a few days beforehand, that their mother might be used to the sound, and had selected their horns some weeks before.

Solomon John had been very busy in inventing some fire-works. As Mrs. Peterkin objected to the use of gunpowder, he found out from the dictionary what the different parts of gunpowder are—saltpeter, charcoal, and sulphur. Charcoal he discovered they had in the wood-house; saltpeter they would find in the cellar, in the beef-barrel; and sulphur they could buy at the apothecary's. He explained to his mother that these materials had never yet exploded in the house, and she was quieted.

Agamemnon, meanwhile, remembered a recipe he had read somewhere for making a "fulminating paste" of iron filings and powder of brimstone. He had it written down on a piece of paper in his pocket book. But the iron filings must be finely powdered. This they began upon a day or two before, and the very afternoon before, laid out some of the paste on the piazza.

Pin-wheels and rockets were contributed by Mr. Peterkin for the evening. According to a programme drawn up by Agamemnon and Solomon John, the reading of the Declaration of Independence was to take place in the morning on the piazza under the flags.

The Bromwiches brought over their flag to hang over the door.

"That is what the lady from Philadelphia meant," explained Elizabeth Eliza.

"She said flags of our country," said the little boys. "We thought she meant 'in the country.'"

Quite a company assembled; but it seemed nobody had a copy of the Declaration of Independence.

Elizabeth Eliza said she could say one line, if they each could add as much. But it proved they all knew the same line that she did, as they began:

"When, in the course of—when, in the course of—when, in the course of human events—when, in the course of human events—when, in the course of human events, it becomes necessary—when, in the course of human events, it becomes necessary for one people—"

They could not get any further. Some of the party decided that "one people" was a good place to stop, and the little boys sent off some fresh torpedoes in honor of the people. But Mr. Peterkin was not satisfied. He invited the assembled party to stay until sunset, and meanwhile he would find a copy, and torpedoes were to be saved to be fired off at the close of every sentence.

And now the noon bells rang and the noon bells ceased.

Mrs. Peterkin wanted to ask everybody to dinner. She should have some cold beef. She had let Amanda go, because it was the Fourth, and everybody ought to be free that one day, so she could not have much of a dinner. But when she went to cut her beef, she found Solomon John had taken it to soak, on account of the saltpeter for the fire-works!

Well, they had a pig, so she took a ham, and the boys had bought tamarinds and buns and a cocoa-nut. So the company stayed on, and when the Antiques and Horribles passed again, they were treated to pea-nuts and lemonade.

They sang patriotic songs, they told stories; they fired torpedoes, they frightened the cats with them. It was a warm afternoon; the red poppies were out wide, and the hot sun poured down on the alley-ways in the garden. There



THE PATRIOT'S DREAM.

And the number of the horns was most remarkable! It was as though every cow in the place had arisen and was blowing through both her own horns!

"How many little boys are there? How many have we?" exclaimed Mr. Peterkin, going over their names one by one mechanically, thinking he would do it, as he might count imaginary sheep jumping over a fence, to put himself to sleep. Alas! the counting could not put him to sleep now in such a din.

And how unexpectedly long the five minutes seemed! Elizabeth Eliza was to take out her watch and give the signal for the end of the five minutes and the ceasing of the horns. Why did not the signal come? Why did not Elizabeth Eliza stop them?

And certainly it was long before sunrise; there was no dawn to be seen!

"We will not try this plan again," said Mrs. Peterkin.

"If we live to another Fourth," added Mr. Peterkin, hastening to the door, to inquire into the state of affairs.

Alas! Amanda, by mistake had waked up the little boys an hour too early. And by another mistake the little boys had invited three or four of their little friends to spend the night with them. Mrs. Peterkin had given them

away all they could, but they were a little out of bloom. The boys were in the midst of nailing up all they had on the pillars of the piazza, when the procession of the Antiques and Horribles passed along. As the procession saw the festive arrangements on the piazza, and the crowd of boys, who cheered them loudly, it stopped to salute the house with some especial strains of greeting.

Poor Mrs. Peterkin! They were directly under her windows! In the few moments of quiet during the boys' absence from the house on their visit to the swamp she had been trying to find out whether she had a sick-headache, or whether it was all the noise, and she was just deciding it was the sick-headache, but was falling into a slight slumber, when the fresh noise outside began.

There were the imitations of the crowing of cocks, and braying of donkeys, and the sound of horns, encored and increased by the cheers of the boys. Then began the torpedoes, and the Antiques and Horribles had Chinese crackers also!

And in despair of sleep, the family came down to breakfast.

Mrs. Peterkin had always been much afraid of fire-works, and had never allowed the boys to bring gunpowder into the house. She was oven





Marshal of the Day.



The Standard Bearer.



The Orator.



The Poet.

## HEROES OF THE CELEBRATIONS.

was a seething sound of a hot day in the buzzing of insects, in the steaming heat that came from the ground. Some neighboring boys were firing a toy cannon. Every time it went off, Mrs. Peterkin started, and looked to see if one of the little boys was gone. Mr. Peterkin had set out to find a copy of the "Declaration." Agamemnon had disappeared. She had not a moment to decide about her headache. She asked Ann Maria if she were not anxious about the fire-works, and if rockets were not dangerous. They went up, but you were never sure where they came down.

And then came a fresh tumult! All the fire engines in town rushed toward them, clanging with bells, men and boys yelling! They were out for a practice, and for a Fourth of July show.

Mrs. Peterkin thought the house was on fire, and so did some of the guests. There was great rushing hither and thither. Some thought they would better go home, some thought they would better stay. Mrs. Peterkin hastened into the house to save herself, or see what she could save. Elizabeth Eliza followed her, first proceeding to collect all the pokers and tongs she could find, because they could be thrown out of the window without breaking. She had read of people who had flung looking-glasses out of windows by mistake, in the excitement of the house being on fire, and had carried the pokers and tongs carefully into the garden. There was nothing like being prepared. She always had determined to do the reverse. So with calmness she told Solomon John to take down the looking-glasses. But she met with difficulty—there were no pokers or tongs, as they did not use them. They had no open fires; Mrs. Peterkin had been afraid of them. So Elizabeth Ann took all the pots and kettles up to the upper windows, ready to be thrown out.

But where was Mrs. Peterkin? Solomon John found that she had fled to the attic in terror. He persuaded her to come down, assuring her it was the most unsafe place; but she insisted upon stopping to collect some bags of old pieces, that nobody would think of saving from the general wreck, she said, unless she did. Alas! this was the result of fire-works on Fourth of July! As they came down stairs, they heard the voices of the company declaring there was no fire—the danger was past. It was long before Mrs. Peterkin could believe it. They told her the fire company was only out for show, and to celebrate the Fourth of July. She thought it already too much celebrated.

Elizabeth Eliza's kettles and pans had come down through the windows with a crash, that had only added to the festivities, the little boys thought.

Mr. Peterkin had been about all this time in search of a copy of the Declaration of Independence. The public library was shut, and he had to go from house to house; but now as the sunset bells and cannon began, he returned with a copy, and read it, to the pealing of the

bells and sounding of the cannon. Torpedoes and crackers were fired at every pause. Some sweet-marjoram pots, tin cans filled with crackers which were lighted, went off with great explosions.

At the most exciting moment, near the close

friend had told him of the composition. The more thicknesses of paper you put around it, the louder it would go off. You must pound it with a hammer. Solomon John felt it must be perfectly safe, as his mother had taken potash for a medicine.

He hastened to snatch the paste away before it should take fire, flinging aside the packet in his hurry. Agamemnon, jumping upon the piazza at the same moment, trod upon the paper parcel, which exploded at once with the shock, and he fell to the ground, while at the same moment the paste "fulminated" into a blue flame directly in front of Mrs. Peterkin!

It was a moment of great confusion. There were cries and screams. The bells were still ringing, the cannon firing, and Mr. Peterkin had just reached the closing words: "Our lives, our fortunes, and our sacred honor."

"We are all blown up, as I feared we should be," Mrs. Peterkin at length ventured to say, finding herself in a lilac-bush by the side of the piazza. She scarcely dared to open her eyes to see the limbs scattered about her.

It was so with all. Even Ann Maria Bromwich clutched a pillar of the piazza, with closed eyes.

At length Mr. Peterkin said, calmly: "Is anybody killed?"

There was no reply. Nobody could tell whether it was because everybody was killed, or because they were too wounded to answer. It was a great while before Mrs. Peterkin ventured to move.

But the little boys soon shouted with joy and cheered the success of Solomon John's fireworks, and hoped he had some more. One of them had his face blackened by an unexpected cracker, and Elizabeth Eliza's mushu dress was burned here and there. But no one was hurt; no one had lost any limbs, though Mrs. Peterkin was sure she had seen some flying in the air. Nobody could understand how, as she had kept her eyes



## ON THE WAY TO THE CELEBRATION.

of the reading, Agamemnon, with an expression of terror, pulled Solomon John aside.

"I have suddenly remembered where I read about the 'fulminating paste' we made. It was in the preface to 'Woodstock,' and I have been

He still held the parcel as he read from Agamemnon's book: "This paste, when it has lain together about 26 hours, will of itself take fire, and burn all the sulphur away with a blue flame and a bad smell."

firmly shut.

No greater accident had occurred than the singeing of the top of Solomon John's nose. But there was an unpleasant and terrible odor from the "fulminating paste."



## FIREWORKS IN THE EARLY TIMES.

around to borrow the book, to read the directions over again, because I was afraid about the 'paste' going off. Read this quickly! and tell me, where is the fulminating paste?"

Solomon John was busy winding some covers of paper over a little parcel. It contained chlorate of potash and sulphur mixed. A

"Where is the paste?" repeated Solomon John, in terror.

"We made it just 26 hours ago," said Agamemnon.

"We put it on the piazza," exclaimed Solomon John, rapidly recalling the facts, "and it is in front of mother's feet!"

gunpowder. The distracted lady was thankful there was likely to be but one Centennial Fourth in her life-time, and declared she should never more keep anything in the house as dangerous as saltpetered beef, and she should never venture to take another spoonful of potash. —*Lucretia P. Hale, in St. Nicholas.*





A. T. DEWEY, W. B. EWER,  
Publishers.  
Office, 224 Sansome St., S. E. Cor. California St.

SUBSCRIPTIONS, payable in advance: For one year, \$4;  
six months, \$2.25; three months, \$1.25. Remittances by  
registered letters or P. O. orders at our risk.  
ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 80 2.00 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE

Our latest forms go to press Wednesday evening.

No Quack Advertisements inserted in these Columns.

SAN FRANCISCO:  
Saturday, June 30, 1877.

## TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Fourth of July; The Wheat Trade, 401. The Week; Thoughts for Farm Laborers; The Coming Fairs, 408. Hints to Subscribers; The Celebration in the City, 409. The Coming Industrial Exhibition; A Successful Machine; Suspension Bridge in Mendocino County, 412.

ILLUSTRATIONS.—Independence Hall, Philadelphia, 401. The Patriot's Dream, 408. Heroes of the Celebrations; On the Way to the Celebration; Fireworks in the Early Times, 407. The Fourth of July by Moonlight, 409.

CORRESPONDENCE.—Mendocino County Hop Growing; Alkali Soils and Drainage; Santa Cruz County; Harvest Notes from Napa County, 402.

HORTICULTURE.—The Fruit Tree Phenomena; Fruit Trees at Riverside; Figs, 402.

ARBORICULTURE.—Durability of Timber, 402.

THE STABLE.—Breeding Horses for the Market, 403.

THE STOCK YARD.—The Herefords in Colorado, 403.

THE VINEYARD.—Shipping Wine; The Spanish Raisin Crop of 1877, 403.

THE DAIRY.—Dairying and Fertility, 403.

PATRONS OF HUSBANDRY.—Worthy Lecturer's Visits; Industrial Education and Industrialists; The Opportunity; Open Grange Meetings, 404.

AGRICULTURAL NOTES from the various counties in California, 405.

HOME CIRCLE.—The Greatness of Washington; The Peterkins Celebrate the 4th of July, 406-7.

QUERIES AND REPLIES.—The Abnormal Condition of Fruit Trees, 408-9.

SHEEP AND WOOL.—Wool and Mohair in Oregon, 410.

MISCELLANEOUS.—A Remarkable Monument; An Ancient Calendar; The Geographical Survey; A Coral Curiosity; A Bessemer Steel Bell, 410.

GENERAL NEWS ITEMS on page 412 and other pages.

## NEW ADVERTISEMENTS.

Bags, Tents, etc., Neville & Co., S. F.; Music Books, Oliver Ditson & Co., New York; Water Pipe, American Pipe Co., S. F.; Jack For Sale, Saxe's Stock Yards, S. F.; Fencings, Nellis & Co., Pittsburg, Pa.

## The Week.

The flight of the weeks brings the RURAL PRESS to the close of another volume. After the manner of merchants we have "taken account of stock," and the last page of this issue tells the story of our six months' work. A hasty glance over the finely printed columns will show what a variety of topics we have laid before our readers. We cannot but conclude that some of these different relations of fact, descriptions of practice, soundings of truth and touches of sentiment, must have come home to each reader as things meeting his or her needs, and thus endearing the RURAL PRESS to its patrons. This is one of the ends toward which we labor. We are serving a wide and diversified interest. We aim to come home to every reader's field, orchard, vineyard, dairy-house, stock-yard and garden, with the fresh contributions of men who are working and studying in all these lines of production, and with the results of our own earnest researches into the matters which are presented for our examination from all parts of the world. Passing beyond the facts of work and labors, we strive to bring to the homes of our readers a pleasant entertainment, never admitting even a shade of the evil in literature, upon which so many journals build up a demoralizing prosperity. As we look back through the closing volume we are conscious of having constantly borne in mind the high character and aim of our labors, and trust that the work has given evidence of the thought.

Ere the old volume is fairly on the shelf we address ourselves to the labors of the new volume. We can promise that it shall be in every possible way better than its predecessors. We are planning for new avenues of information and illustration. We are ready for more enthusiastic and unyielding effort in every direction which can bring to the RURAL PRESS more and more of the quality of usefulness in the field which it occupies. We ask also that all our friends help us in this our purpose and ambition. Friends have helped us nobly in the past and our earnest thanks are outstretched to each of them. Now but give us the kind hand and the firm shoulder once more. Help us during the next six months to win access for the RURAL PRESS into a thousand more homes. Do this and the RURAL PRESS shall show upon its face the improvement which your aid makes possible.

## Thoughts for Farm Laborers.

It would be both for the public good and his own if the farm laborer would indulge in calm, sober thoughts concerning the relations which exist between himself and his employer, and the conditions which will bring success or failure to each of them. It is, perhaps, too much to expect that a man who has had little advantage of education or leisure for reflection should, all at once, become a philosopher, but there are some things so plain and so easy to be attained by a simple and calm thought, that there seems no excuse for not possessing them. Let us mention a few of them:

It is evident that to better his condition, in short, to make the laborer his own master, he must so live that he may have, at the end of the year, some surplus from his earnings. If he have this he has something to build with. Year after year he can put his surpluses together until his money shall accumulate; just as the wall increases, stone on stone, or the coral reef grows, cell on cell. It will not be many years before there will be enough saved to make a payment on a small place which will become a home and the laborer will become a master.

As this desirable sequence can only follow from small and constant savings, it is evident that the method of hiring and laboring most in vogue in California does not give the laborer any chance for gaining it. To work a part of the year, to squander the earnings and tramp during the balance of the year, will never make a man anything but an outcast and a slave. To succeed as we have described, a man must work constantly, and his motto must be, while health and strength last, not to spend more than he earns each day.

But, says the laborer, it is easy for you to say work by the year, but how shall we get men to hire us by the year? Our employers keep us only when they cannot do without us and then we are discharged. This is no doubt true as a general rule, but where lies the fault? Probably the laborer waits around in idleness until the harvest work comes and then he refuses to work except at high wages, and the farmer is compelled to hire him because he cannot do otherwise. How long will a farmer keep a man under such conditions? Only so long as the man is absolutely necessary. In order to get work by the year the laborer's habit must be very different. He must see that the farmer can only use him at a low rate, and he must see, on his own part, that while he is assured his living through the year he can work for low wages and still be much better off than he can by working part of the year and squandering and tramping the rest.

We are fully convinced that if our farm laborers would consider their situation better and understand the real truths and possibilities of success which lie before them by permanent work and constant saving of little surpluses, they would not only transform themselves, but would have a most wholesome influence upon the agricultural practice in this State. We want more diversity of production. Our farmers need to produce more and buy less. They need to greatly increase the amount of labor and work upon the soil. They have in contemplation many permanent improvements which will increase their productive area or lighten the desirability of their property. It is evident that they cannot do this at the present rate demanded by laborers. All lines of farm production have shown division of price since the early times, but labor has done its best to retain the old-time figures. By so doing it has compelled employers to take just as little of it as they could, and has restrained that wholesome tendency to investment and improvement which would have flourished if our farmers could have had trustworthy assistance for long terms of service at wages which they could afford to pay. These are things for the laborers to consider. They must know that the habits which have prevailed largely among them have given them reputation for nothing but unreliability and utter disregard for their own best interests. All this must be changed. They must show employers that they consider their interests and his identical, and by constant service and the acceptance of such pay as the farmer can afford to give, they may lay the foundations of their own independence and prosperity.

There are many other thoughts in this connection which we might mention, but possibly our paragraph is already long enough to serve as a hint to those who need it. One thing more we would instance, and that is the conflict between different classes of labor. This phase of the subject has come up in a tangible form in the Colusa grain fields, and we quote from the Colusa Sun some sharp and eminently true comments: "We understand that some of our farmers have received anonymous notices that they must not employ Chinese labor. We want to have a little plain talk with those of our own race who expect to live by labor, or who now are seeking employment in the harvest fields in order to get a start in the world. Most of the present farmers of Colusa county have been day laborers like yourselves. We can count you a hundred, any day, whom we have known as laborers for other men, who are now well to do; some of them worth from \$10,000 to \$100,000. These men are not ashamed of labor, but on the contrary, are proud of the fact that they have worked themselves from the ranks, as it were,

up. They have no prejudice whatever against you; on the contrary, each one of them would be only too glad to give you a chance. While we must admit that the system of farming in this State works a hardship on those who depend on their labor, by reason of the work all coming on in a heap, you must admit that the character of the white labor which has been available for harvest work has been anything but reliable. The farmers of this county were absolutely compelled, about two years ago, to employ Chinese in the harvest field. Whole crews of men would leave them just as they were in the greatest need. There is not the slightest trouble now about any man getting employment who is known to be reliable, but you know, as everybody knows, that the farmer is justified by experience in not trusting a stranger's reliability. Now, as a reasonable man we ask you what are you to do to get yourself ahead? It is evidently first to get a reputation—that is the cash capital of the laborer, as well as the lawyer, the doctor, or the editor. Suppose you do not make anything while you are acquiring this cash capital? You have at least made that. Suppose instead of joining in with a crowd of lazy loafers to punish some farmer for employing Chinese, you take off your coat some day, walk into a harvest field and say to the farmer: 'I want to take the place of one of these Chinamen. I am not afraid of work, and as for wages, you can fix that to suit yourself after you have tried me. If I am not worth as much as a Chinaman, pay me less wages. If I don't earn my bread, kick me out of the field.' You would get a chance. Then commence to make your cash capital your reputation. Watch around and see if you can't make yourself a little more useful than a mere unintelligent machine. Make his interest your study, and if you don't soon find yourself in demand at good wages, we are the worst mistaken man that ever wrote an article."

## The Coming Fairs.

The season of the fairs is again at hand. Although the exhibitions have not the fullest possible support from the farmers, because their policies are not such as producers desire, still they are among the great events of the year in the regions where they are held. These fairs have within their possibilities very much that is of the highest importance to our farmers, and we trust that as the years go on their character may be more in accordance with their possibilities for good. We notice that in some cases our leading farmers are coming forward and speaking plainly their ideas of what an agricultural fair should be. They are consulting with the officers of the societies to secure modifications which will make the agricultural fairs truer to their name and to their proper purposes. This is now the case in Contra Costa county, and we trust the same method will prevail elsewhere. We think it is within the power of our farmers to make their influence sufficient to the needs of reform in the societies.

Another way to build up desirable qualities in a fair is to put special premiums in such shape that they must tend towards desirable ends. What could be more effective in awaking the young women to interest in housewifely arts than the steps which Hon. J. McMillan Shafter has taken with reference to the district fair held at Petaluma? The following is the official wording of Mr. Shafter's offers:

The following premiums will be given by Hon. J. McMillan Shafter, to any lady under 20 years of age, resident of this district, for the best average of the following:

Five pounds of wheat bread.

Five pounds of rye and corn bread.

Two pounds each of sponge, pound and fruit cake.

To be made by the exhibitor and baked by her in a common oven, without any assistance, and to be exhibited at 12 o'clock m. on the second day of the fair, Tuesday, September 25th, 1877.

First premium—Silver plate, not less than \$75 in value.

Second and third premiums—Not less than \$30 for both.

The district includes the counties of Sonoma, Marin, Napa, Solano, Mendocino, Lake, Humboldt and Yolo.

There is abundant time to prepare for competition for these premiums and we shall be surprised if such a display of "breadstuffs" is not made that will ever be memorable in five counties. The contest will not only mark the successful young lady with enduring fame, but by stimulating interest in these branches of domestic manufacture will so improve the quality of the bread and cake of the counties, that health and happiness will be greatly increased. If the other special and honorably productive features of the fair were built up as firmly as Mr. Shafter has endowed this specialty, we should no longer have reason to regret that all the interest of the people was in the ring and the pool.

THE PHYLLOXERA IN SPAIN.—The New York World has the following item showing that Spain's wine and raisin crops are endangered: "At the very moment that the Vinicultural Exposition of Madrid was being opened, the terrible news has been received of the presence in Andalusia vines of Rouda, in the Province of Malaga, of the dreaded *Phylloxera vastatrix*, and the have already suffered. The Minister of Public works has ordered the most vigorous measures to be taken for protection of Malaga, Xerez, San Lucar and Prada del Rey. The Province of Malaga's average annual export of wine is about 3,500,000 gallons."

ON FILE.—"Notes from Oregon," R. D. N.; "Lecturer's Visits," B. P.; "Women in the Grange," S. J.; Address from Potter Valley Grange; "In Memoriam," Sonoma Grange; San Jose Grange.

## QUERIES AND REPLIES.

### Abnormal Condition of Fruit Trees.

EDITOR'S PRESS.—To extend my views expressed in a former number of your paper, and give all the observations I have, would fill your paper; and I will start by presenting my view of the normal condition of the thrifty orchard.

First, then, what are the favorable conditions for tree and plant? I answer, in brief, a suitable amount of moisture in the soil, a proper amount of heat and moisture in the atmosphere, and a suitable soil. The best orchards I ever saw here or elsewhere, were on ground naturally retentive of moisture to keep the tree always in a thrifty condition, at the same time with a suitable subsoil and natural drainage, to carry off all surplus water. Of course much will depend on the kind of fruit to be grown; and also whether the tree is to be grown from its own root or from the bud or graft. The pear, like other trees, roots much deeper from the seed than on grafted roots, and this explains the reason given by one of your correspondents why such trees are doing well the present season. The roots go deeper for moisture, and the seedling tree will doubtless do better on such soil where irrigation is not resorted to. Pomologists generally assign the pear to a heavy, clayey soil that does not dry out. But this would be a fatal soil for the peach, cherry and other trees of spongy roots; and I may add the blackberry, among plants, of which I had the first 24 acres on this coast, and was obliged to plow up, as the land was retentive of water, without natural or artificial drainage, either of which would have been a fortune to me at the time. The last ten years of experience in irrigation has convinced me that we need to study more of the roots than the tops of the trees.

To return: the dwarf pear, grafted or budded on the quince, has more fibrous roots than has the standard tree, and comes into bearing sooner, and, as I believe, for that reason. If this be true it is the key to a knowledge of the reason why trees fail to fruit in extremely dry or wet seasons. The office of these little fibrous roots—these little sponges—is to absorb the fruit food. In a very wet season these little rootlets will die in heavy soil not well drained. Any one who is in the habit of removing trees from the nursery has noticed the discolored tips of their small roots when the ground has been saturated with water which it retained for any considerable length of time. In a dry season these little roots may die altogether if near the surface, and must always do so in a dry season following a wet one, unless mulching or irrigation is resorted to, to keep the moisture in the soil. The trees suffer from one extreme as well as another, and their healthful condition must be restored to restore them to productiveness. There are no mysterious freaks of nature other than the common laws of growth and production, which are founded on conditions. It is true the hot sun may destroy the blossoms after the fruit is set, as it has done this very month to much of the blackberry crop in this region. Further, after a wet season, the wood may not be fully ripened when the cold weather comes on, and the buds may be injured by the cold. But this is not a common occurrence on this coast, although it may be on the Atlantic slope.

Mr. Brier corroborated my views so well in the last number of the RURAL PRESS, so far as he went, that I only feel called on to give examples or illustrations.

One of your correspondents, in connection with this subject, speaks of "water sprouts" from irrigation. Irrigation and mulching will produce roots near the surface as well as "water sprouts." I find it impracticable to grow gooseberries or currants on heavy soil, for this reason: In a climate like ours in summer, as they must not be pruned in tree form or they would become a prey to the borer, too many suckers will come up, requiring too much pruning to pay at latter-day prices. I speak of this fact incidentally, as it will illustrate my experience in root growing, for the same rule will hold with regard to the tree that does to the plant. I have plowed up 14 acres of gooseberries in the last two years, and a half dozen acres of currants, while 15 acres of the latter remain to go the same way, for the reason above stated. In an article in your paper two or three years ago, I took the liberty to coin a word—*rootology*—as expressive of a hobby, if you so choose to call it, in treating that part of the tree that is in the ground, and I think I have enlarged and confirmed my views of roots, plants and trees by much dearly-purchased experience since that time.

Having hinted at the conditions favorable or unfavorable to the growth and productiveness of the tree and plant, I may add, if an argument were needed, that active manures, as well as soils containing much vegetable matter, will make vines, and is perceptible in potatoes, tomatoes, strawberries, etc., while those well composted will make fruit, the latter being in fit condition for the little fibers to appropriate.

I have said that the loss of rootlets is equivalent to a loss of fruit till new ones are formed. In further support of this assumption, let me say that even strawberries will die out from the effects of long-continued warm rains; notwithstanding, strawberries are a water plant. An overflow may cover a strawberry plantation ten feet deep with cool water and not hurt them. Indeed, they will grow in the water. We may cut the roots off and suspend a plant over a



glass of water just above its surface and it will throw its roots down into the water. It follows from this, that strawberries have their roots rotted off in a long, wet winter and a small crop of fruit follows. I have renewed fields of these injured plants by changing the ditches with the plow, partially covering up the plants so they would make new roots. As with the tree, if the ground had been loose and leaching, the roots would not have died from the extreme of wetness but of dryness; and while I would not look for fruit in either case, the amount of foliage I should expect would depend on the nature and character of the soil down deeper into which the roots had penetrated for moisture.

To prove that anything that checks the growth of the tree will tend to its fruiting, I refer the reader to the practice of the French amateurs, who tie down the limbs of pear trees by strings and weights so as to check the flow of sap. And I attribute the early bearing of trees on this coast to effects of the climate, mainly, if not wholly, to the flow of sap being checked in the dry weather, which causes the fruit buds to develop for the coming year.

I have frequently noticed the development of fruit buds on currant cuttings the year they were planted, the wood having hardened, or ripened, as we call it, by dry weather, followed

This year that orchard has had an abundance of foliage, but is minus the fruit. There can be nothing more certain than that the orchard has not the roots near the surface that should have been produced by the abundant rains of the previous rainy season. Although this orchard was for some years under irrigation, and has undoubtedly lost its surface roots, it still lives and thrives in a favorable season. By again irrigating this orchard I could make new roots near the surface, and nature will do the same always if the conditions are favorable.

In conclusion it will be inferred, from what I have written, that if the orchardists of the southern coast would dig down to the roots of their orchards, they would find the fruit-feeding if not the vital parts out of order.

Already I am restoring plum trees to foliage and some to fruitfulness by repeated irrigation, but I expect the fruit will be inferior, as the health of the tree is impaired.

I. A. WILCOX.

Santa Clara, June 25th, 1877.

#### Hints to Subscribers.

The times are hard in the experience of many of the farmers of our State. Many have no

ful lessons. A man cannot learn them all through his own observation. He needs the aid of all other observers. This he gains through the RURAL PRESS. Through our columns farmers compare notes of experience and all are benefited. There is no newspaper in the United States which has a better corps of correspondents than the RURAL PRESS. There is no paper which can show a community of readers who are so ready to help each other by voluntary statements of valuable points in experience and research. Can a reader afford to cut himself aloof from this aid and pleasure, which is his to command upon any important subject? The testimony of thousands of our readers, written and spoken, says: No.

The times will only be hard for a few months. Redoubled good succeeds the evil in our climatic conditions. It is time now to begin preparations for a season of unusual prosperity. We have all experience to indicate that the husbandman may expect seed time and growth time and harvest of most propitious character during the season which will soon begin. Let no effort be relaxed! Let no courage fail! Let every sense be alert to catch working points for the year to come, so that all its favor may be garnered. To aid you in work for good seasons as well as bad, the RURAL PRESS stands ready with the wis-

#### The Celebration in the City.

Active preparations are being made by the different committees having the matter in charge, for a successful celebration of the Fourth of July in the city. The feature of the day will be, of course, the procession. The military companies, are, as usual, all ready for the parade and a large number of the societies of the city are also making preparations, having signified their intention to turn out. The procession in San Francisco has always been a success and there is no reason to believe that there will be any exception this year.

The literary exercises will take place at the California theater. Henry George has been chosen as orator of the day; Geo. H. Jessop, poet; and Henry Edwards, reader of the Declaration of Independence.

There will be no exhibition of fireworks in the evening, experience having proven that the winds prevailing at this season of the year are apt to spoil the exhibition and also add to the danger of fire. The Board of Supervisors have before them an order amending the present ordinance prohibiting the discharge of cannon and



THE FOURTH OF JULY BY MOONLIGHT.

by a second growth. Fruit trees, on this principle, or from extra tillage, often put out blossoms for a second crop. But, do you ask me, what of your root theory? I answer that anything that checks the growth of trees, so far as we can judge of them, not only produces fruit buds but also root fibers, provided there is sufficient moisture to grow them; and my observations confirm the assumption that the tree cannot thrive and bear well till these lost rootlets are succeeded by others. I think this conclusion is in harmony with the facts of abnormal growths of trees, so far as we can judge of them from your numerous correspondents on the subject.

If more proof were needed I would refer to the old orchards in other States, which must assuredly lose their rootlets as the trees become old. For all persons who are at all conversant with trees, must know that any injury to the roots of a tree, from any cause, will show itself in the tree above ground—in other words, at the ends of the limbs. When the circulation is not full all through the root, it cannot be above.

Let me refer to a large orchard in my immediate neighborhood, and I will dismiss the subject. Last year Mr. Watkins's orchard, at Santa Clara, was denuded of most of its foliage by caterpillars. The orchard is on dry land and undoubtedly is deep-rooted on that account; in fact, must have been or it would have died.

crops, and many others will have to spend more than the outcome from the season amounts to in efforts to maintain themselves and their stock until the next season's plenty comes. Notwithstanding these unfavorable times, the RURAL PRESS rejoices in the fact that it has continued to receive gratifying support from those whose interests it serves. It is assurance of the strength of our position as a help to the farmer. It is testimony that the RURAL PRESS is looked upon as a friend even in adversity—a friend in need, a friend indeed.

While we have no reason to complain at all at the treatment which we have received, we must take the present opportunity to say a word to any reader who may think the times are too hard to allow him to continue the RURAL PRESS. The price is \$4 for a year. It is a small sum. It cannot add but a trifle to embarrassment at the worst, and it contains so many hints in each issue for ways to act wisely in the many new affairs which are coming up for action, that it may make the reader's fortune by suggesting points which he might have never known or overlooked. This season is against the farmer in many ways. Such being the case, it is plain that he must work closer. He must pay more than customary attention to the details of his business. He must study what to do under the novel conditions which govern him. This season has been full of fruit-

dom of thousands to meet your doubts and your inquiries. The RURAL PRESS is not a thing of individuality. It is an institution supported by the farmers of the Pacific coast for their own benefit and information. It reflects their progress, it embodies their advancement, it records the items of successful practice. A man who cuts off the RURAL PRESS removes himself from the assistance which such an institution is always ready to afford.

No, it will not be wise economy to hold back the \$4 from the RURAL PRESS. Rather practice the economy on some luxury or indulgence which endures but a moment and then passes away. Do not refuse yourself and your wife and children the profit and enjoyment of that weekly mirror of home and farm life—the PACIFIC RURAL PRESS.

MINNESOTA'S MILLING PROGRESS.—The Tribune says: Minneapolis has handled 5,250,000 bushels of wheat during the past year, but sent abroad only 480,000 bushels. The rest of it came down to the sea coast in the form of barrels of flour, branded with gilt edges as "Sea Foam," "Red Letter," "Old Glory," and other imaginative titles in which the millers there take delight, and Minneapolis is accordingly \$3,000,000 richer for having manufactured her raw material instead of having to export it

fireworks, so as to include all kinds of fireworks in the prohibition, within city limits. An addition has been made to the order declaring it the duty of the Chief of Police and every member of the Department to enforce the ordinance. It is expected that this order will be passed on Monday night. The order will be rather hard on the boys, as it will prevent the indulgence in the time-honored customs of burning firecrackers and making more noise than on ordinary days. The Board of Fire Underwriters has sent out a circular letter to the agents of the companies on this coast, directing them to use all their efforts to restrict the use of fire crackers and dangerous explosives on the Fourth of July, and to see that the fire apparatus in all the towns is in good working order.

Chief Ellis has made application to the Board of Supervisors for authority to appoint 250 special policemen for duty on the Fourth.

The route of the procession will be as follows: Start from corner of Folsom and Third streets at 10 A. M.; thence to Market street, to Montgomery, to Montgomery Avenue, to Kearny, to Market, to Seventh, counter-march on Market to Powell, to Sutter, to Kearny, to Bush. At this point the procession will break up and those who desire to attend the literary exercises will go to the California theater. The Brigade review will come off before the procession forms, at 9.20 A. M., the line forming on New Montgomery street.



## SHEEP AND WOOL.

## Wool and Mohair in Oregon.

We gain from the *Willamette Farmer* some interesting facts and statements concerning this branch of the new State's growth: At the Oregon State census taken in 1875, the number of sheep in the State was given as 530,000, and the wool clip of that year at a trifle less than 2,000,000 pounds. With two successful years since that time and the usual increase, the number of sheep should now be very nearly 1,000,000 and the wool clip of the present year considerably over 3,000,000 pounds.

The climate of all the Columbia river region is excellently adapted to sheep husbandry. It was supposed that wool from Eastern Oregon and Washington would be injured by the prevalence of alkali in the soil, but manufacturers who have used it report favorably, and the present year the price offered for Eastern wool is not so strongly in contrast with that paid for wool from the Willamette valley.

In the rich farming districts of the Willamette valley farmers cannot afford to keep, as of old, large bands of sheep, the land being so valuable for wheat culture, but the value of sheep is so great for fertilizing the soil and especially for cleaning as well as enriching summer-fallow, that every wheat farm must have enough sheep to accomplish this result to be fully successful. As a consequence of this the farmers of the Willamette valley will be apt to keep small but choice flocks of sheep and use care to improve them so as to realize the best quality of wool, coupled with the heaviest fleeces. This system carefully pursued for a number of years will tend to improve the breed of sheep and the character of wool through the whole State. The Willamette valley can and should become the experimental ground for the sheep husbandry of the whole State. A man who owns thousands of sheep has not the opportunity for careful experiment that is afforded the owner of a well improved farm in this valley, with fields to change them to, stubble and summer-fallow, as well as ordinary pastures, and shelter from storm. It is then possible for many experiments in crossing breeds and improving wool to be tested by Willamette farmers, and it is very necessary that such tests should be made. The success of the Merino sheep is established, but it may be also shown that a heavier-bodied, long-wooled sheep will yield more profitable fleece and furnish better mutton. The circular recently sent to Oregon from Justice Bateman & Co., of Philadelphia, well known and reliable commission merchants in the wool trade, sets forth the excellent reputation gained for Oregon wools at the Centennial; shows the superior value of combing wools that are so easily produced in Oregon, and intimates that there will be strong competition among Philadelphia manufacturers for our wool.

The demand for mohair is said to be permanent and its value assured, so those who have brush land (and there are millions of acres in the valleys and foothills and on the coast) can afford to give the goat a fair trial.

There is a small band of choice goats near Salem that the owner expects will average at least \$2.50 per head for each fleece. We confess that we have always taken the stories told about goats and the profits of goat raising with many grains of allowance, until the experience of those engaged in breeding them warrants the conclusion that they possess great value, both for subduing brush lands and for the value of their mohair.

**A REMARKABLE MONUMENT.**—The Department of State at Washington is in receipt of a letter from Gen. John Meredith Read, Charge d'Affaires at Athens, reporting the discovery by M. Stephen Commanderis, the leading Secretary of the Archaeological Society of Athens, of the monument mentioned by Thucydides, as having been erected by Pisistratus, son of Hippas, and grandson of the tyrant Pisistratus. The stone, which was lying neglected on the right bank of the Ilissus, southwest of the temple of Jupiter Olympus, bears an inscription, of which the following is the translation: "This monument, upon his advent to power, Pisistratus, the son of Hippas, has dedicated in the Temple of Apollo Pythius." The discovery of this remarkable stone fixes the site of the temple of Apollo Pythius, which was hitherto unknown. The monument has been purchased by the Archaeological Society, and will be immediately transferred to the museum of Varvakeion.

**AN ANCIENT CALENDAR.**—In digging near Cere, Rome, there has been discovered a superb marble fragment of an ancient Roman calendar, containing the second half of the first five months of the year. Beside the usual indications of days, feasts and the different games, there is a list of the principal solemnities; some of these last are quite new; others confirm conjectures which have been made by learned men on less certain indications. The most recent date which can be read is that of the dedication of the Altar of Peace by Augustus in the 745th year of Rome.

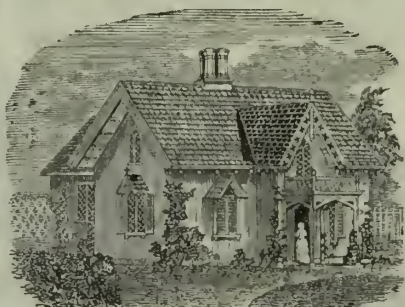
The war is already benefiting American shipmasters, as for long voyages merchants prefer chartering flags not likely to become embroiled in the present war.

**THE GEOGRAPHICAL SURVEY.**—Major Powell, U. S. A., in charge of the geological and geographical survey of the Territories, has already sent out five parties, all of which are at work in Utah Territory. The triangulation party, under Professor Thompson, is located on the eastern slope of the Wahsatch mountains. Three geographical parties, under Messrs. Renshaw, Wheeler and Grover, are pretty busy prosecuting their work on the Uintah, Price and Lower Green rivers, and a geographical party under Captain Dutton, of the Ordnance Department, U. S. A., is located on the central plateaus. Major Powell will leave here about the 1st of July for the field, and in the meantime two other parties will be fitted out for work this season, one of which will make a specialty of the subject of irrigation in Utah. It is expected that the geographical work in eastern Utah, which has been prosecuted with vigor for some years past, will be finished this season. The survey now being made of the Pacific coast by the United States Engineer Corps, comprises all the country lying between the British possessions on the north, the boundary line of Mexico on the south, the Pacific ocean on the west, and the meridian of 100 degrees on the east. The work so far completed includes the survey of about two-thirds of Arizona, nearly the whole of Nevada, and a portion of New Mexico and Colorado. The extension of the Southern Pacific railroad to Yuma has offered such additional facilities to the survey party that the survey of Arizona will be rapidly carried on and soon completed. A number of topographical atlas maps have been prepared, embracing each an area of 80 square miles, showing the drainage basins of the different sections and the several elevations of the various mountains.

**A CORAL CURIOSITY.**—A Melbourne journal describes a remarkable piece of coral taken from the submarine cable near Port Darwin. It is of the ordinary species, about five inches in height, six inches in diameter at the top and about two inches at the base. It is perfectly formed, and the base bears the distinct impress of the cable and a few fibers of the coil rope used as a sheath for the telegraphic wire still adhering to it. As the cable has been laid only four years, it is evident that this specimen must have grown to its present height in that time, which seems to prove that the growth of coral is much more rapid than has been supposed.

**A BESSEMER STEEL BELL.**—The *Bethlehem Times* says, probably the first Bessemer steel bell ever cast now hangs in the belfry of the Presbyterian church, in that borough. This bell was cast in the Bessemer works of the Bethlehem Iron Company and weighs but 53 pounds. Its tone is clear and pleasant.

## CENTRAL CALIFORNIA COLONY.



**BEWARE OF DRY SEASONS!**  
Cultivate Irrigated Land and Get Two Crops a Year. No Failure.

Irrigated Land for sale in quantities to suit, on the installment plan: four years' credit, no interest charged. NO CHARGE FOR WATER FOR IRRIGATION. On railroad, only nine hours from San Francisco. Adapted to the growth of oranges, lemons, figs, prunes, raisins, almonds, etc., and all vegetable productions.

**THE BEST ALFALFA LAND IN CALIFORNIA.**  
Contracts made to plant trees and vines and take care of the same at small cost per annum until purchasers desire to take possession.

**The Most Successful Colony in California.**  
Also, land for colonies, for investment, for sheep ranches, for cattle ranches, for wheat farms, etc., for sale at low prices and on easy terms of payment.

**WANTED.**  
Active agents in every town and village in the United States to form colonies to come to California. Liberal inducements offered. Correspondence solicited. Send for maps and circulars to

M. THEO. KEARNEY, Manager.  
306 Pine Street, San Francisco.



Use no more Metal Trusses! No more suffering from iron hoops or steel springs! The Patent Magnetic Elastic Truss is worn with ease and comfort NIGHT AND DAY and will perform radical cures when all others fail. Reader, if ruptured, try one of our comfortable Elastic Appliances. You will never regret it. Send for Illustrated Book and Price List. MAGNETIC ELASTIC TRUSS COMPANY, 609 Sacramento Street, San Francisco.

## MONEY TO LOAN

UPON CHOICE RANCH PROPERTY.

JNO. D. HOOKER,

302 Montgomery Street, San Francisco

50 FINE CARDS, Damask, Repp, Etc., with name on, 13 cents. CLINTON BROS., Clintonville, Conn.

Call and See them or Send for Descriptive Price List. Sent by Express to any part of the Pacific Coast.

DEWEY & JORDAN,

No. 433 Montgomery Street, San Francisco.

NEW YORK WATCH CO'S FIRST CLASS AMERICAN WATCHES, FROM SPRINGFIELD, MASS.

## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents

OFFICE, 224 SANSOME STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarried, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 224 Sansome St., S. F.



SEEDS. SEEDS.  
IMPORTED.  
Crosby's Extra Early  
Marblehead Mammoth  
Stowell's Evergreen  
Mexican Sweet, New  
Early Canada } Sweet Corn.  
Early Dutton }  
Long Red Mangel Wurtzel } Beet Seed.  
Yellow Globe }  
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,  
No. 317 Washington Street, San Francisco

R. J. TRUMBULL,  
Grower, Importer, Wholesale and Retail Dealer in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYR- INGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Trade Price List on application. My "Guide to the Vegetable and Flower Garden" will soon be ready, and will be sent FREE to ALL CUSTOMERS. It will contain instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Tobacco Alfalfa, etc.

R. J. TRUMBULL,  
419 and 421 Sansome Street, S. F.

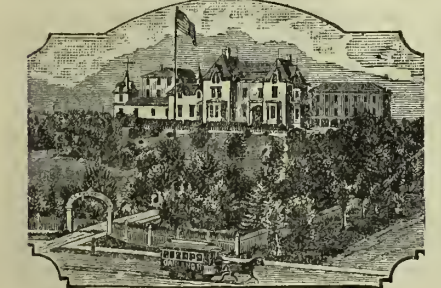
THOROUGHbred FOWLS,  
BRONZE TURKEYS,  
Pekin Ducks, Embden Geese,

PLYMOUTH ROCKS Eggs Shipped to  
EGGS, \$6.50 per doz. Any part of the  
BRAHMAS } \$5.00. Coast to Hatch Af-  
LEGHORNS } ter Arrival.

Send stamp for Price-List. Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., adapted especially to the Pacific coast; price 10c. Address,

M. EYRE, Napa, Cal.  
Also, Thoroughbred Southdown Sheep.

CALIFORNIA



MILITARY ACADEMY.

For circulars, address  
Rev. DAVID McCLURE, Principal,  
OAKLAND, CAL.



What are your symptoms. Sufferer? Are they a fur- red tongue, dizziness, headache, an uneasy stomach, oppres- sion after eating, pain between the shoulders, constipation? If so, you are dyspeptic and bilious, and nothing will meet your case so efficiently as TARRANT'S EFFERVESCENT SELT- ZER APERIENT. For sale by the entire drug trade.

PACIFIC RURAL PRESS,

A first-class 16-page Illustrated Agricultural Weekly, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is im- mensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

Choose a good companion only—one of Dewey & Jordan's "New York watches."

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT). JOHN LEWELLING, (TREASURER). W. L. OVERHISER.  
A. D. LOGAN, (VICE PRESIDENT). G. W. COLBY. A. T. HATCH.  
AMOS ADAMS, (SECRETARY). I. C. STEELE. O. HUBBELL.

W. W. GRAY.

THOS. FLINT

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

In consequence of spurious imitations of  
LEA AND PERRINS' SAUCE,  
which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

Lea & Perrins

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.  
Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

JOHN H. GOVE'S  
CENTENNIAL HAY PRESS.

Farmers and Hay Pressers will find it to their advantage to examine this Press before buying any other. It is built compact, combining lightness for moving with the greatest power and durability in its working parts, capable of making the average 250 pound bale, more or less, baling 10 to 15 tons per day, with three men and a pair of horses, they traveling only 36 feet to operate it. No excavations required for this press. This is the original Gove Press improved, after an experience of building Presses in the States the past 15 years, where they gave the best of sat- isfaction. Price, No. 1, \$250.

Manufactured and for sale, or built to order, at the Eureka Grain Storage Warehouse, by

JOHN H. GOVE or ANDREW J. GOVE, Box 1122.

Also, for sale by DAVID N. HAWLEY, Agricultural Warehouse, 211 Market Street.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$5,000,000.

OFFICERS:

PRESIDENT AND MANAGER....C. J. CRESSEY.  
VICE-PRESIDENT.....JOHN LEWELLING.  
TREASURER.....J. V. WEBSTER.  
CASHIER.....ALBERT MONTELLIER.  
SECRETARY.....FRANK A. CRESSEY

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now pre- pared to buy and sell Exchange on the Atlantic States at the best market rates.

Buy N. Y. Watch Co's  
Superior Watches.

C. H. DEWEY. GEO. JORDAN.  
DEWEY & JORDAN,  
DEALERS IN

Watches, Jewelry, Silverware,  
Etc., Etc.,  
No. 433 Montgomery St., near Sacramento,  
SAN FRANCISCO.

Fine Jewelry made to order. Complicated Watches repaired.

American Watches a  
Specialty.

Newspaper Fileholders.

Dewey's new elastic fileholders (black walnut), size of the PRESS, Harper's Weekly and Scientific American, 1c. 50 cents. Larger sizes to suit any newspaper, 75 cents. By mail, postpaid, 10 cents extra. Cash with all orders. Patent allowed. Address, DEWEY & CO., Pub- lishers, San Francisco.

Buy the Best.

Before purchasing an American Watch, examine the different styles manufactured by the NEW YORK WATCH COMPANY, at Springfield, Mass. They are the latest and best improved manufacture. You can depend upon them for fine finish, durability and perfect time. They are sold at favorable prices—in fact, no higher than many of the inferior styles. Examine into the merits of this Watch before you buy any other. Our word for it, you will not regret it.

DEWEY & JORDAN, Agents,  
433 Montgomery St., S. F.

London Assurance Corporation,  
OF LONDON, ENGLAND.

Established in 1720.

Cash Assets - - - \$14,993,466

Western Assurance Company,  
OF TORONTO, CANADA:

Incorporated 1851.

Cash Assets - - - \$1,576,307

CROSS & CO., Gen. Agents, San Francisco.

ANTIOCH FERRY.

Notice to Stockmen and the public In general that a good Ferry Boat has been put on between Antioch and Collinsville by the California Transfer Co., and are prepared to move stock in lots to suit, as a large barge is connected with the boat. For particulars apply to the Company's office, at

519 East Street, San Francisco.

W. R. FIRMAN, Antioch. WM. HARKINS, Collinsville

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breed- ers of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

P. STANTON, Sacramento, Cal., breeder of choice Jersey Cattle. Bulls, Cows and Calves for sale.

W. L. OVERHISER, Stockton, Cal. Breeder of Durham Cattle, Spanish Merino Sheep and Berkshire Swine.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

B. F. WATKINS, Santa Clara, breeder of thorough- bred Spanish Merino Sheep.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

LANDRUM & RODGERS, Watsonville, Cal. Im- porters and breeders of Pure Breed Angora Goats.

POULTRY.

ALBERT E. BURBANK, 43 and 44 California St., S. F. Fancy Fowls, Pigeons, Rabbits, Etc.

J. M. KERLINGER, Ellis, San Joaquin Co. Selected Pure Bred Brown Leghorns and Pekin Ducks and Eggs. Write for reduced price list.

M. FALLON, corner Seventh and Oak streets, Oak- land. Bronze Turkeys. Choice Eggs for Hatching from Pure Bred Fowls.

MRS. L. J. WATKINS, Santa Clara, Cal. Pre- mium Fowls, White and Brown Leghorns, S. S. Ham- burgs, L. Brahmas and B. B. Red Game Bantams. Also Eggs.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal., Breeder of Improved Berkshire Swine.

PETER SAXE & SON, Importers and Breeders of English-Kentucky Berkshires, all ages. Perfect pedi- grees. Cor. 9th and Howard Sts., San Francisco, Cal. N. B.—Largest Importers and Breeders in the U. S.

To Wine Manufacturers.  
GRAPE CRUSHER AND STEMMER

We would call your attention to the machine patented by C. Wadhams. It has capacity—according to size—to crush and stem grapes for from 5,000 to 10,000 gallons of wine in ten hours. It can be worked by any motive power. It stems the grapes better than by hand, saving the labor of three men for every 1,000 gallons of wine, and does not crush or bruise the stems, from which so much deleterious matter comes. It causes the juice to fall through the air like rain, so as to absorb all the air in it that can be desired, increas- ing the temperature, and insuring a rapid and effective fer- mentation. It does not bruise or crush the seeds, nor does it even loosen the envelope of the seeds, which is astringent and greasy. It produces five per cent. more wine than by any other mode, because the grapes are crushed so com- pletely that the liquid easily separates from the solid parts. In making red wine, the color of the skin dissolves much quicker, and the fermentation is perfected before the new wine has time to become too astringent by a prolonged con- tact with the marc. It crushes all the grapes evenly, the small and tough berries as well as the large and fresh ones. The machine cannot easily get out of repair, being made strong and durable.

The above reasons were given by M. Keller, Los Angeles, after having made 200,000 gallons of wine with one machine, thoroughly testing its merits. In making 75,000 gallons it will save enough to pay for the machine and a horse power to run it, saving nothing of the five per cent. more wine saved.

Address WM. G. WENDELL & CO.,  
No. 321 California Street, San Francisco.



MOUSTACHE PROTECTOR.

Will fit any Cup. Gents' Delight. Boss Novelty for Agents. Big to sell. Gents must have it. Ladies buy it for them. Only 25c by mail. Circulars free as air. Storekeepers, let me whisper to you, C. H. BARROWS, Patent tee, Willimantic, Conn

TO FISH RAISERS.

I am now ready to sell "Carp" which were imported from Germany in 1872, in lots to suit.  
Address J. A. TOPPE, Sonoma, Cal.

Dutcher's Lightning Fly Killer.

Dutcher's Dead-Shot for Bed-Bugs.

Try them, and Sleep in Peace.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



## The Coming Industrial Exhibition.

We are assured by Mr. Culver, Secretary of the Twelfth Industrial Exhibition under the auspices of the Mechanics' Institute, that the coming fair promises to be the most successful ever held in this city. Already there have been more applications for space than ever before, and the number of exhibitors will be largely in excess of any previous fair. There will be a number of very fine exhibits in different classes which will eclipse former efforts.

The exhibition will open on August 7th, and be continued for one month. The Pavilion will be open for the reception of articles on and after July 16th. The Board of Directors have purchased the large engine which furnished power last year, and will continue to use it for that purpose; of course no charge will be made for power. The engine will be in operation for one week previous to the opening, and exhibitors of machinery will be required to have their machines in running order on that day.

This year premiums are to be awarded for the first degree only, as no second-class premiums will be given. It will be understood that while one class may be considered superior in merit to another class, yet the awards made will be for the best in that class to which the article receiving the award belongs. A copy of the award of the jury, certified to by the proper officers, will, in all cases, be given when demanded, and no fee charged. In cases where cash constitutes the premium, the awards will vary in accordance with the value of the exhibit.

A very good feature, if carried out, will be that of experimental tests and trials with mechanical devices competing for awards. These trials always excite considerable interest, and put the competitors in a position in which they must show true merit, or "take a back seat." As only one premium is given, as stated above, the article in any special class winning the medal will be the best in its class. Therefore, as an advertising proposition alone, it behooves manufacturers and agents to begin to get ready their machinery as soon as possible, so as to have everything in first-class order.

The dull times in business which have been felt lately among us have not been at all detrimental to the interests of the coming exhibition; in fact, the reverse has been the case. In many instances previously people have failed to exhibit, giving as an excuse that they did not have the time to spare to arrange any display. Of late, however, business generally has been so dull that there has been plenty of time for preparation, and as it is known there is always a good attendance of visitors at the fair, those likely to exhibit know they can have no better opportunity of bringing their names and wares before the community. Accordingly a much better and longer display than usual is expected.

Messrs. Dewey & Co. have been awarded the privilege of publishing the *Fair Daily* again this year, and are preparing to get up a first-class paper, devoted to the interests of the Twelfth Industrial Exhibition. The experience of this firm in this particular field warrants the assertion that the *Fair Daily* will as usual be favorably received by exhibitors and visitors.

## A Successful Machine.

We are pleased to know that the agricultural implements which we introduce to our readers by illustrations and descriptions are found suited to their uses. About a year ago we gave an illustration of the new Walter A. Wood self-binding harvester, which is represented on this coast by Frank Bros. & Co., of San Francisco, Sacramento and Portland. We found the other day in an Eastern exchange an account of a large sale of these machines. It is as follows, from the *State Journal* of Madison, Wisconsin: "Probably the greatest sale of harvesting machines ever made in the United States, at any one time, for any one firm, has just been made by Fuller, Johnson & Co., of this city. Oliver Dalrymple, of St. Paul, who has 8,000 acres in wheat, in the Red river valley, has bought from Fuller, Johnson & Co. 31 Walter A. Wood self-binding harvesters. Dalrymple had 10 of these machines last year, with which he harvested the 1,300 acres he then had in grain, so that he knows just what he is about. The 41 machines are expected to harvest the 8,000 acres and do it up in good season, being about 200 acres to each machine. We understand that Mr. Wood has just filled a cash order for binders to go to Australia and New Zealand amounting to about \$100,000 in gold. This order resulting from a few binders sent out on trial last season."

Reading the above we thought to make inquiry of the success of the machine on this coast. Frank Bros. & Co. (who, by the way, include as their "Co." the firm of Fuller, Johnson & Co. mentioned above) informed us that they had met with like success with the self-binder. Their branch house in Portland had sold 60 machines and then telegraphed for all that could be spared from the San Francisco depot. There were, unfortunately, but two which were not covered by orders. They also had an order for 12 of the machines from New Zealand which they could not fill. Thus it appears that the machine is taking as well on this coast as in Wisconsin.

A FEARFUL tornado occurred in Iowa, Missouri and Illinois on Sunday night, destroying a great deal of property.

## Suspension Bridge in Mendocino County.

Mr. R. W. Gorrell, Treasurer and Engineer of the Pacific Bridge Co., gives us the following particulars of a new steel wire suspension bridge which he is erecting in Mendocino county for Mr. W. R. Miller. It is located at Cottonville, on the coast, and extends from the main land to a rocky island where a chute is to be built for shipping lumber.

The distance from center to center of the saddles on the towers is 270 feet. The deflection or fall of the cable is 23 feet, six inches. The cables are built in the same manner as those of the Clifton bridge, at Niagara. The steel wire is about No. 11 Birmingham gauge, and is protected against rust by immersing in a bath which gives it a fine coat of zinc. There are 11 wires in each strand, seven strands in each one and one-half inch rope, and seven ropes in each cable. The ropes are not twisted together to form the cables, but gathered up every six feet by the suspender bands. Each rope is warranted to bear a strain of 60 tons. Each rope is made fast to an independent anchor-bar, one by three inches in diameter, and forming links 18 feet long, until connection is made with the anchors. The anchors are of cast iron, three and one-half by three feet in surface, weigh 1,000 pounds each, and are placed 14 feet below the surface of the rock.

Great care was taken in securing these anchors in place by means of cross beams which run under the rock on either side. The lower part of each pit was enlarged so as to form a hemispherical chamber, and the rock-work, set in Portland cement, which is built upon the anchor, is so constructed that the upward strain is transmitted to its sides. The towers are of redwood. There are four posts 10x10 inches, and two 10x12 inches, giving an effective area of 640 square inches to withstand the strain of the cable on the tower. The wooden truss to prevent vertical vibration is eight feet high and of the Howe truss pattern. The 270 feet of the bridge is divided into 45 pannels. The longest suspenders, 44 in number, are of seven-eighths inch steel wire, the 42 shorter ones are of one and one-eighth-inch solid iron.

The estimated dead load of the bridge is 1,000 pounds per linear foot; live load, one ton per linear foot; in all, one and one-half tons, or one-fifth of actual breaking load. The bridge will be completed in about 30 days, and promises to be a structure which the builders may well be proud of.

We were shown a portion of an iron bar from the Ashtabula bridge, which was so crystalline in its structure that probably not one-twentieth of its substance had any greater strength than pig iron. This unfavorable condition was undoubtedly produced by the rearrangement of the molecules, produced by the vibrations of the bridge under passing trains and changes of temperature. Mr. Gorrell prefers a combination of wood and iron in the truss bridges, as the elasticity of the former saves the iron from the severe strain which is put upon it when all parts are rigid. He also insists upon a factor of safety of five in ordinary bridges and six for railways. We hope to illustrate this subject with a good cut of the bridge and some of its more important details before long.

THE RURAL PRESS IN NEW ZEALAND.—The *Russian River Flag* of last week has the following item: About a year ago we published an item stating that Eld. R. Corbaley had discovered a new variety of blackberry. The San Francisco RURAL PRESS copied the article; a short time afterward a subscriber in Central New Zealand sent a letter to Mr. Corbaley via RURAL PRESS and *Russian River Flag*, asking the Elder to send price of slips from the new variety, as he must have some. Mr. Corbaley has been interviewed and the information forwarded. The new variety was discovered as follows: Mr. Corbaley, while traveling along the lower Dry Creek valley one day, observed a very fine wild blackberry bush. He transplanted it, and the berries have grown larger and better with cultivation. They are not quite so large as the Lawton, and have been bearing since the 10th of May.

HAY FORK PATENTS.—The Cleveland, Ohio, *Herald* says: In the case of A. J. Nellis vs. the Ashland Fork Manufacturing Company, in the United States Circuit Court for the Northern District of Ohio, a decree has been entered in favor of the patents, and an injunction issued against the defendants enjoining them from making and selling the Harris Double Harpoon horse hay fork. We notice from the court records that there are over 100 suits now pending for the infringement of these patents, against parties in the State of Ohio. Evidently the owners of the patents are determined to protect their rights.

CHINA SILKWORMS SUFFERING.—Private advices from Shanghai report a disaster to the silkworms, the result of a sudden unfavorable change in the weather, that will cause a deficit of 35 per cent. in the yield as compared with the previous seasons. Estimated exports for the season have been reduced from 80,000 to 55,000 bales.

The proprietors of the Sturtevant house, New York, announce that they will have no bills against army officers who may become guests of the hotel until after Congress votes an appropriation for the army.

## Signal Service Meteorological Report.

Week Ending June 26, 1877.

HIGHEST AND LOWEST BAROMETER.						
June 20	June 21	June 22	June 23	June 24	June 25	June 26
30.02	30.07	30.07	29.97	29.94	29.92	30.06
29.93	30.03	29.95	29.86	29.88	29.90	29.99
MINIMUM AND MAXIMUM THERMOMETER.						
63	63	68	71	68	64	65
52	53	55	55	55	53	52
MEAN DAILY HUMIDITY.						
72	74	65	61	62	66	77
PREVAILING WIND.						
SW	SW	W	SW	W	W	W
WIND—MILES TRAVELED.						
335	270	271	214	235	260	440
STATE OF WEATHER.						
Fair.	Cl'dy.	Clear.	Clear.	Clear.	Clear.	Cl'dy.
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1876, 11.03 in.						

## General News Items.

ROBERT DALE OWEN died at Lake George on Sunday last.

NEARLY all the silk weavers at Paterson, N. J., are out on a strike.

THE Turks and Russians are having some very lively fighting on the Danube.

THE Chico soap factory has been burned again. The incendiaries have not been caught.

FOURTEEN "Mollie Maguires" were hung on Thursday of last week in Pennsylvania.

THE Lick monument is to be set up at once in the cemetery at Fredericksburg, Lebanon county, Pa. It contains seven large statues, and cost \$20,000.

THE court of inquiry into the loss of the steamship *City of San Francisco* have rendered a decision depriving Captain Waddell of his certificate as Master for a period of 12 months.

A DISPATCH from Omaha says that Sidney Dillon and Jay Gould have returned from the West. It is said on good authority that the road to the Black hills will not be commenced this year.

THE PALACE RESTAURANT, J. V. Webster, proprietor, is a first-class eating establishment. It is a model of neatness and the best place we know of for good living. Try it. No. 218 Sansome Street, between California and Pine.

WOODWARD'S GARDENS has the following new attractions: The buffalo chase; large whale skeleton; new museum; improvements in the zoological department, besides the other features which have made it popular.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill. want to hire agents for their late improved Windmill, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

## EDUCATIONAL.

GOLDEN GATE ACADEMY, Oakland, Cal.

NEXT TERM BEGINS AUGUST 1, 1877.

D. P. SACKETT, A. M., Prin. JOSIAH KERR, A. M., Ass't.

Classical Department; Scientific and English Department; Commercial Department; Preparatory Department; Department of Physical Culture. Superior training in every department. The fitting of young men and women for college a specialty. Military drill and gymnastic exercises required daily—solely for physical exercise, development and health. Situation most commanding, beautiful and healthful. Send for Circular.

WASHINGTON COLLEGE, Washington, Alameda County, Cal. For young men and young women. Full corps of able and experienced instructors. Address Rev. S. S. Harmon, Principal. New year will begin July 28th. Send for Catalogues.

25 FANCY CARDS, all styles, with name, 10c; 25 Morning Glory Cards, with name, 20c; 20 fancy Scroll Cards, all styles, no name, 10c., postpaid. J. B. HUSTED, Nassau, Remis. Co. N. Y.

J. M. NEVILLE.

G. H. BRYANT.

## NEVILLE &amp; CO.,

Office—No. 113 Clay Street, San Francisco.

FACTORY, 105 &amp; 113 CLAY STREET &amp; 114 COMMERCIAL STREET.

BAGS, of all kinds.

TENTS, all sizes and descriptions.

HOSE, of Duck for Hydraulic use.

CANVAS, all numbers.

DUCK, all numbers.

TWEED, for sewing,

BURLAPS, all widths.

Awnings, Ceilings, Wagon Covers, Needles, Grommets, Palms.

Orders Respectfully Solicited.

## MUSIC BOOKS.

Mrs. Van Cott's PRAISE BOOK.—(In Press.) 35 cts. Will be the brightest thing out. For Camp Meetings, Praise Meetings, Noon Meetings, Tabernacle Meetings, and the Murphy Temperance meetings. Be ready for it!

SHINING RIVER, 35c. GOOD NEWS, 35c. CHORAL PRAISE, 25c.—Three shining Sabbath School Song books. Those who don't use them will miss a great deal. The last is for Episcopal Schools.

THE SCHOOL SONG BOOK, 60c. THE HIGH SCHOOL CHOIR, \$1. THE ENCORE, 75c.—For High Schools, Academies, Seminaries, Colleges. First-class books. The last is also for Singing Schools, and the first is for female voices.

Stainer & Barrett's DICTIONARY OF MUSICAL TERMS.—This magnificent encyclopedia daily increases in favor. Best book of reference published. Price, \$5.00.

Either book mailed, post free, for retail price.

OLIVER DITSON &amp; CO., Boston.

C. H. DITSON &amp; CO., 843 Broadway, New York.

J. E. DITSON &amp; CO., Successors to Lee &amp; Walker, Philadelphia.

## WATER! WATER!

For Irrigation, For Mines, For Cities and Towns, For Houses, Factories, For any Purpose.

The Cheapest and the best Pipe in the World. Easily laid, easily tapped—practically imperishable. Anybody and everybody wanting the only really common sense

WATER PIPE MANUFACTURED,

SEND TO

AMERICAN PIPE CO.,

No. 22 California Street, San Francisco,

For Descriptive Book and Price List.



NELLIS' O. H. H. FORK, with Nellis' Patent method for mowing and stacking hay or straw without extra charge to the farmer. Agt. steel finished and tempered by Nellis' process to suit all kinds of soil. Medal awards on all our goods exhibited at the Centennial. Information free.

A. J. NELLIS &amp; CO., Pittsburg, Pa.

A Fine Two-Year-Old

PROOF JACK For Sale.

Price, \$350.00.

Sired by

IMPORTED JOE PORTER

AND OUT OF A ZORAB JENNET.

SAXE'S STOCK YARDS,

Cor. 9th &amp; HOWARD STS., San Francisco

FOR SALE.

AT \$40.00 PER ACRE.

The Alfalfa Ranch, nine miles from the city of Los Angeles, bounded and fenced for one mile on the north by the Anaheim Railroad; east by San Gabriel (old) river, containing about 300 acres of land, all set with good grass, 60 acres alfalfa. Abundant water for irrigation and willow for fuel. Inquire on the ranch or by mail at Los Angeles.

IRA CARPENTER.



## Sansome Street.

DEWEY & Co.'s PATENT OFFICES, MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS newspaper offices, and the SCIENTIFIC PRESS ENGRAVING establishment will be found at the above place, (No. 202 Sansome Street, N. E. Corner of Pine, opposite the Pacific Bank), after July 4th, 1877. Just three-fourths of a block south of our old location.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 27th, 1877.

Trade has passed through another dull week. Some little interest has been caused by a tendency to advance in some produce prices, but as a general rule there is little doing, and the streets most devoted to business presented a very summery scene as we passed through them this afternoon, with long lines of drays standing at rest along the curbstones and groups of draymen talking to pass away the idle hours. The merchandise establishments of the city have generally conceded considerable reductions in the prices of dry goods, etc., trimming their sails to catch the slightest breeze of custom.

In Wheat there has been rather more than usual interest and fluctuations. The Liverpool price has both fallen and risen since our last report and the feeling here is now stronger than it has been for a month past.

#### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday	12s	—@12s	2d	12s	—@12s	9d		
Friday	11s	11d@12s	2d	12s	3d@12s	8d		
Saturday	11s	11d@12s	2d	12s	3d@12s	8d		
Sunday	11s	11d@12s	1d	12s	3d@12s	8d		
Tuesday	12s	—@12s	4d	12s	5d@12s	10d		
Wednesday	12s	—@12s	4d	12s	5d@12s	10d		

Yesterday's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1875	8s	10d@9s	1d	9s	2d@9s	6d		
1876	9s	8d@10s	—	9s	10d@10s	5d		
1877	12s	—@12s	4d	12s	5d@12s	10d		

#### The Foreign Review.

LONDON, June 26th.—The *Mark Lane Express* says: The growing crops have made a satisfactory advance towards maturity except in districts where the drouth has been so severe as to check the growth. A high temperature and dry atmosphere have been favorable for the development of Wheat and cutting meadow Hay on heavy soils. Wheat is somewhat late, but on light lands the ears are plentiful. Barley and Oats have improved in appearance, but the effects of a wet seed time and subsequent cold period will most probably be traceable at harvest. Haymaking has commenced and the cutting of Grass and Clover is satisfactory. The depression which has been experienced in the Wheat trade is, in a great measure, due to the continuation of heavy imports into London and the United Kingdom generally. The arrivals up to Friday were nearly 70,000 quarters, and selling to any extent has been quite impracticable. The weekly returns have been swelled by the arrival of shipments from southern Russian ports. The large outward movement from Germany has proved the existence of a much heavier surplus for export than was anticipated. The action of this country, northern Russia and India has been so significant that the falling off of American supplies has come to be regarded as a matter of secondary importance. At the close of the week there appeared to be a symptom of returning firmness. During the past week the floating cargo trade for Wheat ruled dull, and business was limited by the small arrivals off the coast; but on Saturday further arrivals were reported, when the tone was firmer. Maize improved in value early in the week, but fresh arrivals since have depressed the market. Barley is quiet.

#### The American Wheat Crop.

WASHINGTON, June 22d.—The June report of the Department of Agriculture indicates a better prospect than usual for Wheat. The report of June, 1876, made the average for the country 13% below the standard of the normal condition, and subsequent returns of the condition and yield were still lower, forecasting the scarcity which has occurred. The average for winter and spring Wheat together is, this year, 100—winter Wheat being above that figure and spring Wheat below it. Two hundred and seventy-seven counties report—Winter Wheat in full normal condition, 494 above 100, and 193 below that figure. Of the spring Wheat counties 93 report 100, 177 above and 137 below 100. State averages are as follows: Maine, 101; New Hampshire, 102; Vermont, 102; Massachusetts, 100; Rhode Island, 100; Connecticut, 103; New York, 103; New Jersey, 100; Pennsylvania, 98; Delaware, 97; Maryland, 103; Virginia, 100; North Carolina, 100; South Carolina, 97; Georgia, 108; Florida, 100; Alabama, 96; Mississippi, 107; Louisiana, 103; Texas, 110; Arkansas, 106; Tennessee, 91; West Virginia, 107; Kentucky, 108; Ohio, 115; Michigan, 109; Indiana, 112; Illinois, 105; Wisconsin, 97; Minnesota, 93; Iowa, 102; Missouri, 110; Kansas, 99; Nebraska, 103; California, 50; Oregon, 109. Returns from California indicate half of a full crop from the deficiency of the winter rainfall.

#### Eastern Grain Markets.

New York, June 23d.—Of Wheat there is very little available, while the disparity of prices at home and abroad checks shipments of Corn. No 2 spring Wheat has been sold to a limited extent at \$1.60@1.65, which is 10¢@15¢ at least above the views of exporters. Crop prospects, as a whole, were never more brilliant, and the harvest has already commenced in the southern portion of the Wheat belt. This prospect undoubtedly has had effect upon the

market; but "There's many a slip 'twixt the cup and the lip."

Chicago, June 23d.—The enthusiasm in breadstuffs has apparently died out. Prices have become steady and business lax. The week has been stormy and bad for growing crops, which in low lands have suffered considerably from too much moisture. The prospect is not bad, however, and the fall will probably show up with crops nearly, if not quite, equal to those of 1874. July wheat has sold from \$1.41, which price was reached on Monday, to \$1.46, which was obtained to-day. The greatest fluctuation in any one day was 3¢. Wheat is now fully as active as Corn, and as much of a speculative grain. Corn ranged from 43¢, which was the best price to-day. Oats have been selling at 35¢@36¢, the highest price being on Monday. Rye and Barley are nearly nominal and unchanged. Activity has been greater than usual in the Provision markets; fluctuations of prices were severe. July Pork sold at \$12.52, Monday's lowest prices, to \$13.35; to-day, \$12.60 to \$13. Lard was steadier, selling at \$8.75@8.97. The closing for cash was: Wheat, \$1.45; Corn, 40¢; Oats, 36¢@37¢; Rye, 61¢; Barley, 50¢@50¢; Pork, \$12.90; Lard, \$8.90. Receipts for the week: Wheat, 91,000; Corn, 906,000; Oats, 321,000. Shipments of Wheat, 91,000; Corn, 1,644,000; Oats, 294,000. Receipts for the same time last year: Wheat, 541,000; Corn, 916,000; Oats, 356,000. Wheat shipments, 458,000; Corn, 1,854,000; Oats, 539,000.

#### Eastern Wool Markets.

Boston, June 23d.—The Wool market has been quite excited the past week. Sales comprised three million pounds. The market is still almost bare of fleeces. A few lots have been received, but scarcely enough to establish prices. Sales of Ohio, 79,000 lbs, including X and above, 42¢@47¢; medium, 42¢; choice, 47¢@52¢; sales of Michigan, 75,000 lbs, at private terms; combing and delaine is in good demand; sales 60,000 lbs washed at 50¢@55¢; 61,000 pounds unwashed, 35¢@41¢, including choice Kentucky at the highest figure; pulled Wool is in good demand and stocks are sold up close; low pulled wools seem difficult to super. Transactions of the week include 380,000 lbs super and X at 23¢@46¢, principally at from 35¢@45¢. A lot of 20,000 lbs combings, pulled, sold at 47¢, and 70,000 lbs at 40¢@42¢. Texas continues to attract attention. Sales of the week, 290,000 lbs at 17¢@37¢. California has been quite active; the bulk of the sales of spring has been in the range of 30¢@35¢. There is very little fall on the market, and the only sales of this description were 46,000 lbs at 15¢.

New York, June 23d.—The Wool market has been exceedingly active during the week, and at the close of business yesterday, the stock of desirable grades was reduced to a mere bagatelle. Receipts of spring California and Texas are placed, immediately on arrival, at hardening prices, and could a sufficient stock be obtained, the market would be considered in an extremely favorable condition. Manufacturers are pressed for goods, and in consequence are actively inquiring for material to continue their business. As is usually the case, farmers throughout the West are away up in their views, demanding and obtaining 45¢ in Ohio and 40¢ in Michigan. At one time instructions were sent to the West to cease purchasing, but the eagerness shown by many dealers sustained the previous current prices, and in consequence nothing was gained by the move. Foreign Wool remains quiet, but should the value of domestic rule high here, as from the present outlook, there will be no trouble experienced in disposing of what is in stock and that to arrive from London. Sales of carpet stock are very dull, and prices favor buyers. Sales for the week are 80,000 lbs Australian at 50¢; 230,000 lbs spring California, 22¢@27¢; 10,000 lbs scoured California, 56¢; 200,000 lbs fall California, 16¢@21¢. 420,000 lbs western Texas, 16¢@18¢ for inferior and 20¢@28¢ for improved; 80,000 lbs eastern Texas, 24¢@30¢; 15,000 lbs new washed Jersey, 36¢; 51 bales Monteideo, 104 bales Donskoi, 5,000 lbs California pulled, 15,000 lbs Utah, 43,000 lbs Georgia, 100 bags superfine pulled, 43 bags extra superfine, 50 bags black extra superfine, 18 bags lambs' extra superfine, 15 bags No. 1 do, 6,000 lbs new unwashed Indiana, 5,000 lbs old State, on private terms.

PHILADELPHIA, June 26th.—Wool is active and firmer, with supply in quick sale on arrival. Ohio, Pennsylvania, West Virginia, XX and above, 46¢@47¢, X, 45¢@46¢; medium, 45¢@46¢; coarse, 40¢@43¢; medium, 43¢@45¢; coarse, 38¢@40¢; combing washed, 50¢@55¢; do unwashed, 37¢@38¢; Canada combing, 52¢; fine unwashed, 28¢@29¢; coarse and medium do, 23¢@30¢; tub washed, 42¢@45¢; Colorado washed, 22¢@27¢; do unwashed, 17¢@20¢. Extra and Mexico pulled, 35¢@36¢; No. 1 and super pulled, 35¢@37¢; Texas fine and medium, 25¢@30¢; do, coarse, 18¢@20¢; California fine and medium, 25¢@35¢; do, coarse, 25¢@30¢ per lb.

#### Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 6.	WEEK. June 13.	WEEK. June 20.	WEEK. June 26.
Flour, quarter sacks.	39,130	21,321	45,951	32,430
Wheat, centals.	81,080	34,714	20,020	21,223
Barley, centals.	7,206	5,411	4,243	11,141
Beans, sacks.	1,094	677	439	1,007
Corn, centals.	2,863	6,725	1,032	1,154
Oats, centals.	8,957	1,428	7,739	1,588
Potatoes, sacks.	9,653	7,008	10,641	14,851
Onions, sacks.	1,080	609	578	1,075
Wool, bales.	2,406	3,780	3,494	3,407
Hops, bales.	13	—	42	—
Hay, bales.	1,362	1,209	1,355	2,391

Bags—Dealers report rather more demand from farmers for Grain Bags for immediate use. Although this wakes up the trade a little, it is not sufficient to affect prices, which are unchanged from last week.

Barley—Receipts have been considerable and sales fair at former prices. We note sales: 1,000 sacks Bay Brewing, \$1.65; 700 sacks Coast Feed, \$1.58; 400 do choice Bay Feed, \$1.62; 740 do choice Bay Brewing, \$1.65; 1,000 sacks good Feed, \$1.55; 200 do Bay do, \$1.60; 300 do choice Bay Brewing, \$1.65; 720 sacks Coast Brewing, \$1.58; 740 sacks Bay Brewing, \$1.65, and 360 sacks Coast do at \$1.62 per ctl.

Beans—Prices are unchanged. Receipts are increasing a little.

Buckwheat—The demand is small and sales slow at \$1.65@1.75 per ctl.

Corn—We find no change in Corn prices. We note a sale of 100 sacks small Hay, \$1.70.

Dairy Produce—Dealers report large receipts of fresh roll, and sales difficult. Great complaint is made that even the best dairies are sending butter of very uneven quality. The feed is becoming very dry, and doubtless the cows are cleaning up everything green, much of which is not good butter making material. Most sales of choice butter are made at 28¢@29¢. Occasional boxes of fancy brands are sold at 30¢, and 31¢@32¢ are the extremes for the gilt edged demand. Cheese is unchanged.

Eggs—A little improvement is noted in the freshest California. Low grades are dull and cheaper.

Feed—Bran and Middlings are selling at reduced prices, as noted in our table. Corn Meal rises again to \$37.50@40. Straw has reacted, owing to increased supply, and now gains 75¢@80¢ per bale. Hay has been received in large amounts and the market has shown some tendency to fluctuation. To-day the excess of former re-

ceipts seems to have been worked off and the market is steady. We note Hay sales as follows: 78 tons fair Stock, \$15; 20 do fair Barley, \$16; 35 do fair Alfalfa, \$16; 50 do good do, \$16.50; 44 do fair Wild Oat, \$17; 16 do Volunteer, \$16.75; 33 do good Wheat, \$21.50; 21 tons fair Wild Oat, \$17; 31 do good new, \$21; 28 do Wheat, in two lots, the new at \$21 and the old at \$23; 24 do choice Wheat, \$23; 31 tons Alfalfa, \$16.50; 34 do fair Wheat, \$20.50; 20 do good do, \$22; 24 do choice Wheat and Wild Oat, \$24; 48 tons good Wheat, \$23.50; 28 do do, \$23; 6 do fair Oat, \$17; 8 do Volunteer, \$16 per ton.

Fruit—Apples are plenty and cheaper. The Peach season is now beginning to show its fullness and for the next few weeks will be the Fruit which will rule in the market. Lemons are higher, both California and Sicily. The second crop of Strawberries is coming in in large amount and prices are low.

Hops—Transactions are very small. We quote a sale of three bales to a brewer at 18¢. Holders are firm, and shippers will not meet them. The New York market for the week ending June 15th is reported by Emmet Wells as follows:

Extreme dullness has characterized the market this week, and prices are fully 2¢ off. Shippers have taken only a little over 300 bales; brewers about the same quantity. Speculators are waiting further developments of the growing crop. Our reports from the interior of this State are less favorable, though it is rather early to judge much of the prospect. The stock in this city is somewhat larger than usual for the time of year, and many bales could yet be spared for export without drawing upon the supply required for home use. As vegetation in the hop districts is said to be two weeks in advance of the corresponding period of last year, it is safe to predict that we shall see new Hops upon this market within the next 60 days. Our letters from the Pacific coast speak encouragingly of the crop. Quotations—New Yorks, choice to fancy, 13 to 15¢; New Yorks, common to prime, 8 to 12¢; Eastern, 8 to 12¢; Wisconsin, 8 to 12¢; Yearlings, 6 to 10¢; Olds, all growths, 4 to 6¢; Californians, nominal, 10 to 15¢; Oregon, nominal, 10 to 15¢.

Oats—Prices are unchanged. We note Sales: 100 sacks choice Hay, \$2.25; 200 sacks heavy Oregon for milling, \$2.25; 100 do Oregon Feed, \$2.20.

Onions—Receipts of New Onions from all sources are increasing, and the price shows a downward tendency. There have been occasional sales of fine bulbs at \$1.25 per ctl., but to-day \$1.12½ seems to be the top of the market.

Potatoes—The last of the old stock, a line of Humbolds, are now selling at 60¢. New Early Rose is coming in full supply, and prices are reduced to 60¢@1.00 per ctl.

Provisions—Fresh Meats are abundant. Prices are unchanged. Cured Meat products, Lard, etc., are moderately active and prices unchanged.

Tallow—Is still firmer, with a stronger demand for export.

Poultry and Game—The Market has been well supplied with Poultry, but the cooler weather has facilitated Sales. Prices are same as a week ago.

Vegetables—Asparagus, Cabbage, String Beans and Peas have all advanced a little in value. Rhubarb has been received in excess of demand and declines. Cucumbers and Tomatoes are now very abundant and cheaper.

Wheat—The week's Wheat trade has been considerably unsettled, but has now recovered itself by improved foreign arrivals, and has a promising look. We note sales as follows: 6,000 sacks Shipping, \$2.17; 4,800 do good Oregon, to a miller, \$2.20. By auction, 2,000 ctls choice Salt Lake, \$2.28; 1,500 sacks good Shipping sold to complete cargo at \$2.20 alongside; 500 sacks good Shipping, \$2.15; 394 do Superfine, \$2.13; 12,000 do choice Club, \$2.20; 1,860 do good Australia, to a miller, \$2.25; 60 tons good Shipping, \$2.15 per ctl, delivered at Vallejo.

Wool—There is evidently a better feeling in the city Wool trade and sales are more often made at outside figures. Oregon wool is selling at a somewhat wide range and there is much difference of opinion on range of values. We give quotations for the two grades as the price appears this week. More accurate figures may be expected next week. We note sales: 250,000 lbs various, 14¢@27¢; 60,000 Northern, 25¢@29¢; 18,000 Southern, 14¢.

#### FRUITS AND VEGETABLES.

WHOLESALE.]

WEDNESDAY M., June 27, 1877.

FRUIT MARKET.		PEARS.	
Apples, box.	50 @ 1 00	Pears.	9 @ 10
Apricots, box.	1 00 @ 1 50	Pineapples.	3 @ 4
Bananas, bunch.	2 50 @ 3 50	Pitted.	12 @ 14
Blackberries.	15 @ 20	Prunes.	12 @ 17
Cherries, box.	5 @ 15	Raisins, Cal, box	1 50 @ 2 50
Citrus, box.	5 @ 15	Strawberries.	3 @ 5
Cocoanuts, 100.	5 00 @ 6 00	Zante Currants.	9 @ 10
Currants, drwr.	60 @ 75	Asparagus, box.	1 50 @ 2 00
Figs, box.	50 @ 75	Cucumbers, cts.	75 @ —
Grapes.	8 @ 10	Cabbage, 100 lbs	75 @ —
Gooseberries.	6 @ 12	Carrots.	75 @ —
Limes, Mex.	20 @ 30	Corn, doz.	12 @ 60
Lemons, Cal M.	25 @ 35	Corn, doz.	12 @ 60
Sicily, box.	— @ 14 00	Cucumbers, doz.	15 @ 20
Oranges, Mex.	— @ —	Garlic, New, lb.	1 @ 2
Tabiti.	20 @ 25	Okra, lb.	10 @ —
Cal.	20 @ 25	Peas, Sweet.	3 @ 4
Peaches, box.	75 @ 1 25	Lettses, doz.	10 @ —
Pears, box.	75 @ 1 25	New potatoes.	3 @ 1
Pineapples, doz	6 @ 8	Peppercorns.	5 @ 8
Plums, box.	1 00 @ 2 00	Rhubarb.	2 @ 3
Raspberries.	8 @ 15	Horseradish.	6 @ —
Strawberries, cts	5 @ 8	Squash, Marrow.	— @ —
DRIED FRUIT.		fat, tinner.	35 @ 60
Apples, lb.	5 @ 8	Summer, box	1 00 @ 1 25
Apricots.	10 @ 12	String Beans.	5 @ 8
Citrus.	28 @ 30	Tomatoes, box	30 @ 40
Figs, black.	5 @ 7	Turnips, cts.	50 @ —
White.	6 @ 8	White.	75 @ —
Peaches.	8 @ 10	Wax Beans.	4 @ —

#### LUMBER.

WEDNESDAY M., June 27, 1877.

CARGO PRICES OFFICE SOUND PINE.		RETAIL PRICE.	
REDWOOD.		REDWOOD.	
Rough, M.	14 00	Rough, M.	18 00
Refuse.	10 00	Fencing.	18 00
Clear.	24 00	Flooring and Step.	28 00
Clear Refuse.	14 00	Narrow.	30 00
Rustic.	27 00	2d quality.	25 00
Refuse.	20 00	Laths.	3 50
Surfaced.	24 00	Furring, lineal ft.	—
Refuse.	14 00	REDWOOD.	
Flooring.	24 00	Rough, M.	18 00
Refuse.	10 00	Refuse.	15 00
Beaded Flooring.	26 00	Pickets, Rough.	18 00
Refuse.	14 00	Pointed.	20 00
Half-inch Siding.	20 00	Fancy.	25 00
Refuse.	10 00	Siding.	22 50
Half-inch Surfaced.	20 00	Surfaced & Long Beaded.	30 00
Refuse.	10 00	Refuse.	32 50
Half-inch Battons.	18 00	Refuse.	32 50
Pickets, Rough.	12 00	Half-inch Surfaced.	32 50
Rough, Pointed.	14 00	Rustic, No. 1.	32 50
Fancy, Pointed.	18 00	Battens, lineal ft.	—
Shingles.	2 00	Shingles, M.	2 25

#### DOMESTIC PRODUCE.

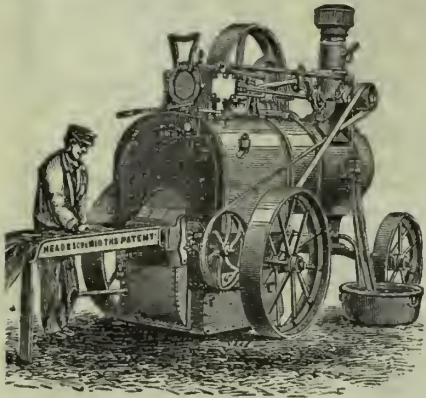
[WHOLESALE.]

WEDNESDAY M., June 27, 1877.

BEANS.		HOPS.	
Bayo, cts.	4 50 @ 4 75	California.	15 @ 20
Butter.	2 00 @ —	NITS—Jobbing.	
Peas.	3 25 @ —	Cal. Walnuts.	9 @ 10
Red.	4 00 @ —	Almonds, hd sh lb	7 @ —
Pink.	4 00 @ —	Soft sh lb	15 @ 17
Sm'l White.	2 75 @ 3 00	Brazil.	14 @ 16
Lima.	3 00 @ 3 25	Pecans.	17 @ 18
BROOM CORN.		Peanuts.	4 @ 6
Common, lb.	2 @ 2 1/2	Filberts.	15 @ 16
Choice.	3 @ 4	ONIONS.	
CHICORY.		Union City, cts.	1 00 @ 1 12 1/2
California.	4 @ 4 1/2	Stockton.	1 00 @ 1 12 1/2
German.	6 1/2 @ 7	POTATOES.	
COTTON.		Petaluma, cts.	— @ —
Cotton, lb.	15 @ 18	Humboldt.	60 @ —
DAIRY PRODUCE, ETC.		Curry Cows.	5 @ —
Cal. Fresh Roll, lb	25 @ 29	Early Rose, new.	60 @ 1 00
Point Reyes.	30 @ 32 1/2	Sweet.	— @ —
Pickle Roll.	30 @ 32 1/2	POULTRY & GAME.	
Firkin.	27 1/2 @ 30	Hens, doz.	7 00 @ 8 00
Western Reserve.	16 @ 20	Roosters.	6 00 @ 6 50
New York.	20 @ 25	Broilers.	3 00 @ 3 50
EGGS.		Ducks, tame.	5 50 @ 7 00
Cheese, Cal, lb.	13 @ 16	Geese, pair.	25 @ 30
Old.	12 @ 14	Wild Gray.	1 50 @ 2 00
Eastern.	— @ —	White.	75 @ 1 00
N. Y. State.	— @ —	Turkeys.	20 @ 22
EGGS.		Suife, Eng.	2 50 @ —
Cal. fresh, doz.	24 @ 26	do, Common.	1 00 @ —
Ducks.	20 @ 22	Rabbits.	1 00 @ 1 25
Oregon.	19 @ 20	Hare.	1 50 @ 2 00
Eastern.	18 @ 20	BAKED MEATS.	
FEED.		Cal. Bacon, L't, lb.	13 @ 14 1/2
Brn, ton.	21 00 @ —	Medium.	13 @ 13 1/2
Corn Meal.	37 50 @ 40 00	Heavy.	12 1/2 @ 13
Hay.	15 00 @ 23 00	Lard.	12 @ 14
Middlings.	30 00 @ —	Cal. Smoked Beef	10 @ 11
Old Cake No. 1.	40 00 @ —	Eastern Smoked.	10 @ —
Straw, bale.	75 @ 80	Clams, Cal.	12 1/2 @ 13
FLOUR.		Armour.	13 1/2 @ 14
Extra, bbl.	7 25 @ 7 50	Dupea's.	14 1/2 @ 15
Superfine.	6 25 @ 6 75	Davis Bros.	14 1/2 @ 15
Graham.	7 50 @ —	Magnolia.	15 @ 15 1/2
FRESH MEAT.		SEEDS.	
Beef, 1st qual'y, lb	5 1/2 @ 6	Alfalfa.	22 1/2 @ 23
Second.	4 @ 5 1/2	Canary.	10 @ 12 1/2
Tbird.	2 @ 3 1/2	Clover, Red.	25 @ —
Mutton.	3 @ 4	White.	50 @ 55
Spring Lamb.	4 @ 5	Cotton.	6 @ 10
Pork, uncured.	45 @ 5 1/2	Flaxseed.	3 1/2 @ —
Dressed.	7 1/2 @ 8	Hemp.	5 @ 5
Ven.	6 @ 6 1/2	Italian Ry.	35 @ —
Milk Calves.	5 1/2 @ 6 1/2	Perennial.	35 @ —
GRAIN, ETC.		Millet.	10 @ 12
Barley, feed, cts.	1 50 @ 1 60	Mustard, White.	10 @ —
Brewing.	1 50 @ 1 65	Brown.	3 1/2 @ 4
Oberalry.	1 50 @ 1 65	Rape.	3 @ 4
Buckwheat.	1 60 @ —	Ky. Blue Grass.	30 @ —
Corn, White.	1 60 @ 1 70	2d quality.	25 @ —
Yellow.	1 60 @ 1 70	Sweet V Grass.	75 @ —
Small Round.	1 75 @ —	Orchard.	30 @ 35
Oats.	1 70 @ 2 15	Red Top.	25 @ —
Milling.	2 25 @ —	Hungarian.	8 @ 12
Pork, cured.	45 @ 5 1/2	Lawn.	50 @ —
Wheat, shipping.	2 20 @ 2 30	Mesquite.	20 @ 25
Milling.	2 30 @ 2 40	Timothy.	10 @ 10 1/2
HIDES.		TALLOW.	
Hides, dry.	18 @ 18 1/2	Crude, lb.	6 1/2 @ 7
Wet salted.	7 1/2 @ 9	Refined.	8 1/2 @ 9
HONEY, ETC.		WOOL, ETC.	
Beeswax, lb.	25 @ 27 1/2	Short Fleece, Rusty.	13 @ 15
Honey in comb.	12 1/2 @ —	Good Southern.	15 @ 14
No. 2.	10 @ —	Choice Northern.	22 @ 29
Dark.	8 @ 9	Burry.	12 @ 16
Strained.	6 @ 8	do, Northern.	18 @ 23
GENERAL MERCHANDISE.		Oregon, East.	22 @ 25
[WHOLESALE.]		do Valley.	25 @ 31
BAGS—Jobbing.		WEDNESDAY M. June 27, 1877.	
Eng Standard Wheat.	9 1/2 @ 10	OILS.	
Neville & Co's		Pacific Glue Co's	
Hand Sewed, 22x36.	9 1/2 @ 10	Neatsfoot, No. 1.	10 @ 90
24x36.	10 @ —	Castor, No. 1.	1 05 @ —
23x40.	11 @ —	do, No. 2.	05 @ —
Machine Sew, 22x36.		Baker's A. A.	1 25 @ 30
Flour Sacks, bal.	9 1/2 @ 11	Olive, Plagniol.	5 25 @ 75
Quarters.	6 @ 7	Possel.	75 @ 85
Eighths.	4 1/2 @ 5	Palm, lb.	9 @ —
Hessian, 60 inch.	13 @ —	Linseed, Raw, bbl.	80 @ —
45 inch.	8 @ 8 1/2	Boiled.	85 @ —
40 inch.	7 1/2 @ 8	Cocount.	80 @ —
Wool Sacks.		China nut, es.	68 @ 70
Hand Sewed, 3 lb.	50 @ —	Sperm.	60 @ 65
Machine Sewed.	45 @ —	Polar, refined.	60 @ —
4 lb.	55 @ —	Lard.	1 10 @ 15
Standard Gunnies.	13 1/2 @ 14	Oleoblu.	35 @ —
Bean Bags.	7 @ 8	Devco's Brilt.	30 @ 31
CANDLES.		Phototho.	23 @ —
Crystal Wax.	19 @ 20	Nonpariel.	50 @ —
Eagle.	12 1/2 @ —	Possel.	22 1/2 @ 25
Patent Sperm.	28 @ 30	Barrel kerosene.	30 @ —
CANNED GOODS.		Downer Ker.	47 1/2 @ 50
Assorted Pic Fruits.		Elaine.	50 @ —
2 1/2 lb cans.	2 75 @ 3 00	PAINTS.	
Tahle do.	3 75 @ 4 25	Pure White Lead.	9 1/2 @ 10 1/2
Jams and Jellies.	4 25 @ —	Whiting.	14 @ —
Pickles, hf gal.	3 50 @ —	Putty.	4 @ 5
Sardines, gr box.	1 65 @ 1 90	Chalk.	2 @ —
Hf Boxes.	3 00 @ —	Pine White.	2 1/2 @ —
COAL—Jobbing.		Ochre.	3 1/2 @ —
Australian, ton.	9 00 @ 9 25	Venetian Red.	3 1/2 @ —
Coos Bay.	8 00 @ —	Averil, Mixed	
Bellingham Bay.	8 00 @ —	Paint, gal.	
Seattle.	8 00 @ 9 00	White & tints.	2 00 @ 2 40
Cumderland.	14 00 @ 17 00	Green, Blue &	
Mt Diablo.	5 75 @ 7 75	Paint, gal.	3 00 @ 65
Light.	22 00 @ —	Light Red.	3 00 @ 3 50
Liverpool.	8 50 @ 9 00	Mettallc Roof.	1 30 @ 1 60
West Hartley.	14 00 @ —	RICE.	
Scotch.	7 50 @ 8 00	China No. 1, lb.	5 1/2 @ 6 1/2
Scranton.	13 00 @ 16 00	Hawallan.	45 @ 55
Vancouver Id.	10 50 @ 12 00	SALT.	
Charcoal, sack.	1 @ —	Cal. Bay, ton.	13 00 @ 14 00
Coke, bbl.	60 @ —	Common.	6 00 @ 6 50
COFFEE.		Carmen Id.	10 00 @ 14 00
Sandwich Id, lb.	21 1/2 @ —	Liverpool fine.	17 50 @ 18 00
Costa Rica.	18 @ 20	SOAP.	
Guatemala.	18 @ 20	Castile, lb.	10 @ 10 1/2
Java.	24 1/2 @ —	Common brands.	4 1/2 @ 6
Manila.	19 @ 19 1/2	Fancy brands.	7 @ 8
Ground, in cs.	25 @ —	SPICES.	
FISH.		Cloves, lb.	45 @ 50
Sac'd Dry Cod.	5 @ 6	Cansta.	22 1/2 @ 25
Boneless.	7 @ 8	Nuttings.	85 @ 90
Eastern Cod.	5 75 @ 6 25	Pepper Grain.	15 @ 17
Sahoun, bbl.	8 50 @ 9 50	Pimento.	15 @ 16
Hf bbls.	4 50 @ 5 00	Mustard, Cal.	
2 lb cans.	3 00 @ —	1 lb glass.	15 @ —
Pkld Cod, bbls.	22 @ 25	SUGAR, ETC.	
Hf bbls.	11 00 @ —	Cal. Cube, lb.	14 @ —
Mackerel, No. 1.		Cube & crushed.	14 @ —
Hf bbls.	14 00 @ 15 00	Powdered.	14 1/2 @ —
In Kits.	3 00 @ 3 25	Fine crushed.	14 @ —
Ex Moss.	3 50 @ 4 00	Granulated.	13 1/2 @ —
Pkld Herring, bx	3 00 @ 3 50	Golden C.	11 1/2 @ 12 1/2
Boston Sm'd Hg	40 @ 50	Hawallan.	10 @ 11
LIME, ETC.		Cal. Syrup, kgs.	26 @ 30
Lime, Sta Cruz.		Hawallan Mfg Co.	26 @ 30
Centk, Roman.		TEA.	
Portland.	2 75 @ 3 50	Young - Hyon.	
Plaster, Golden	4 75 @ 5 50	Moyunc, etc.	35 @ 50
Gate Mills.	3 00 @ 3 25	Country pkd Gun-	
Land Plaster, tn	10 00 @ 12 50	powder & Im-	
Ass'd elces, keg	3 25 @ 4 00	perial.	50 @ 60



## Agricultural Articles.

HEAD & SCHEMOITH'S  
STRAW-BURNING ENGINES

At the Vienna Exhibition of 1873, the Diploma of Honor, the Highest Award, was given to Ransomes Sims & Head, Orwell Works, Ipswich, England, Engineers and Manufacturers of Agricultural Machinery, for their Engine, and since that time more than four hundred of these Engines have been manufactured and exported to Russia, Roumania, Italy, Hungary, Egypt, India, Brazil, etc., and have in every instance worked with the most perfect success. This is the ONLY Fire-Box Straw-Burning Engine, and is without doubt the BEST PORTABLE ENGINE ON THE COAST. Extra Government Safety Valve; Boiler Fitted; Extra Bars to burn wood or coal.

ERNEST L. RANSOME, Agent,  
10 Bush Street, S. F.

## The Famous "Enterprise"

(PERKINS' PATENT)  
Self Regulating Farm  
Pumping, Railroad  
and Power

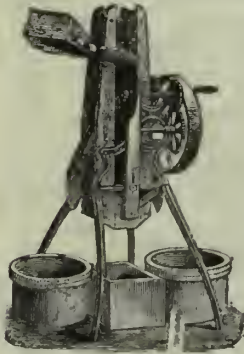
WINDMILLS,  
Pumps & Fixtures.

Have been in use on the Pacific Coast in the towns and farming districts for over four years, and wherever they have been sold (and there are thousands of them out) they are doing their work as well as when put up. A careful perusal of our Circulars gives a fair representation of them and shows their simplicity.

We are prepared to fill orders from a PUMPING MILL to a 24-foot POWER MILL for running Machinery, as well as doing the pumping.

All warranted. Address,  
**HORTON & KENNEDY,**  
Managers for California and Pacific Coast.  
ALSO BEST FEED MILLS FOR SALE.  
General Office and Supplies,  
LIVERMORE, ALAMEDA COUNTY, CAL.

## TO FRUIT MEN.

LILLIES' FRUIT PITTEK,  
Patented March 7th, 1876.

This machine pits all the different kinds of stoned fruits, (citrus, stone, etc.) both rapidly and well, and without waste, and with entire satisfaction to all who have used it. It is a perfect success, and it does not depend upon pressure upon the flesh of the fruit to extract the pit. It will pit an average of 3,000 pounds of fruit per day, and is not liable to get out of order. This is the only machine that will pit cherries successfully. For further particulars and terms, address

**H. JONES, Sole Agent for California,**  
419 and 421 Sansome Street, S. F.

## MATTESON &amp; WILLIAMSON'S

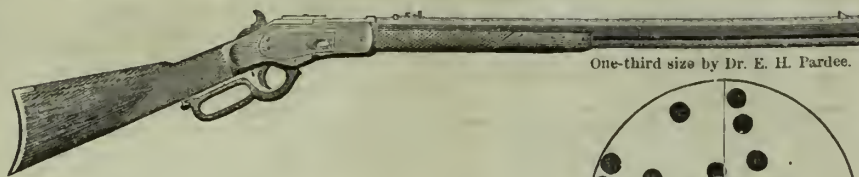


Took the Premium over all at the great plowing match in Stockton, in 1876. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## Winchester Repeating Rifle

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

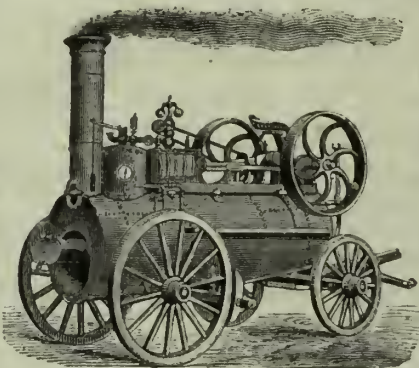
Round barrels, plain and set, 24 inch—blue. Octagon barrel, plain, 24 inch—blue. Octagon barrel, set, 24, 26, 28, 30 inch—blue. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blue. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and "check" stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blue, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

## The Rice Straw-Burner Engine.



The only reliable Straw-Burner Engine manufactured. Parties are cautioned against buying any other make of Engines, with Return Fire Boilers. The United States Court has decided that Rice has a valid patent, and all infringers are liable.

## MARCUS C. HAWLEY &amp; CO.

SOLE AGENTS FOR

Buckeye Mowers and Reapers, Haines's Headers Gear, Scott & Co.'s Thresher Engines and Separators, Rice's Straw-Burner Engines, Deere's Gang Plows, The "Regulator" Windmills, Schuttler Wagons, "Perpetual Hay Presses, Etc.

301, 303, 305, 307 &amp; 309 Market St.

SAN FRANCISCO.

43, 45 &amp; 47 J Street,

SACRAMENTO.

## CAUTION.

To Farmers and all others who put barbs upon wire fences, making a barbed wire fence, and to all manufacturers and dealers in fence barbs and barbed fence wire.

You are hereby notified, that in putting barbs upon wire, making a barbed wire fence, or in using or dealing in barbs for wire or barbed fence wire, not made under license from us, you are infringing upon our patents, and we shall hold you strictly accountable for damages for all infringements of Letters Patent Nos. 66,182, 67,117, 74,379, 84,062, 153,985, 157,124, 157,508, 164,181, 165,661, 172,760, 173,491, 173,667, 180,351, 181,433, 186,389, 187,126, 187,172; re-issue, Nos. 7,136, 6,976, 6,902, 7,035, 7,036, 6,913, 6,914.

Copies of our claims can be obtained of our attorneys, COBURN & THATCHER, Chicago, Ill., or of our counsel, THOS. H. DODGE, Worcester, Mass.

**WASHBURN & MOEN MANUF'G CO.,**  
Worcester, Mass.

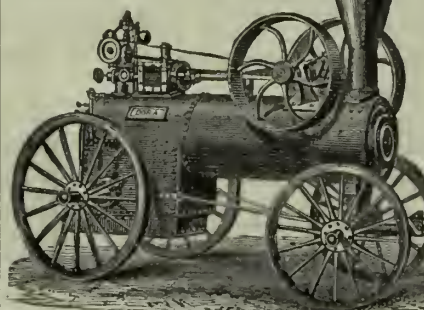
I. L. ELLWOOD &amp; CO., DeKalb, Ill.

HOADLEY'S  
THRESHING ENGINES.

PRICES.

12-Horse Power.....\$1250

15-Horse Power.....\$1450.



We have a few of these Engines on hand, which we can offer at the above

VERY LOW PRICES.

They are the latest style, and warranted to give the power represented. Call or address,

**BERRY & PLACE,**  
San Francisco

## Fraud! Fraud!!

COLLINS & CO'S  
CAST, CAST STEEL PLOWS.

FARMERS are cautioned against inferior counterfeit plows and points which are being sold as genuine cast, cast steel. The Genuine Steels are stamped with our trade mark:

## COLLINS &amp; CO., HARTFORD.

Look for this stamp before buying plows or shares, and secure the genuine. Full particulars of new and improved plows sent to any address.

**COLLINS & CO.,**  
212 Water Street, New York.

## HARRIS &amp; BRADLEY,

31 and 33 Beale Street, San Francisco,  
Manufacturers of Harris's

## PATENT FRUIT DRIERS.

Patent Combination Heater and Cheese Vat, Patent Heater for Washing Churns, Pans, etc., Patent Heater for Steaming Feed for Stock, Patent Heater for washing or the Laundry.

Also, Windmills, which are made of Cast and Galvanized Iron, and warranted to work as well and last as long as those costing three times as much. All of the above machines are fully warranted. All that is asked is a fair trial, and if they do not give satisfaction the money will be refunded. All who wish a cheap, efficient Fruit Drier, should not fail to call and examine Harris's patent before purchasing any other make or style.

## LANDSCAPE GARDENING.

CHAS. A. REED.

Experienced Landscape Gardener,

SANTA BARBARA, CAL.

Correspondence solicited.

## Seedsman.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



BLISS' ILLUSTRATED GARDENER'S ALMANAC AND ASSIDUOUS CATALOGUE—128 pages. Embraces a monthly calendar of operations, and a price-list of all the leading Garden, Field and Flower Seeds, profusely illustrated, with brief directions for their culture. Mailed FREE to all applicants. B. K. BLISS & SONS, 34 Barclay Street, New York. P. O. Box No. 5712.

SPANISH CHUFA  
SEED FOR SALE.

Address

L. L. BEQUETTE,  
Downey City, Los Angeles  
County, Cal.

Trees, Plants, Spring Lists free. F. K. PUGH,  
Six, Bloomington Nursery, Illinois.

## Nurserymen.

## SANTA BARBARA NURSERY,

Located seven miles west of Santa Barbara, Cal.  
Depot, Cor. Montecito and Castillo Streets.  
JOSEPH SEXTON, - - - Proprietor

CULTIVATOR OF

Fruit, Nut and Ornamental Trees. Also,  
Orange, Lemon, Lime and Palm Trees,  
Pot Plants, and Hardy Evergreen Shrubbery.

## HENRY SHAW,

VENTURA, VENTURA COUNTY, CAL.

Wholesale Grower of

ORANGE, LEMON and LIME TREES

Geo. F. Silvester, Seedsman, 317 Washington Street, San Francisco, has samples and will fill orders. Trees packed and boxed so as to be safely transplanted at any season. Summer months the best for removal.

## Poultry.

SAVE MONEY.

\$10 PER PAIR, \$15 PER TRIO.

All Chickens ordered during June and July will be sold at the above prices. Can spare Brown Leghorns, Silver Spangled Hamburgs, Buff Cochins, Black Breasted Red Games, Game Bantams and Koenen Ducks. After July my prices will be changed and those wishing to purchase FIRST-CLASS stock at low figures should write to me at once. Everything warranted as represented and strictly pure bred. Enclose stamp and address: I. P. LORD, Reno, Nevada. **At No order booked unless accompanied by the cash.**

## LOOK!



ALBERT E. BURBANK, importer and breeder of Fancy Fowls, Pigeons, Rabbits, Dogs, Birds, Etc., Eggs for hatching from the finest of imported stock. Eggs and Fowls at reduced prices. Send stamp for Price List.

ALBERT E. BURBANK,  
43 and 44 California Market, S. F.

## POLAND CHINA PIGS.



A. J. TWOGOOD, Riverside, Cal.

Has on hand and offers for sale a few pure blooded Pigs of this variety of Swine. Parties desiring first-class stock are invited to examine my herd or address me as above.

A. J. TWOGOOD

## DAVIS &amp; SUTTON,

75 Warren St., New York,

Commission Merchants in Cal'a. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

## E. GROTKASS,

COLIMA, - - - MEXICO.  
DEALER IN REAL ESTATE.

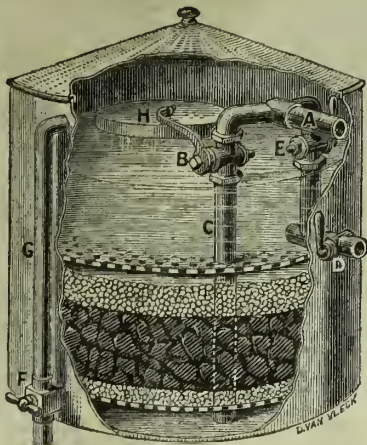
Information given free of charge. Lands procured for sale or for rents on easy terms.

50 MIXED CARDS, with name, for 10c. and stamp. One pack (20 styles) Acquaintance Cards, 10c. Sample for 3c. stamp. M. BOWD & CO., Bristol, Ct.



## SNOOK'S PATENT TANK FILTER.

FOR PURE WATER USE THE



SNOOK PATENT TANK FILTER.

It is self-regulating, will last many years without renewing filtering material. Is simple, durable, easily cleaned, and not liable to get out of order. A sure preventive against snakes, worms, bugs and all other impurities in the water. It will filter all the water required for any dwelling house, and is not expensive. These filters are expressly designed to use in place of a tank. May be connected to any tank and through the usual pipes supply all the house, or the water may be used direct from the filter, where no tank is required for other purposes. Every house should be provided with one and thus avoid one of the most fruitful sources of disease. Full satisfaction guaranteed and filters kept repair free of expense. For sale by

G. &amp; W. SNOOK, 427 Pine Street, S. F.

## HEALD'S BUSINESS COLLEGE.

No. 24 Post Street  
SAN FRANCISCO, CAL.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## THE ALDEN PROCESS.

We have added many improvements lately, greatly increasing the capacity, and at the same time simplifying and cheapening our apparatus, which we now offer at greatly reduced prices and upon the most liberal terms.

Our No. 4 Evaporator, for family use, will be furnished complete, including all the wood-work, at \$300. Its capacity is nearly equal to those erected three years ago, for which we received from \$1,000 to \$1,500 each, without the wood-work. The prices for the larger sizes have been reduced correspondingly, and we have determined that the charge of high prices shall no longer deter persons from availing themselves of the advantages of the Alden Process, which is the oldest, best and cheapest.

THE ALDEN FRUIT PRESERVING CO.,  
OF CALIFORNIA,  
No. 426 Montgomery Street.

## A FARM FOR SALE IN NAPA COUNTY.

The undersigned offers his lands in Foss Valley for sale, situated ten miles north of Napa City, containing 1,960 acres; 300 choice grain land, well watered, having a stream of water running through the tract; also, has numerous flowing springs distributed over the same, has a good Dwelling House, Barn, Granary, Sheds and other out-houses, a good orchard, a small vineyard and a choice vegetable garden; has a great quantity of timber, enough to pay for the whole place. Any person wanting a choice stock and grain farm and a pleasant home with a splendid climate, will do well to call and see for himself. I will sell the same at cheap rates and easy terms. I will subdivide and sell the following tracts to wit: one tract of 1,020 acres, 100 grain and the balance good pasture land, at \$7.50 per acre; one tract of 400 acres, 50 tillable, also one tract of 160 acres, 40 acres tillable, at \$10 per acre, either of which will make a good home. Apply to the undersigned on the premises. WILLIAM CLARKE,  
Napa Co., Cal. P. O. Napa City, Box 51

## H. H. H.

## HORSE MEDICINE,

D. D. T.—1868,

Is gaining a wide-spread notoriety. Testimonials from all parts of the coast show it to be a companion in every family. It quickly removes Wind Galls, Spavins, Callous Lumps, Sweeney, and all blemishes of the horse, while the family finds it indispensable for Sprains, Bruises, Aches, Pains, and wherever a good liniment is required.

WILLIAMS & MOORE, Prop's,  
Stockton, Cal.

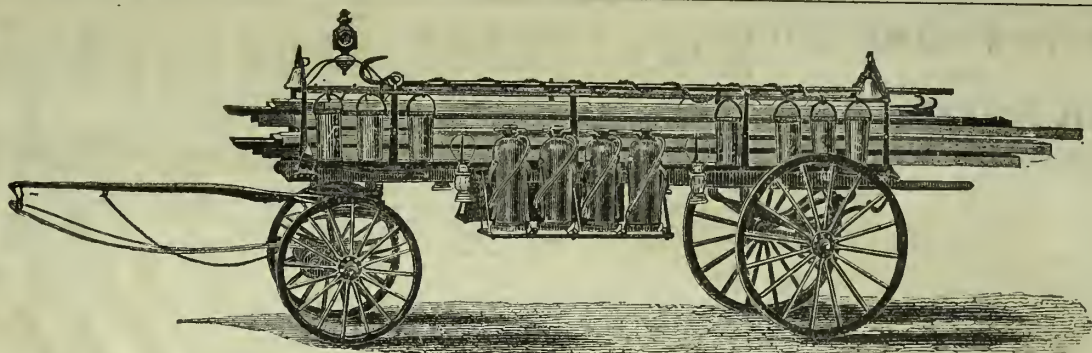


### CALVERT'S CARBOLIC SHEEP WASH,

\$2 Per Gallon.

After dipping the Sheep, is useful for Preserving Wet Hides, Destroying the Vine Pest, and for Disinfecting Purposes, Etc.  
T. W. JACKSON, S. F., Sole Agent for the Pacific Coast.

## The BABCOCK.



## The BABCOCK.

## Village Hook and Ladder Truck.

We manufacture three sizes of this truck, which is so equipped as to furnish a complete fire department for villages, or an excellent auxiliary to a city fire department. For further information,

Address PARKE &amp; LACY, 417 Market Street.

## HAY PRESSES

AND

## Excavating Machinery.

Constantly on Hand and for Sale

The well known PRICE or PETALUMA HAY PRESS, the standard machine of its class and the fastest baling press known; over 500 in use on this Coast. Price....\$450

The IMPROVED ECLIPSE POWER PRESS, the simplest and best press ever made for the price, which is.....\$300

The IMPROVED ECLIPSE HAND-POWER PRESS, very compact and powerful.....\$200

The PRICE PRESS, (extra heavy,) for baling hay for shipment in box cars. Will put from nine to twelve tons in a box car. A very strong and powerful machine, fully warranted as to strength and capacity.....\$600

## MADE TO ORDER.

Hide Presses for baling dry hides for shipment to the East.....\$500

Presses for Hair, Wool, Rags, Hops, Moss Broom Corn, etc., at reasonable prices.

PRICE'S BOX EXCAVATOR or SELF-LOADING GRADING CART, the most remarkable labor saving machine that has been invented for years. Will move earth any distance, from 50 to 2,000 feet at one-fourth the cost of the ordinary way. The large size, using four horses and carrying over one and a half yards at a load is worth....\$650

The same machine, carrying three-quarters of a yard and using two horses.....\$500

Price's Draper Excavator, for making ditches from 10 to 20 feet wide.....\$650

There are conditions connected with the sale of excavators which will be explained upon application by letter or otherwise. Address

## PRICE PRESS COMPANY,

I. J. TRUMAN, San Francisco,

J. PRICE, San Leandro.

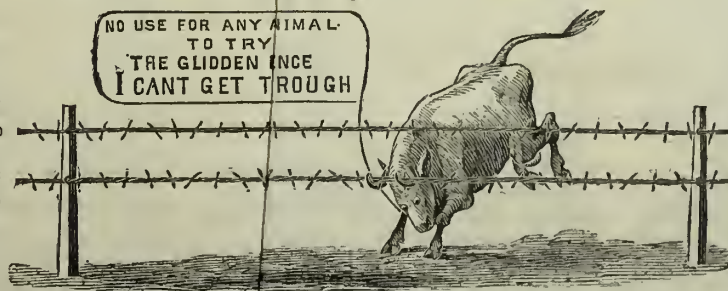
Office, With BAKER &amp; HAMILTON,

No. 17 Front Street,

San Francisco

After Nearly Three Years' Test, the STEEL BARBED FENCE WIRE, Patented by J. F. GLIDDEN, Stands Head and Shoulders Above all Competitors, and is More in Demand than all Other Barb Fences Put Together.

It makes the most durable, safe, and reliable fence in the world against stock of all ages.



About one-half the cost of any other good fence; and can be put up for one-quarter the labor.

OVER 300,000 POUNDS SOLD IN CALIFORNIA THE FIRST SEASON OF ITS INTRODUCTION. THE GLIDDEN PATENT BARB WIRE HAS BEEN TESTED BY THOUSANDS OF PRACTICAL FARMERS, WHO UNIVERSALLY RECOMMEND IT, AND IS SUPERIOR TO ALL OTHERS FOR THE FOLLOWING REASONS:

1. The wire is manufactured entirely from steel, which has a relative strength of 50 per cent. greater than of any common iron wire.
2. The only steel wire barb.
3. The only barb that cannot be displaced with thumb and finger or cattle's horns.
4. The only barb with prongs projecting from between the twisted wire and cannot be bent, broken or rubbed off, and needs no replacing.
5. The only coiled barb with broad base on main wire, which renders it immovable.
6. The only barb wire during process of manufacture its strength is tested equal to that of two-horse power.
7. Only barb put on with machinery. It is not pounded on with hammer and indented in main wire to hold it in place.
8. The only barb wire you can lay 80 rods or more on ground and drag with team and not injure or displace barbs.
9. The only barb wire that gives universal satisfaction and has greater sale than all others put together.

JONES, GIVENS &amp; CO., Pacific Coast General Agents, Sacramento, Cal.

Manufactured by Washburn &amp; Moen Manufacturing Company.

## WEBBER LAKE HOTEL!

DAVID G. WEBBER, M. D., - - PROPRIETOR.

A. J. ANDERSON, Manager.

Post Office Address, Truckee, Cal.

Hotel Open for Visitors From May 20th  
Until November 1st.

## WEBBER'S STAGE

Leaves Truckee Tuesdays &amp; Fridays,

FARE, \$3.00.

BOATS, FISHING TACKLE, SADDLE

HORSES AND WAGONS Furnished to Guests Free.

Webber Lake is 6,925 feet above sea level, is well stocked with Silver Trout, and 24 miles from Truckee, on the Henness Pass Road, surrounded by the highest peaks of the Sierra Nevada mountains. As a resort for families and lovers of rare scenery, excellent fishing and fine drives, this hotel excels all others.

## LEVI STRAUSS &amp; CO.,

Patent Riveted

Clothing,

14 & 16 Battery St.,  
San Francisco.

These goods are specially adapted for the use of FARMERS, MECHANICS, MINERS, and WORKING MEN in general. They are manufactured of the Best Material, and in a Superior Manner. A trial will convince everybody of this fact.

Patented May 12, 1873.  
USE NO OTHER, AND INQUIRE FOR THESE GOODS ONLY.

## LAND PLASTER.

(SULPHATE OF LIME.)

THIS FERTILIZER IS ESPECIALLY WELL ADAPTED TO CALIFORNIA LANDS AND CLIMATE, AND IS DESTINED TO BE USED TO IMMENSE ADVANTAGE.

PRICES GREATLY REDUCED.

In Bulk, \$10 per ton; in Barrels, \$12.50.

GOLDEN GATE PLASTER MILLS,  
LUCAS & CO.,

Nos. 215 and 217 Main Street, San Francisco.



## HEADQUARTERS

FOR THE PACIFIC COAST

OF THE U. S. Camp Lounge COMPANY.

Price of Folding Cot, \$10, Lounge \$6 and \$8.

AGENTS WANTED.—A liberal discount to the trade. Sent C. O. D., to any part of the coast. Also, rubber hose in variety and lengths to suit.

C. H. MOSELEY, Agt., 415 Sansome Street, S. F.

YOUR NAME PRINTED on 40 Mixed Cards for 10 cents.  
CLINTON BROS., Clintonville, Ct.



# INDEX TO VOLUME XIII

## OF THE

### PACIFIC RURAL PRESS,

From January, 1877, to July, 1877.

PAGE.	PAGE.	PAGE.	PAGE.
Abies Venusta.....	19 Carr, J. D. Card From.....	3	
Acacia Trees, Insects on.....	19 Carr, Mrs. J. C. Addresses.....	3	
Acacia Venusta.....	361 Castor Oil, Degrading.....	151	
Adulteration of Foods.....	71 Taste.....	151	
Agr in Mexico.....	312 Catalpa Tree.....	19, 122	
Agr in Oregon.....	273 Cattle Sale.....	307	
Agr in Public Places.....	201 Cattle Growing in Cal.....	200	
Agr Implements.....	72 Cattle Breeders Meeting.....	217	
Agricultural Credit.....	40 Cattle, Measuring.....	146	
Agri Education.....	224 Century Plants in Mexico.....	204	
Agri, Advance Talk in.....	2 Cereals, Notes on.....	204	
Agri Society, State, S. 34.....	337 Cherry, The.....	387	
73, 75, 92, 215.....	337 Cherry, Packing.....	387	
Agri Survey of State.....	260 Cheese as Food.....	247	
Alfalfa Fiber.....	360 Cheese Making, Heat in.....	39	
Alfalfa, Sowing.....	178 Cheerfulness.....	342	
Alfalfa Seed.....	360 Chicken M-thers.....	338	
Alkali Soils.....	354, 380, 403 Chills, Avoid.....	7	
Almonds Dropping off.....	10 Cions, Young.....	10	
329, 360, 370, 388.....	Citric Acid Manufacture.....	152	
Almond Growing.....	211 Coal Crushing.....	281	
Almond Stocks, Grafting.....	10 Coal, Using.....	170	
152, 168, 195.....	10 Coffee, Cal.....	73	
Alameda Co. 5, 21, 37, 53.....	238, 339, 355.....	263	
101, 117, 133, 181, 213.....	Coffee Cultivation.....	114, 280	
220, 261, 277, 325, 357.....	Coffee Drinking.....	263	
405.....	Columbia River Scenery.....	105	
Alden Drier.....	98 Colorado, Shearing in.....	339	
14 Ways Giving.....	182 Colma Co. 5, 21, 37, 53, 101.....	101	
Allegory, Beautiful.....	117, 149, 197, 213, 229.....	229	
Analador Co. 85, 133, 107.....	245, 261, 277, 293, 309.....	309	
309, 325.....	341, 357, 372, 380, 405.....	405	
Anachor, Notes from.....	322 Conifery.....	90, 249, 266	
Angelus Cattle.....	115 Company, Entertaining.....	39	
Angels Unawares.....	71 Consumptives, Diet for.....	135	
Animals and Men.....	358 Conscience.....	262	
Animals, Distribution of.....	243 Contra Costa Co. 21, 53.....	53	
Appetite and Work.....	87 117, 165, 181, 197, 213.....	213	
Apple Tree, Cuts on.....	245, 261, 277, 293, 309.....	309	
Apple Parer.....	313 325, 341, 357, 372, 389.....	389	
Apple Root Louse.....	72, 104.....	405	
Apples as Food.....	151, 231 Cooking, Philosophy in.....	343	
Artichoke, Jerusalem.....	21, 231 Cooking, Sermon on.....	55	
56, 88.....	201, 231, 341, 357, 372, 389.....	389	
Artist and Mother.....	103 Cork Oak.....	114	
Ashtabula Disaster.....	12 Corn, Egyptian.....	83, 130, 161	
Ashe for Insects.....	147 Corn in Pork Making.....	357	
Asparagus, How to Cook.....	279 Coughing.....	120	
Asparagus Growing.....	229 Coughing.....	120	
Assessing Agr Improve.....	177 Country, People, Socially.....	22	
ments.....	177 Country, People, Socially.....	22	
Assessing Crops.....	206, 296.....	301	
222, 337, 340, 356, 372.....	Cow, Raising.....	301	
376.....	Cream, New Way to Raise.....	232	
Aunt Mary, Launch with.....	230 Crop.....	215	
B.....	Crow, The Fish.....	337	
Babies, Teaching.....	119, 247 Current Events.....	102	
Babies, How Treated.....	23 Curtains, Window.....	106	
Baden Farm, Visit to.....	89 Culture, Physical.....	262	
Badness, Petroleum for.....	151 Cuts, Treatment for.....	343	
Balking Horses.....	16.....	343	
Banana Growing.....	83, 210 "Daity Barn.....	377	
Barley Broth.....	119 Dairy House, Concrete.....	323	
Bedtime.....	39 Dairy and Fertility.....	403	
Beef, Canning.....	41 Dairy Notes, Etc.....	8	
Bees and Fruit.....	370 Dairy, Cooked Food for.....	24	
Bees in Napa.....	34, 392 Dairy Ranches of J. M.....	106	
Bees Riting Blossoms.....	106 Dairy, California Milk.....	307	
Bees Rising Angles.....	3 Dairy on Tiles.....	355	
Bees Show, English.....	60 Daisies and Stars.....	151	
Bees in Drouth.....	307 Dairy.....	83	
Bees Saved a Kingdom.....	119 Death, Pains.....	231	
Beeskeepers Meeting, San.....	Diego.....	122, 160, 206, 276, 382	
Bees and Citrus Family.....	152 Desert, Origin of.....	215	
Bees, Bilious.....	103 Desert Lands, 17, 159, 216.....	216	
Bees, Tests for Purity.....	179, 248, 273.....	273	
Bees, Protector from.....	Diarrhea Cure.....	215	
Bees Moths.....	215 Diarrhea, 12-pinata.....	40, 72	
Bees Pioneers, Cal.....	242 Did Rosy Propose.....	198	
Beef, Exports of.....	233 Diamond Cutting by Girls.....	214	
Beef Sugar.....	91, 113, 216 Diamond Thiefs.....	326	
Bells, The Silver.....	70 Dinner, How to Cook.....	183	
Berkshires, Premium.....	217 Diphtheria, Carbolic Acid.....	55	
Bernuda Grass, Against.....	259.....	55	
Berryessa Barbecue.....	2 Direct Trade.....	56	
Berryessa in Napa.....	34 Diseases, Chronic.....	183	
Best Rule, The.....	39 Diseases Spread by Tail.....	279	
"Bird, Reed or Boholink.....	208 Distribution of Plants.....	281	
Black Knot.....	262 Doct. Pastry.....	285	
Bleeding, How to Stop.....	55 Dog, What Tric to do.....	55	
Blowers Fruit Drier.....	175 Doves, Collie Sheep.....	90	
Bobby.....	135 Dollar, The First.....	151	
Bones and How to Use.....	71 Doll's Wedding.....	71	
Them.....	51 Douglas Mixture.....	162	
Books, Fate of.....	39 Draft, On.....	90	
Botanic Garden.....	120 Drainage and Sewage.....	327	
Bots in Stock.....	106, 259 "Drawing the Lot.....	313	
Boys and Birds.....	350 Dresses, Color of.....	278, 342	
Boys and Girls, Letter to.....	87, 109, 247.....	279	
Boys, Advice to.....	167 Drink and Disease.....	263	
Boxes, Berry.....	161 Dry Soils, Grass for.....	205	
Brandy Law.....	179, 234, 291 Dry Year, Reflections.....	246	
Bread, Brown.....	39 Ducks, Pekin.....	227	
Bread Making, Hints.....	119, 193 Ducks, Care of.....	338, 387	
Breeding, Selection in.....	115 Dynamite, Use for.....	88	
Bridge, Mendocino Susp.....	115 Dysentery.....	23, 311	
Broch California.....	179.....	23, 311	
Brooms, Using.....	343 Eagle, American Bald.....	150	
Brusies, Hot Water for.....	55 Ear, Extraction of Insect.....	119	
Butch's Head Stock Yards.....	25 Earth's State, Theories.....	138	
Business.....	87.....	138	
Butte Co. 117, 133, 181.....	213, 245, 325, 341, 389.....	389	
Butter Making Notes.....	82, 206 East and West.....	22, 38	
Butter Packing.....	162 Economy, Spasm of.....	120	
Butter Washing.....	280 Education, Industrial.....	404	
Butter, Hard in Warm.....	273 Education, Meeting and.....	119	
Weather.....	280.....	119	
"Buzzer, Red Tailed.....	273 Education, Meeting and.....	119	
Cake, Corn Gem.....	103.....	346, 354, 386	
Cakes, Oatmeal.....	87 Eggs, Preserving.....	215	
Cake, Almond.....	7 Eldorado Co. 37, 101, 181.....	181	
Cake, Corn.....	55.....	213, 277	
Calaveras Co. 21, 181, 245.....	405.....	405	
California, Investment.....	38, 209, 217.....	225, 381	
in.....	168 England, Agr Condition.....	324	
"Camp Beds, Etc.....	289 Eucalyptus Tea.....	71	
"Camping Season, The.....	289 Eucalyptus, The.....	243	
Canal, Isthmus.....	25, 25.....	35	
201, 302.....	Eucharis Amazonica.....	35	
Candy, Poisonous.....	359.....	241, 305	
Candy Seed.....	8, 321 Exhibition, Phila.....	136	
Candles from Mutton Fat.....	140 Experience, Chapter.....	140	
low.....	344 Eyes, Blue Glass for Weak.....	103	
Carbolic Powder.....	227.....	390	
Carpets and Disease.....	227.....	390	
Carpets, Cleaning.....	194 Fairs, Abuses of.....	260	
.....	Fairs, Coning.....	408	
.....	Faithful Dora.....	38	

33	"Honey Extractor.....	281	PAUSE	66	Raisin, The Hmaseo.....	24	PAUSE
50	Hoof, Contraction of.....	9	New Year.....	56	Ramic.....	24, 0	
6	Honor Your Calling.....	374	Napa Co. 5, 21, 37, 53,		Reason, Offices of.....	70, 102, 11	
130	Hop Culture in Sac.....	2, 345	69, 85, 101, 133, 149,		"Reins, Check or Gagr.....	25	
236	Hops, Curing.....	18	165, 181, 213, 242, 245,		Receives 135, 151, 167, 100,	127	
1	Hop Crop of the World.....	41	241, 257, 293, 300, 325,		247, 279, 329, 343, 350,	127	
408	Hops, Mendocino Co.....	402	361, 357, 372, 380, 402,		375, 391.	127	
306	Hops, Their Indications.....	35	Nature.....		Red-breasted Rail.....	11	
294	Horse Hospital.....	7	Nature, Power in.....		Red Kidding Hood.....	27	
278	Horses, Breeding.....	403	Nervousness.....		Redwood Stumps.....	3	
231	Horses, Draft.....	332	Nevada.....		Redwood, White.....	10	
294	Horse Power, Gillis.....	320	Nitrogen.....		Reflections.....	10	
342	Horse Stealing Raid.....	131	Nomenclature, Botanic.....		Refrigerator Shipments.....	25	
230	Horse Stalls, English.....	162	162, 338.		Refinement.....	25	
57	Horseshoeing.....	210, 380	Non-setting Hens.....		Rhinematist, Cure for.....	87, 11	
54	Horse, European Market.....	208	Nose, Foreign Bodies in.....		Rhinodermis in Europe.....	29	
343	For.....	208	Nurses, San Jose.....		Rock Cradle, Rules the.....	24	
178	Horse Bearing, Turcoman.....	298	O.....		World.....	24	
103	House Painting, The.....	300	Oak Home Herd.....		Roses, Insects on.....	10, 7	
402	Houses and Things.....	342	Oakland Reading Room.....		Roses, Conserve of.....	21	
380	Housekeeping.....	230, 295	Oatmeal.....		Ross, Not a.....	30	
106	How She Won Her Way.....	286	Old Jenkins and Ben.....		Ross, Reward for Charlie.....	35	
311	Huggins's Nut Ranch.....	286	Old Trees in Asia Minor.....		Roup, Treatment for.....	3	
211	Humant Nature.....	211	333.		Ruin, Ancient, 153, 160, 18	21	
230	Humbolt County.....	151	Olve Trees, Insects on.....		Rural Press, the.....	21	
50	Husbands, Farmers as.....	151	Onet, Bread-trail.....		S.....		
116	Ichneumon Phies.....	49	Onet, The Queens.....		Sacramento Co. 5, 53, 85,	85	
231	Idea, Don't Dwell on One.....	250	One and Two.....		101, 133, 143, 165, 107,	107	
7	Idolatry, Hindoo.....	329	Onions.....		220, 245, 261, 277, 293,	293	
378	Improvements.....	328	Opium Production.....		264, 357, 389, 405.....	405	
49	Industry.....	22	Orange, An Old Tree.....		"Sailor, Home for.....	9	
134	Industrial Condition, Our.....	22	Orange Culture, 242, 255,		Salad.....	8	
338	22, 290, 306, 340.....	7	323, 355.		Salmon Fisheries on Co.....	35	
306, 388	Infants, Air for.....	7	Oranges, From Seed.....		humbia.....	15	
258	Influence, Moral.....	6	Orange, Budding or Seed.....		Salt Marsh.....	34	
306	Ink for Postal Cards.....	336	ling.....		San Benito Co. 5, 21, 117,	117	
306, 322	In Memoriam.....	20, 52, 85	Oranges in California and		157, 213, 229, 245, 261,	261	
401	100, 116, 131, 196, 212,	212	Florida.....		344 293, 309.....	309	
232, 372, 404.....		243	Orange Scale Insect.....		18 San Bernardino Co. 98,	98	
338	Insect, A New.....	243	Oranges, Sonoma.....		140 149, 194, 210, 213, 241,	241	
225	Insects, Books on.....	264	Orange Packing in Sand.....		122 San Diego Co. 37, 69, 140,	140	
217	Intemperance, Food for.....	37	Oranges, Market for.....		165, 243, 239, 261, 309,	309	
117, 133, 149, 165, 181,		181	Orchards, Cultivating.....		113 325, 357, 405.	405	
217, 213, 229, 245, 261,		261	Oregon.....		5, 21, 53, 231,	231	
277, 322, 341, 357, 389,		389	Over-eating.....		273, 389.	389	
405.....		405	Overtaker, W. L.....		312 San Mateo Co. 181, 213,	213	
Irrigation in Merced.....	345		Owl, Large Horned.....		17 229, 277, 405.	405	
120 Irrigation, Pipes for.....	380		P.....		Santa Barbara Co. 5, 21, 37,	37	
88 Itch on Cattle.....	50, 72		Pacific Congress Springs.....		101, 165, 157, 213, 245,	245	
66, 72, 227, 306.....	3		"Pacassaddle," The.....		65 274, 325, 341, 357, 372,	372	
83 Jersey for Butter.....	3		Pampas Grass, Preserv- ing.....		39 Santa Maria Valley.....	226	
131 Jersey Farm, Visit to.....	377		Paradise Valley.....		274 Santa Clara Co. 21, 69, 101,	101	
132 "Jersey, Central Prem.....	385		Paris and Roy.....		103 117, 165, 213, 229, 245,	245	
170 Keg, The Fatal.....	23		Pat de foie gras.....		146 261, 277, 293, 341, 372,	372	
109, 203 Kern Co. 5, 21, 69, 85, 101,	101		Pastors and Inventions.....		44 76 92, 108, 204,	204	
227, 257, 273, 117, 149, 165, 181, 197,	197		14 76 92, 108, 204,		26, 253, 268, 280, 332,	332	
249 229, 245, 261, 374, 277.....	277		304.....		285, 295, 308, 108, 156,	156	
239 239, 309, 325, 370.....	215		Pedons, Recent.....		204, 236, 268, 284, 300,	300	
Kindness.....	215		348.		Pavements, Concrete.....	380	
"Kingdom, My.....	262		Peanut Growing.....		184, 232, 380	380	
291 Kingdoms, Three.....	302		Pears, Cal., Abroad.....		161 Schoolroom Evil.....	311	
Kingsburg.....	390, 392		Pepper, Oil of.....		97 136 Sewing Machine Cheapening.....	329	
371 Kings River.....	7		Persimmons, The Japan.....		101, 131, 145, 161	161	
184 Kitchens, Farmers.....	7		Perspiration, Checking.....		391 Seeds and Seed Planting.....	362	
167 Labor and Think.....	326		Peterskins' 4th of July.....		406 Sheep Raising in Oregon.....	35	
167 Labor, Encouragement of.....	21		Phosphorus, remedies.....		287 Sheep, Shelter for.....	10	
311 Lady of Olden Time.....	54		Phylloxera.....		8, 57, 72, 103,	103	
212 Ladies as Lawyers.....	182		25, 291.		71 Sheep, Merinos.....	114	
71 Lake Co. 18, 85, 117, 133.....	133		Pies Cocanutt.....		103 Sheep as Grubbers.....	202	
356 181, 242, 261, 283, 309.....	309		Pies.....		103, 135, 167.....	167	
7, 55 Lake County Springs.....	226, 246		Pie, A Dutch.....		103 Sheep, New Merino.....	943	
34 Landscape Gardening.....	35		"Pie, The Last.....		22 Sheep in Sandwich Is.....	145	
215 Land, Gov, Inquiry for.....	35		Pine Apples in Florida,		12 Sheep in Colorado.....	216	
66 Lands, Light.....	50, 55		17 402.		Short Horns.....	292	
66 Grandfathers, Our.....	50, 55		Pisciculture in Cal.....		24, 187 Short Starching.....	135, 151, 247	
50, 55 Grand Meetings.....	228, 356		Poet to Spring.....		31 Seely, Scenes in.....	54	
228, 356 Grange Co-operation.....	304		Poison in Blue Cloth.....		91 Silk in Kansas.....	30	
148 Grange, N. Y. State.....	148		Poison in Spoiled Corn.....		91 Silk in U S.....	300	
148 Grange Elections.....	2, 37, 52, 65, 84, 100, 116, 132.....	132	Poison in Rubber Toys.....		10 Sisters, To the.....	20	
148, 196, 228, 260, 372.....	372		Pomological Society, Am.....		146, 194, 226	226	
164 Grange Halls.....	116		249		S.....		
116 Grange, Higher Degrees.....	36		Pooling.....		355 Sheep.....	214	
100, 356, 387 Grange Rulings.....	116		Popping it Gravely.....		278 Sleeplessness.....	103, 182	
116 Grange, Lecturer's Visits.....	1, 36, 52, 68, 196, 276.....	276	Pork-acking in Cal.....		24 Soap Making.....	391	
276, 308, 372, 383, 404.....	404		Postap, Rates of.....		31 Soeable, Re.....	324	
Grange in England.....	110		Potat, Growing.....		162 Social Statistics.....	217	
Grange, Juvenile.....	110		Potat, Bines in Arizona.....		Society Islands.....	257	
Granger Railroad Cases.....	164		97, 1, 218.		So Analysis.....	266	
Grange Petitions to Con.....	180		Potatolot.....		1, 312 Solano Co. 2, 101, 133, 149,	149	
Grange Picnics.....	228, 208		Potato, Seed, Slips.....		55, 181, 213, 277, 325,	325	
Grange, Stockton.....	244, 200		Potato, Seed, Slips.....		129, 136 341, 372, 389,	389	
Grange Amendments.....	244		Potato, Baked.....		301, 372, 389.....	390	
Man, Treatise on.....	134		Potato, Plaster for.....		152 (Sung, Very Old.....	54	
Man's Part in Home.....	183		Potato, Dried.....		275 Sonoma Co. 11, 21, 37, 53,	53	
Man's Destiny.....	326		Potatrynd its Value.....		259, 369, 101, 117, 133, 149,	149	
Manibot Carthagensis.....	49		387.		165, 181, 213, 213, 245,	245	
"Manitis, The.....	73		Poultry Diseases.....		162, 261, 277, 293, 301, 325,	325	
Marin Co. 85, 133, 181, 210.....	210		211, 2.		341, 357, 372, 380, 389,	389	
213, 261, 341, 389, 405.....	405		Poultry Game.....		291-405.		
372 Marriage and Health.....	363		Poultry-raising.....		115, 194 Soup, Bread and Barley.....	251	
372 Marriage, Errors in.....	331		Poultry, Books.....		83 Soup, Celery.....	55	
404 Marmalade, Orange.....	10		Poultry, Breeding Myster- ies.....		35 Soup, Sage Cream.....	39	
36 Matrimonial Advice.....	55		Poultry, Breed and Com- mon.....		16, 212, 250 Sprains.....	231, 263	
290 "Massacre, Mountain.....	201		Poultry, Fossing.....		83 Spectacles, Wearing.....	295	
55 Meadows.....	201		Poultry, Farmers.....		99 Squirrel Poisoning.....	168,	
55 May-day Celebrations.....	358		Poultry, Cal, Colossal.....		323 Squirrels, Skins.....	168	
214 May Shipping, Overland.....	200		312 St. 21, 37, 85, 117,		181, 213, 261, 357, 372,	372	
206 Mechanics' First 12th Es.....	85		133, 1-178, 181, 220,		309, 40		
Melon Sugar.....	37, 83,		309, 40		Strawharming, Notes on.....	137	
Mendocino Co. 5, 37, 83,	83		Plants, Lural, Opening.....		67		
308 69, 149, 215, 341, 389,	389		67		83 Summe.....	297, 323, 328, 344	
51 Men, Ilany.....	102		Plains, Texas on.....		226, 255		
361 Merced Co. 5, 53, 85, 117, 133	133		Plymouth Rock Fowls.....		226, 255		
361 Meridian, To obtain true.....	74		226, 255		Sun, Distance of.....	231	
114 Microscope in Good hands.....	259		Pre-empt, A Success- ful.....		386 Sunrise Never Failed.....	342	
114 Mildew, Grape.....	51, 259		Progress, Medical.....		71 Sunbeam, If I Were.....	279	
114 Mildew, Wheat.....	233		Propagate, Austrian Method.....		145 Sun Bonnets.....	358	
393 Milk Colder.....	277		Pruning bit Trees.....		181 Sunflower, Cal.....	91	
117 Milk-Made Desserts.....	263		Publishers, New.....		25 Surveys, Wheeler.....	97	
55 Milk Curdle in Stomach.....	263		Pudding, Apple.....		71 "Susquehanna, Moonlight.....	9	
Milk for Infants.....	391		Pudding, Apple.....		39 Sun.....	53, 117, 149,	
357 Milk Fever.....	19, 115, 178		Pudding, Cool Batter.....		72 Suner Co. 53, 117, 149,	149	
247 Mining, Liver.....	137		Pudding, Cool Plum.....		165, 197, 213, 277, 309,	309	
55 Mistake, Fatal.....	54		Pudding, Lian.....		23 325, 341, 359, 405.	405	
55 Mistake, Was it.....	290		"Pumps, Laid & Saeo.....		345 Swine, Berkshire Assoc.....	163	
193 Moose Curing.....	50, 29		Pinto, Hoto Use.....		91 Swine, Cross Breeding.....	10, 115,	
28 Moose, Shearing and Sell- ing.....	258		Quack Advice.....		44, 82		
88 Mohair in Oregon.....	410		Rabbit-Gazing, Cure for.....		291		
28 Moose in Oregon.....	410		Rabbit Stev.....		23 Table Fruit, Trimming.....	215	
28 Moose in Oregon.....	410		Racing and Gambling.....		178 "Tabiti.....	215	
28 Moose in Oregon.....	410		Rain, Drops.....		153 Tamarind Tree.....	243	
28 Moose in Oregon.....	410		Rain, Prodion.....		40 Tanks, Remedy for Leaks.....	104	
28 Moose in Oregon.....	410		Rain, Rain Forests.....		25 Taxidermy.....	148, 244, 354, 389	
28 Moose in Oregon.....	410		Rain and Sea on Mt's.....		14 Tea, Making.....	215	
28 Moose in Oregon.....	410		Rain in Low Cal.....		24 Tea, Poking.....	167	
28 Moose in Oregon.....	410		"Rain, Out.....		73 Tea, Consolidated.....	295	
28 Moose in Oregon.....	410		Raisin-Maki.....		114, 105 Tea Plant, The.....	309	
28 Moose in Oregon.....	410		Raisin Trade.....		82, 293 Teeth, Exercise for.....	343	
28 Moose in Oregon.....	410		Rais in Los Angeles.....		71 Tehama Co. 34, 53, 117,	117	
28 Moose in Oregon.....	410		Raisins, Hows Drying.....		81 149, 165, 277.	277	
28 Moose in Oregon.....	410		Raisin Pies.....		119 Thistles, Killing.....	28	







